

# Publicly Funded Dental Care In Ontario: Rationing Principles and Rules

by

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A thesis submitted in conformity with the requirements  
for the degree of Master of Science in Dental Public Health  
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# Publicly Funded Dental Care In Ontario: Achieving Stakeholder Consensus on Rationing Rules

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2012

## Abstract

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Objective: To identify principles and rules used by stakeholders in making limit-setting decisions for publicly funded dental care.

Methods: A purposive sample, including administrators, academics, funders, clinicians and community representatives was surveyed using a 28-item questionnaire, in the first round of a proposed three-round modified Delphi study. Using open and closed-ended questions participants made and explained decisions on prioritizing populations and services. Open-ended text was analyzed with a thematic qualitative approach using open and axial coding.

Results: Consensus emerged on two rationing principles; *achieving equity* and providing *essential care*. Rules for eligibility were defined as the inability to pay and/or assume full personal responsibility for securing dental care. Inclusion/exclusion of treatment categories rested on relieving pain/infection, preventing disease and maintaining/restoring function.

Conclusions: Stakeholders presented principles and rules that suggest extending the distribution of publicly funded dental care to include, at a minimum, essential services for those unable to afford care.

# Acknowledgements

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I am sincerely and heartily grateful to my supervisor, Dr. Carlos Quiñonez, for the support he showed throughout all the stages of this process. I am certain that this project would not have been possible without his help. He is a masterful and patient teacher whom I feel blessed to have encountered. His encouragement and faith in my ability and in a better system of care caused me to reach beyond my boundaries.

Many thanks are also due to the members of my advisory committee for without their knowledge, encouragement and cooperation this work would not have been such a rich and enjoyable experience.

The participants of this study offered dedication and willingness to articulate difficult ideas which both surprised and inspired me. The abundance and quality of their thoughts on what we ought to consider when allocating resources within the system of publicly funded dental care provided a wealth of information without which this work would not have been possible. In fact, the fullness of their ideas altered the initial trajectory of this inquiry.

I will always remember with fondness and appreciation, Dr. David Locker, who pressed for change and created an opportunity for dental hygienists to contribute more fully in academic forums. Thank you for working to open the door that allowed me to realize the dream.

Finally, I would like to thank the Population Health Improvement Research Network and the Social Sciences and Humanities Research Council of Canada for their financial support.

*This thesis is dedicated to my family for their unwavering support through this process and to my students for continuing to challenge what is.*

*My deepest gratitude goes to my mother who set me on the path to continued inquiry and higher education, my husband who encourages me always to take chances and pursue my dreams and my children who have reminded me to keep asking why. All have provided me the inspiration to keep moving forward.*

*To my students, thank you for reminding me that there exists a bountiful source of caring providers and that acknowledging and fostering their creativity will provide countless ways to improve our system of care such that no person suffers the effects of dental disease unnecessarily.*

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# Introduction

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## **Statement of the problem**

Challenges in accessing dental care are long standing and yet resources for publicly funded dental care are very limited in Ontario and Canada. As a result, critics have argued that there are significant gaps in the availability of dental care that must be addressed. In the context of both limited resources and a policy push towards the establishment of equity in access to dental care, it is clear that change is required. That said, there are currently no clear, transparent, evidenced based criteria by which to make decisions on how best to allocate these scarce resources – or rather to set the limits that determine *who is eligible* for publicly funded care and *which dental services* are included. Furthermore, current efforts to improve rationing have largely focused on economics, professional preference, and/or clinical evidence and do little to explicitly capture societal or user preferences for the allocation of resources.

By asking a broad range of stakeholders for their opinions about *what* these limits should be and *why*, this thesis will attempt to uncover principles and rules that could be used to frame clear, transparent, evidence-based criteria for setting limits to publicly funded dental care in Ontario. It is hoped that the results can be used to better inform policy, at the macro and meso-level, on what defines *essential dental care* in order to better allocate resources in publicly funded programs.

## **Background**

Dental care is not included in Canada's universal system of health insurance. As a result, most dental services are privately, not publicly funded. In fact, less than six percent of all dental care is paid with public funds, and it is allocated through a patchwork of programs that focus largely on prevention while affording limited curative programs targeted at low-income children, people with a disability or those on social assistance (Canadian Center for Policy Alternatives, 2011; Quiñonez, 2009). This approach to rationing fails to recognize that there are people outside these groups, such as the working poor, and low income adults or seniors, who cannot afford care, either fully or partially, for themselves or their families. Simply stated, there are significant shortcomings in coverage in our current complex web of public programs, or rather, cracks through which people fall.

In her recent report on oral health, Ontario's Chief Medical Officer of Health, Dr. Arlene King, acknowledged these shortcomings and called for "opportunities for better integration and/or alignment of low-income oral health services in Ontario, including integration and/or alignment with the rest of the health care system. This relates predominantly to the client journey, including making it easier for the client to access the care that is needed, when it is needed" (King, 2012, pp. 5,13).

This study endeavors to address concerns about the current limits on publicly funded dental care. It flows from recent work in medicine that calls for incorporation of the values of society and affected stakeholders, in addition to clinical evidence and economics evaluations, in allocation decisions (Baltussen & Niessen, 2006; Daniels, 2001; Daniels & Sabin, 2008; Gibson et al, 2005a; Gibson et al, 2005b). During the 1990's, the National Health Committee (NHC) in New Zealand undertook to advance the role of public debate in advising the government on what types of care should be publicly funded and their relative priority (Bloomfield, 2003). Similarly in the UK, a Citizens Council was developed to advise on priority setting in the NHS (Robert, 2003). Thus this study's purpose is to explore stakeholder opinion on publicly funded dental care in an attempt to determine a set of principles and rules that could help drive rationing decisions. By way of definition and for the purpose of this work, 'principles' are defined as overarching concepts that motivate internally to do the things that are right and good,

and ‘rules’ are the more specific statements of limits that derive from the principles. In order to determine these principles and rules, this study will ask *what limits* should be set and importantly, *why*. However, as background to understanding this complex issue, it is first necessary to ask:

1. What is the current discourse on rationing publicly funded dental care?
2. What does the present distribution of publicly funded dental care look like?
3. What are the implications of this distribution?
4. What can we learn about this issue from health care and from other jurisdictions?

### **What is the current discourse on rationing publicly funded dental care?**

Inequity in access to dental care for Canadian citizens is currently a topic of discussion on public health agendas. Experts across a variety of sectors, including dental, health, and social services, along with the general public, have ‘weighed in’ on the importance of improving the current allocation of resources, which while recognizing the impact of income on health, privileges only to those unable to assume full responsibility for their health (i.e. children and the disabled) and to a lesser extent those on social assistance. Evidence of the gaps present in the current dental safety net can be found in academic writing, media reports, public health conference proceedings and policy decisions (Bedos et al., 2003; Bedos et al., 2005; Birch & Anderson, 2005; Dharamsi & MacEntee, 2002; Leake, 2006; Locker & Millar, 1999; Mouradian, Wehr, & Crall, 2000; Quiñonez, 2009).

In a series of studies that explore the impacts of the current distributive policy on Canadians, Quiñonez et al. (2007, 2009, 2010) describe dental care in Canada as becoming “structured by policy which defines itself along moralized lines, meaning social need turns on personal responsibility and uses employment as the benchmark of this social standing” (Quiñonez & Figueiredo, 2010, p. 481). To that end, they argue that the working poor (WP) provide one of the clearest examples of the contradictory nature of our current policy approach. By definition, the working poor are individuals who maintain regular employment but remain in relative poverty (Quiñonez, 2010). Current policy assumes that their employment signifies an ability to take responsibility (in the form of the ability to pay) for the services required to obtain and/or maintain their oral

health. As a result of being employed, they are not eligible for public (unemployment) assistance for dental care, despite their low-income status. Yet, unlike their higher earning counterparts, very few of the working poor enjoy employment that provides private dental insurance. So while Canadian dental care policy recognizes that unemployment and limited income generally contribute to a greater likelihood of disease and barriers to accessing dental care (Quiñonez, 2010), it fails to recognize the working poor as individuals in need on the basis of their employment status. Similarly, in a compelling series of newspaper stories, Welsh (2007) highlighted the specific challenges of accessing dental care felt by the working poor and other low income Canadians (Welsh, 2007). Her stories report the lack of access that results from the inability to afford care. Through her narrative, she effectively detailed the social and individual impacts of poor oral health on one's overall health, ability to eat, or find employment and housing.

Widespread support for change is echoed in statements by many health and social service associations as well. For example, in a series of town hall meetings held by the Canadian Medical Association in 2011, citizens called for dental care to be included in the array of publicly funded health care services in Canada (Canadian Medical Association, 2010). As well, in a reversal of its long held position, the Canadian Dental Association now recommends a dental safety net for all disadvantaged Canadians, not just specific groups such as children and social assistance recipients (Canadian Dental Association, 2005). The Canadian Association of Public Health Dentistry recommends equitable access to oral health care, regardless of employment, health, gender, race, marital status, place of residence, age or socio-economic status (Canadian Association of Public Health Dentistry, 2006).

Importantly, in what appears to be an emerging political will to re-examine the present distribution of publicly funded care, policy stakeholders have also raised concerns about the costs of poor access to dental care on the broader health care system. Quiñonez et al. (2009) identified that impacts on the hospital sector exist as a result of the way we ration dental care. In their study, 75% of hospital emergency visits for dental problems were classified as preventable (for those with access to appropriate dental care) and non-urgent

(meaning the type which for which people with insurance would normally seek care from a dentist). Additionally, those who made the most visits were ineligible for public funding such as the working poor and seniors (most of whom lack employment benefits), or by those on social assistance (for whom only limited emergency care is available).

Finally, and perhaps in response to the above noted challenges, after more than two decades of decreasing expenditures, governments in five of ten provinces have released targeted funds to improve access for low-income Canadians (Quiñonez, 2009). In the case of Ontario, this meant the earmarking of \$45 million per year (for 3 years) for dental care for low-income adults and children as part of a poverty reduction strategy announced in 2008 (Province of Ontario, 2008). Never the less, as proof of the complex reality of this policy problem, three years later these funds remain largely underspent (City of Toronto, 2011; Matthews, 2009). Any dollars that have been spent were allocated in much the same way they always have been – namely providing more coverage for low-income children, to be primarily delivered in private dental offices on a fee-for-service basis (City of Toronto, 2011; Ferguson, 2010; Matthews, 2009; Province of Ontario, 2010). Despite requests from Medical Officers of Health, Boards of Health members and health organizations in Ontario (City of Toronto, 2011; Mercer, 2012; Sterling, 2009) to consider using unspent dollars to fund dental care for adults and seniors, any previous suggestion of improvements or expansions of the dental program are missing from the most recent annual report on poverty reduction (Province of Ontario, 2010; Province of Ontario, 2011).

Ultimately, given the current context of economic recession, the constantly increasing prices of dental services, and the decreasing robustness of employment-based dental insurance, there are a rising number of Canadians reporting dental care to be a financial burden; yet most find they are either not eligible for public funding or that the care that is funded does not adequately address their needs (Muirhead, Quiñonez, Figueiredo, & Locker, 2009; Welsh, 2007a; Welsh, 2007b). However, as evidenced in Ontario, despite a clear indication of need and the public and professional will to address the shortcomings of the current distribution of care, rationing decisions seem to continue to privilege to the traditional groups – children, the disabled and to a more limited extent, those on social

assistance, in addition to focusing most spending on prevention efforts. Why is this? It is arguable that this is largely because of professional preference (Quiñonez, 2009), which has led to dental care policy that lacks clear, transparent, evidenced based criteria for determining the limits that ought to direct funding in a manner that is consistent with societal preferences. So while it is unlikely that further increases to government funding will be forthcoming, what remains is to examine how we can do things better by developing criteria that will allow for improvements in the allocation of our scarce resources.

### **What does the present distribution look like?**

As has been stated, dentistry is not included in Canada's universal system of health insurance. Dental care is largely distributed in accordance with a market-based system, meaning most Canadians pay for dental care largely through employment-based dental insurance and/or out-of-pocket at the point of delivery (Leake, 2006). In fact, less than six percent of all dollars spent on dental care in Canada come from public sources compared to approximately 75% of medical care (Health Canada, 2010). Unlike the universal, single payer system for Medicare in Canada, dentistry's public dollars come from a complex combination of federal, provincial, and municipal sources, and form a patchwork of programs that largely focus on providing preventive services while limiting clinical treatment services to marginalized populations (Quiñonez, 2008).

In fact, the dental profession has supported public responsibility for prevention and care for children for more than 100 years (Quiñonez, 2009). The current policy position is one that derives from this historical view and was entrenched during the political and professional debates that arose with the development of Canada's national system of universal health insurance from the 1940s through to the 1960s (Quiñonez, 2009). The dental profession argued successfully that oral health was primarily an individual responsibility and as such any social obligation ought to be focused on prevention of disease (such as water fluoridation and education) with service provision only to those with a limited capacity to assume personal responsibility (such as children, the handicapped and the indigent). In part, this allowed dentistry to escape inclusion in Medicare (and the control that it would bring over the profession) and helped shape

dental care policy as one in which care is largely provided on a fee-for-service basis, privately funded by the individual with any public spending limited to prevention and very limited service provision for populations deemed to be in social need (Quiñonez, 2009).

Today, public spending for dental care is mandated by, and broadly detailed in, provincial and territorial legislation. All jurisdictions recognize that some dental care is medically necessary and as such have set a social minimum reflecting this by including a limited number of surgical-dental services delivered in-hospital within their health insurance plans. Yet this is the only place where legislation is clear about the nature of the services being provided (i.e. medical necessity). Otherwise, there is a wide degree of legislative, policy, and program discretion, resulting in a variety of local level approaches to allocating funds (Quiñonez, 2008; Quiñonez, 2009).

While on the one hand, this discretion has provided a way for programming to reflect local budgets and priorities; on the other, it can be seen to have resulted in significant regional variations in coverage (Canadian Center for Policy Alternatives, 2011; King, 2012; Quiñonez, 2008; Quiñonez, 2009). In this regard, public programming for dental care in Canada has come to bear a striking resemblance to the postcode lottery issue in the United Kingdom's (UK) National Health Service, meaning that the dental services available to an individual depend on where one lives. Ham & Roberts (2003) warn that this approach is often undermined by a lack of expertise in assessing the cost-effectiveness of interventions resulting in a fragmented approach that is inefficient, inequitable and complicated to navigate for both patients and clinicians (Canadian Center for Policy Alternatives, 2011; King, 2012).

Ontario provides a clear example of the complexity created by this patchwork of public programs. Currently, publicly funded oral health services include the surveillance and prevention programs provided by the Ontario Public Health Standards (OPHS) and is funded by the Ministry of Health Promotion for Ontario. As well, curative and preventive dental treatments are provided by five different programs, which have a variety of eligibility and service limits and derive their funding from the Ministry of Health Promotion, Ministry of Health and Long-Term Care, and/or Ministry of

Community and Social Services, and in some cases are cost-shared by local municipalities (Quiñonez, 2008; Canadian Center for Policy Alternatives, 2011). The programs (and their funding sources) are as follows:

1. Ontario Health Insurance Program (OHIP) – funded by the Ministry of Health and Long-Term Care for Ontario;
2. Children in Need of Treatment (CINOT) – cost-shared by the Ministry of Health Promotion for Ontario and local municipalities;
3. Healthy Smiles Ontario (HSO) – funded by the Ministry of Health and Long-Term Care for Ontario;
4. Ontario Disability Support Program (ODSP) – funded by the Ministry of Community and Social Services for Ontario;
5. Ontario Works (OW) – discretionary cost-shared program funded by the Ministry of Community and Social Services and local municipalities.

In general though, policy has remained focused on financing prevention with limited curative and preventive treatments or services extended to children, those with a disability, a craniofacial disorder and/or those on social assistance (Quiñonez, 2009). In fact, children and the disabled are prioritized in all Canadian jurisdictions, receiving the greatest entitlements from all funding sources, for care that ranges from preventive to prosthetic services. Conversely, those on social assistance have the most restrictive and varied coverage as determined by the various social assistance schemes (Quiñonez, 2008).

Again using Ontario as the example, eligible children across the province are covered for a reasonably full range of services under four of the above listed programs: Children in Need of Treatment (CINOT), Healthy Smiles Ontario (HSO), Ontario Disability Support Program (ODSP) and Ontario Works (OW). Funding for adults, however, is much more limited and more variable. Adults with disabilities are provided a reasonably full range of service covered under ODSP, while adult recipients of OW are provided coverage for emergency dental care. OW benefits are discretionary and cost-shared between the municipality and the Ministry of Community and Social Services and therefore are highly dependent on regional budgets. As a result, limits to care vary by region. For instance,

adult recipients of OW living in the Durham Region find their benefits limited to emergency dental treatment for no more than two teeth per year (Durham Region, 2011), while those living in the London region can receive restorative care for two teeth and up to four extractions every six months (Middlesex-London Health Unit, 2010). Those in the Middlesex region are limited to services for relief from pain and infection to a maximum of \$250 per year (Middlesex-London Health Unit, 2010), while in the Muskoka region the annual maximum is \$400 (District of Muskoka, 2012). In some cases municipalities also support local programs for special target populations such as seniors (City of Toronto, 2006; Peel Region, 2011). Here too, regional variation in programming is the norm. For example, seniors in the City of Toronto are eligible for, but limited to, one course of dental treatment and a cost-shared denture program (City of Toronto, 2006), while in the region of Peel, low-income seniors can access a fairly extensive public program. (Peel Region, 2011).

There is an irrationality evidenced in this variation in programming even when balanced against the obvious advantages of being able to respond to local needs. Citizens and policy makers quite rightly ask: *who* is covered under publicly funded dental care programs and for *what services*? Unfortunately, the answers are not easily determined. The need for clear and explicit rationing decisions that are taken openly and fairly becomes more obvious when balanced against the backdrop of limited healthcare resources, an informed and empowered consumer, and an increasing array of intervention options (Daniels & Sabin, 2008; Kernick, 2002). In fact, allocating public money for dental care in the absence of clear, transparent, and evidence based rationing principles and rules raises a number of practical and ethical questions: Who is benefitting from publicly funded dental care and who is disadvantaged by the distribution of these limited resources? Is there a fair distribution of public services for dental care in Canada, in Ontario? Simply put, is the best being done with the very limited resources available?

### **What are the implications of this distribution of resources?**

Dental care in Canada, with a system based on the private delivery of care financed largely through employment-based insurance and/or out-of-pocket expenditures, is distributed largely according to market forces. Simply put, treatment decisions are

generally driven by what individuals can afford. Hart (1971) warns that when market forces are used to distribute health care services the result is a less than optimal distribution pattern. Typically, the rich get too much and the poor too little producing consequences which are both unjust and irrational.

For example, while dental disease and its burdens have been shown to decrease with household income, dental visits have long been shown to increase with household income (Locker & Millar, 1999; Leake, 2006; Locker, Maggiri, & Quiñonez, 2011). Locker and Miller (1999) demonstrated that, after controlling for sex, age, income educational attainment and employment status, the odds of seeing a dentist were more than two times greater for those with insurance than those without. Furthermore, poorer families are two times more likely to be uninsured or publicly insured than those in higher income groups (Health Canada, 2010). These income and insurance inequalities produce financial barriers that contribute to inequities in both access to dental services and in oral health outcomes for low-income and uninsured Canadians (Grignon, Hurley, Wang, & Allin, 2010; Locker, Maggiri, & Quiñonez, 2011). In essence, they form a foundation for determining who gets care and who does not.

Given that utilization of dental services increases with the presence of insurance, it would seem logical that public insurance would improve access and oral health outcomes for those deemed eligible. To that end, determining who is eligible for publicly funded care would seem to have paramount importance in improving health outcomes. However, Quiñonez et al. (2011) report that only 30-40% of those with public insurance utilize dental care and thus the effect of insurance on financial barriers does not, of itself, ensure access nor necessarily improve health outcomes. In fact, utilization is also influenced by factors such as the availability of providers who accept publicly funded clients and the acceptability of the range or type of services that are covered in such plans; concepts that are central to limit setting decisions (Bedos et al., 2003; Bedos et al., 2005; Bedos, Levine, & Brodeur, 2009; Muirhead, Quiñonez, Figueiredo, & Locker, 2009; Thomson, Williams, Broadbent, Poulton, & Locker, 2010; Wallace & MacEntee, 2012).

With respect to eligibility or rather who is covered by public insurance programs, again the working poor (WP) provide the best example of the significant weaknesses of the

present policy approach in Canada. The current logic in dental care centers on personal responsibility, meaning children and the very poor should not always be held responsible for their circumstances; hence public support is extended to them (Quiñonez, 2009). Similarly, the employed, as “responsible members” of our society, are supported through tax incentives that support non-wage benefits in the form of dental insurance (Leake, 2006; Quiñonez, 2009; Quiñonez & Figueiredo, 2010). However WP persons, who are neither earning enough to afford care on their own nor employed in the types of jobs that offer dental insurance, find themselves ineligible for public assistance as a direct consequence of being employed (Quiñonez, 2009; Quiñonez & Figueiredo, 2010). It has been reported that WP families do worse across a variety of self-reported oral health outcomes (e.g., dental visits, oral pain), when compared to their no income, publicly insured counterparts, and when compared to their higher income, privately insured counterparts (Quiñonez & Figueiredo, 2010). As such, for the WP, where the policy notion of responsibility should privilege them, given their employment, they actually suffer the most in some respects (Quiñonez & Figueiredo, 2010).

Beyond the intricacies and complications of considering who should be eligible for publicly funded care lies another daunting task – namely determining the types of service that should be provided to those deemed eligible. There is little question that access to health services is only one of a variety of broader determining factors that ensure health (Hart, 1971). However, in the case of dentistry, with relatively simple and proven treatments most oral disease can be prevented, eliminated, or at the very least effectively managed. Therefore, some argue that the effectiveness of dental treatment in immediately relieving pain and/or infection, restoring function, and preventing disease perhaps elevates its importance as a determinant of health (Locker, Maggiri, & Quiñonez, 2011). In fact, Wamala et al. (2006) demonstrated that access to dental services accounted for more than 60% of the socioeconomic differential in the oral health of Swedish adults. However, there is little clarity about what those services ought to be.

Determining what services should be publicly funded is in many ways more challenging than identifying who these programs should cover. Societies could choose to simply fund tooth extractions to relieve the pain and infection of dental caries or focus public money

upstream on prevention, or share the costs of preventing disease and fully restoring teeth and surrounding tissues (Anand, Peter, & Sen, 2009; Daniels & Sabin, 2008; Dharamsi & MacEntee, 2002). A review of international systems conducted for this thesis reveals that other societies have tended to focus public funding on one or more of the following areas: relief from pain and infection, restoring function, and prevention. Evidence from qualitative reports of patient experiences with publicly funded dental care would suggest that aesthetics and function are also key considerations (Bedos et al., 2005; Bedos, Levine, & Brodeur, 2009).

Clearly, the choices are broad and complicated by the fact that there is a lack of consensus on the definition of a reasonable level of oral health (Ozar, 2006a; Spencer, 1980). Nonetheless, choices must be made and intuitively it would seem that estimating need and employing robust evidence to derive appropriate treatment options would properly inform decisions on what services to include or exclude. However, both estimates of need and evidence-based decisions are underpinned by value judgments and experts suggest that it is necessary to properly recognize the complex interplay of these and other factors in addressing these decisions (Baltussen & Niessen, 2006; Dharamsi & MacEntee, 2002; Ozar, 2006; Spencer, 1980). When the treatment or care that is covered is out of step with the values of providers, patients and/or society at large it threatens the availability and the utilization of care.

In an effort to better understand the availability and utilization of publicly funded dental care, researchers have begun to investigate the value patients and providers place on the care allowed by the current allocation (Bedos et al., 2003; Bedos et al., 2005; Bedos, Levine, & Brodeur, 2009; Quiñonez & Figueiredo, 2010; Quiñonez & Locker, 2007; Quiñonez, Figueirdo, & Locker, 2009; Wallace & MacEntee, 2012). Importantly, providers have been shown to be frustrated by the limits to service that are imposed by public programs. They complain that when service is limited to the extraction of teeth with little or no allowance for their replacement it leaves them feeling a sense of therapeutic failure (Pegnon-Machat, Tubert-Jeanin, Loignon, Landry, & Bedos, 2009; Quiñonez, Figueirdo, & Locker, 2009). This frustration combined with their complaints about publicly funded patients as irregular attendees, and low rates of remuneration, and

the slow (or denial of) payment in public insurance programs (Pegnon-Machet, Tubert-Jeanin, Loignon, Landry, & Bedos, 2009; Quiñonez, Figueirido, & Locker, 2009) causes them, in some cases, to limit or withdraw from treating publicly insured patients (Bedos et al., 2003; Dharamsi, Pratt, & MacEntee, 2007; Pegnon-Machet, Tubert-Jeanin, Loignon, Landry, & Bedos, 2009; Quiñonez, Figueirido, & Locker, 2009)

Similarly, adult recipients of publicly funded care report a sense of dissatisfaction with public programs which limit treatment largely to extractions providing few options for saving or replacing teeth (Bedos et al., 2003). While relief from pain is a paramount concern, publicly insured individuals also define oral health in a social manner meaning they place a high value on appearance (Bedos, Levine, & Brodeur, 2009). For them, the decision to seek care lies in the balance between these two priorities and they report often delaying dental treatment for as long as possible knowing the most likely remedy will be removal of a problematic tooth (Bedos et al., 2003; Bedos, Levine, & Brodeur, 2009; Quiñonez & Figueiredo, 2010; Wallace & MacEntee, 2012)

Another important dimension of setting limits and defining basic care derives from understanding the need in a given society. However, when assessments of need are used to prioritize treatments in public health programs, attention must be again be paid to the value of the treatment given by various members of society (Daniels & Sabin, 2008; Spencer, 1980), for professionals are more likely than patients to count all health needs as special and assign them a high priority providing an over-estimation of needs relative to patient assessments. Ozar (2006) suggests that basic care should include whatever care is properly judged as necessary in society, for people to secure a level of health that is reasonably necessary for normal and appropriate human functioning, as defined by the presence of pain or limited ability to eat or speak. While these views stress the importance of recognizing the impact of value judgments on determinations of need and basic care, they do little to define what services might constitute an essential basket of goods.

The current array of allowed services in Canada's public dental programs provides an ample glimpse of the type of irrationalities that can and do occur in defining what treatments are covered. Perhaps the best example is evidenced in the benefits extended to

social assistance recipients in Canada. Unlike the working poor, adults on social assistance are recognized to be in need and thus eligible for dental coverage. However their benefits are limited to emergency care, with funded services often largely restricted to extractions (Quiñonez, 2008). Meanwhile, their children qualify for a much wider range of care, one that includes restorative treatments for which there is substantial evidence of poor prognosis and outcomes and significantly higher remuneration rates. Using Ontario as an example, adults on Ontario Works (OW) may have to persist in pain or live with missing teeth resulting from a lack of affordable, available and acceptable care. However under the same program, their children are entitled to have white colored fillings in posterior teeth, which have a reduced life span (particularly for high risk patients) and are paid at a rate of approximately 1.5 times the traditional silver colored restoration (Quiñonez, 2009). In light of this, it cannot be argued that, thus far, the basket of essential oral health care has been defined in a way that reflects evidence based practice, need or even societal values.

Clearly, going forward, the challenge for society in improving access to care is to set clear, transparent, evidence based rationing criteria for publicly funded dental care; criteria that can be used to more fairly define both who is eligible and what types of care will be publicly funded. While there is little on this topic specific to dentistry, we can draw upon the lessons reported on rationing health care resources in the medical and bioethics literature.

### **What can we learn from health care and other jurisdictions?**

#### *Rationing as a concept in healthcare*

The resources that fund our health care system are finite. That said, Canadian policy reflects the belief that health care should be distributed with an eye to equity, at least with respect to the issue of need. Yet given the incredible advances of the 20<sup>th</sup> century with respect to treatment options, society can no longer afford to provide all the health care services its citizens need, never mind the ones they desire (Daniels & Sabin, 2008). Health care remains but one of a number of social goods such as education, childcare, and unemployment programs that the government must provide within a fixed budget (Daniels, 2001; Daniels & Sabin, 2008).

Given both the finite nature of resources, publicly funded health care must be rationed. Rationing means setting limits that establish who is eligible, what type of care is provided, and how much can be received. When guided by principles of justice, this requires that peoples' needs be met fairly despite the limited resources (Daniels & Sabin, 2008). However, determining what is fair is more difficult than it appears. People have unique value systems that, more often than not, make them disagree on what the limits ought to be (Daniels & Sabin, 2008). Regardless, limits are set one way or another and these limits determine how money for health care services is allocated. There has been much debate about how to best establish these limits over the last 30 years. The insight of experts and the lessons learned are evidenced in the medical, economics and ethics literature (Anand, Peter, & Sen, 2009; Daniels & Sabin, 2008). While there are no clear answers as to *what* limits to set, or *how* best to establish them, two important ideas have emerged, which form the foundation for this study:

1. There is a need to move away from implicit rationing and toward more explicit methods, which employ clear, transparent, evidence based approaches to setting limits.
2. Limits are expressions of the values of society; therefore they should be informed by stakeholder input in a manner that extends beyond the reliance on traditional content or technical experts. Social systems, like health care, are in fact meant to reflect the values of the society for which they are developed.

Decision-making on the prioritization of health care services is complex and requires the consideration of many issues such as evidence, values, resources, costs and benefits and is complicated by the fact that these issues are viewed through a filter that is largely defined by local structures and processes (Flood & Erdman, 2004). Simply put, there are many political, professional and societal forces at play in these discussions. For example, there is ample evidence that the views of the medical profession have had undue influence on the rationing of medical services in a manner that reflects self-interest (Flood & Erdman, 2004). Similarly, the dental profession has been instrumental in the rationing of public dental care in a manner reflecting long held professional values which

prominently position individual responsibility and fee-for-service private delivery for oral health care over other considerations (Quiñonez, 2009).

The Canadian public is now weighing in on the allocation of public money for health care. The current attention to dental care by the media suggests there is a disconnection between the professional values that have shaped dental care policy and those of the larger public. Quiñonez et al. (2007; 2009) confirmed this when they identified that only 14% of dentists believe that dental care should be included in Canadian Medicare compared to approximately 82% of the Canadian public. While dentists focus on public funding mechanisms and argue that they should function more like private insurance schemes and should more adequately remunerate providers for the services provided (Quiñonez, Figueirido, & Locker, 2009), Canadians appear to be more focused on equity as they argue for the expansion of available services to larger segments of the population (Quiñonez & Locker, 2007; Quiñonez, Figueirido, & Locker, 2009).

#### *Lessons in rationing healthcare*

While little attention has been paid to rationing in dentistry, the literature is rich with evidence detailing rationing efforts in medicine that can be used to guide similar efforts in dental care (Daniels & Sabin, 2008; Ham & Robert, 2003; Landwehr, 2009). For example, in the early years of Medicare, there were limited options for clinicians, and patients did as they were told. Any values that contributed to the decision making process were implicit and determined largely by the clinician (Breyer, Klimet, & Thiele, 2002). Given the technical nature of the necessary decisions, what followed was the development of a system that relied heavily on the decisions of the experts. Who was eligible for care and what type of service was deemed appropriate were, to a great extent, the decisions of health care professionals. Rationing occurred implicitly based often on patient level factors such as age, sex, socioeconomic status, and ethnicity (Breyer, Klimet, & Thiele, 2002). Daniels and Sabin (2008) argue that this type of implicit meso-level (clinician level) decision-making on *who gets what service* challenges the fair distribution of healthcare particularly when the decision criteria are not clear and transparent. While it remains a common approach to rationing care today, the emotional and apparent irrationality of relying on providers of care to set limiting priorities

inherently leads to implicit, non-democratic, inconsistent and non-transparent decision rules and processes (Landwehr, 2009).

By the 1980's under the pressure to control costs, many governments began to investigate how to better ration health care services (Ham & Robert, 2003). In the dawn of the evidence-based era there was (and still remains) little question regarding the importance of good science as a basis for recommending interventions. Thus these first generation solutions to rationing resulted in investments in health technology assessments (HTA) as a mechanism to better allocate health resources. Early efforts focused largely on closing the information gap regarding the effectiveness and efficiency of health services as an answer to deciding what limits to set or specifically what services to fund. While investing in HTA provided important information on the cost-effectiveness of interventions, it failed to provide simple and complete solutions to allocating resources. As detailed in the paragraphs that follow, priority setting would still require that policy makers make judgments about the relative priority or value of particular services.

The Oregon Health Plan (OHP) provides an early and unique example of explicit rationing that drew largely upon cost-effectiveness evaluations. In 1989, Oregon enacted health reform that aimed to extend medical insurance coverage to all its' citizens by mandating private employers to provide workers with health insurance while at the same time expanding the state-funded Medicaid program to all people below the poverty line (Oberlander, Marmor, & Jacobs, 2001). The project intended to extend public coverage to more people by making rationing criteria explicit with a process that required deriving a list of condition-treatment pairs prioritized according to their net benefit, using quality of life preferences, cost-benefit analysis and medical outcomes data. Once ranked, this list was meant to provide an objective and scientific rationale for setting funding priorities. A cut-off line, determined by the size of the budget, was established which determined the categories of treatment to be included or excluded from funding. When this exercise resulted in ranking tooth capping over appendectomies it became evident that technical solutions, which focused on efficiency and effectiveness, were inadequate in addressing the complexity of rationing decisions (Glass, 1998; Ham & Robert, 2003). One of the many lessons offered by the OHP is that ultimately setting priorities on health care cannot

be systematically derived from cost-effectiveness analyses alone (Oberlander, Marmor, & Jacobs, 2001).

International experiments in rationing healthcare throughout the 1990s identified another important lesson; the allocation of scarce resources is at once an economic challenge and a political puzzle (Ham & Robert, 2003). Given that choices in healthcare involve value judgments about the relative priority of one service over another, it follows that wider acceptance occurs when these choices are informed by community preferences. As an example of the influence of provider values on rationing, there was an apparent reticence of providers and administrators in the OHP to abide by rules established for rationing when operating on the front lines of health care (Oberlander, Marmor, & Jacobs, 2001). For even though services were ‘delisted’, they were often made available through loopholes or by hand reordering of priorities at the meso-level (Daniels & Sabin, 2008).

With this in mind, global efforts to improve the explicitness of rationing began to take the form of national frameworks or guidelines in the hope of better engaging the co-operation of decision-makers (Ham & Robert, 2003). The National Health Service (NHS) in the UK provides one of the most well known examples of this approach. In an effort to address the inequities that flowed from local programming decisions in what came to be called ‘rationing by postcode’, the NHS invested in health technology assessment and formed an advisory group to provide information on effectiveness and efficiency of various medical treatments and procedures. Established in 1999, today the National Institute for Clinical Excellence (NICE) acts as a robust national repository for evidence and recommendations on clinical interventions. This approach certainly recognizes the complexity of setting limits and eases the political pressure however the guidelines are not legally enforceable or binding, and as such, some experts suggest that by and large they provide little substantive help in resource allocation exercises (Ham & Robert, 2003; Oberlander, Marmor, & Jacobs, 2001; Daniels & Sabin, 2008). Still others suggest that the publicity of their recommendations, which include detailed rationales that make specific reference to evidence as well as their social values framework make it politically difficult for health authorities to run counter to the recommendations (Daniels & Sabin, 2008).

Fortunately in the decades since the early rationing exercises of the OHP and NICE, the need to identify solutions that incorporate values, employ sound technical approaches and include proper decision-making processes has been identified (Daniels, 2001; Daniels & Sabin, 2008; Ham & Robert, 2003). In fact, in what is described by Holm (1998) as second-generation discussions, “policy makers [in the 1990’s] began to turn attention to strengthen decision making processes in order to generate legitimacy for rationing” (Ham & Roberts, 2003; p 9). Expert committees in Denmark and Sweden began to widen the debate about priorities to include a range of stakeholders in an effort to improve the transparency and accountability of decision-making (Ham & Roberts, 2003). Daniels and Sabin (2008) identified the same characteristics to be important in their ‘accountability for reasonableness’ decision-making framework. In this way, procedural justice had begun to figure more prominently in the debates.

Concepts of justice relative to the distribution of health care services also began to be part of the discussions (Anand, Peter, & Sen, 2009). To be sure, issues of equity drive the need to address health care rationing in a way that recognizes the value placed on health and health care by society rather than solely relying on efficiency and effectiveness measures. In short, equity sometimes requires trade-offs in efficiency (Daniels, 2001). So while decisions of what health services should be funded publicly are necessarily supported by evidence, they are also tied into value decisions that are based on what that society holds paramount (Daniels & Sabin, 2008).

Given the complex nature of priority setting combined with the inevitability that the decisions raise moral controversies, Daniels & Sabin (2008) suggest that decision-making processes involve deliberation about the very principles that drive the debate. It follows then that there are stakeholders whose values make an important contribution to the development of appropriate rationing rules for publicly funded health care (Daniels, 2001). In an effort to clarify the values that should guide limit-setting decisions, the Netherlands, Sweden, New Zealand, UK and Oregon have transcended the traditional reliance on technical experts by including stakeholder consultation in more recent rationing exercises (Ham & Robert, 2003; Daniels & Sabin, 2008).

Using the town hall meetings of the Canadian Medical Association as one example, it seems there is a similar evolution in thinking about how to approach rationing in Canada. Recent attention on the lack of access to dental care for low income Canadians demonstrates a raised awareness in public and professional circles about the significant gaps in care that have resulted from the current policy approach (Welsh, 2007a, Welsh, 2007b). The identification and release of funds for special interest groups can also be interpreted as realization of the issue at the government level (Province of Ontario, 2008). Are these events indications that the current principles driving allocation decisions may not be in step with societal values or useful as policy instruments? It appears there is an opportunity or perhaps a need to move beyond our reliance on the technical or scientific experts and employ a wider array of stakeholders in exploring the principles and rules that should govern the rationing of publicly funded dental care.

Broad expert or stakeholder consensus, when properly defined and well developed, provides a tool for improved decision making by combining the best available evidence with relevant expertise and insight on values (Bruni, Laupacis, & Martin, 2008; Coulter, 2001; Gibson, Martin, & Singer, 2005a). In this way, it fills the gap where scientific evidence alone fails to provide sufficient answers to complex questions (Cramer, Klasser, & Epstein, 2008). Thus, consensus that is drawn from a broad spectrum of stakeholders in society could provide better clarity regarding *who* and *for what services*, thereby making a valuable contribution to the present policy debates on fair and equitable distribution of publicly funded dental care. To date, information on the opinions of both dentists and the Canadian public regarding publicly funded dental care have been reported (Quiñonez & Locker, 2007; Quiñonez, Figueirido, & Locker, 2009). Qualitative inquiries have provided insight into the experiences of dentists, allied health and social service workers and publicly funded patients (Bedos et al., 2003; Bedos et al., 2005; Bedos, Levine, & Brodeur, 2009; Wallace & MacEntee, 2012). The opinions of these stakeholders on *what limits* and *why* would be a beneficial addition to the better rationing of publicly funded dental care.

## **Objectives**

The specific aim of this study was to identify the principles and rules used by stakeholders in making limit-setting decisions for publicly funded dental care. It asked participants to respond and explain their answers to two questions. *Who* should have priority for publicly funded dental care? *What services* should be publicly funded for the populations identified as a priority? In posing these questions, it was anticipated that a level of consensus could be reached to inform policy makers about how to more fairly ration publicly funded dental care.

# Methodology

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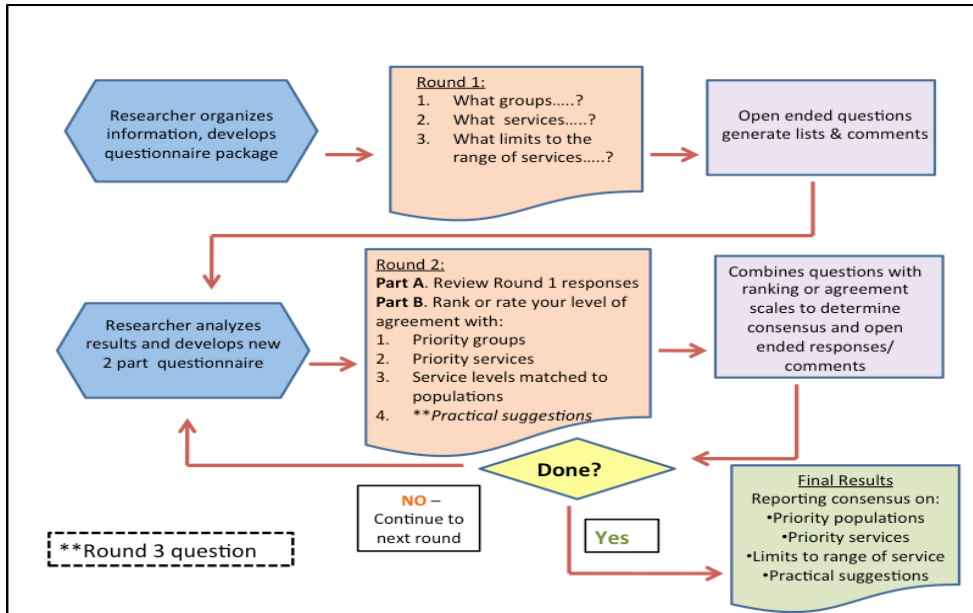
## **Preamble**

The following sections detail the rationale for and the design specifics of a modified Delphi study. Importantly, and as a major caveat to this study, this thesis reports the findings of the first round of this study. The quantity and quality of the data collected in the first round more than provided for the depth of analysis required for a Masters thesis. Given the need for a reasonable timeline for completion of the researcher's thesis, the supervisory committee felt that the investigation could be stopped at the first round and limited to the analysis and presentation of the first round of data.

## **Study design**

A three round modified Delphi survey was proposed to determine if consensus could be reached among stakeholders on rationing principles and rules for publicly funded dental care in Ontario. The Delphi technique has proven as an effective way to gain and measure group consensus on complex topics for which there is more than one clear option or course of action. It has been widely used in both social sciences and healthcare (Adler & Ziglio, 1996; Keeney, Hasson, & McKenna, 2001). The three rounds proposed are outlined in Figure 1. While background on the Delphi methodology is described below, it is important to note that this study was terminated at Round 1 as indicated above.

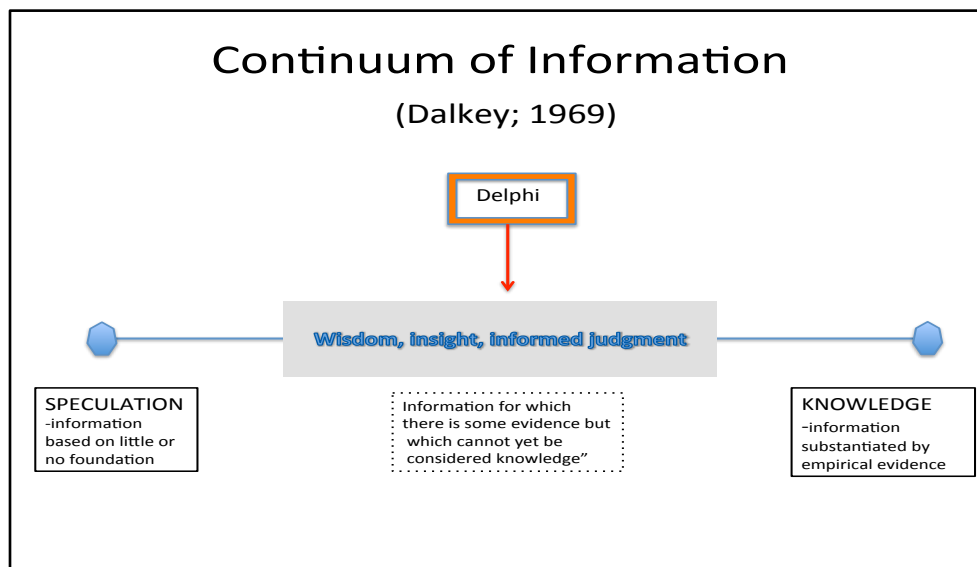
Figure 1 - Proposed modified Delphi process



## The Delphi process

The Delphi was developed by Dalkey and colleagues at the RAND Corporation in the 1950's to guide decision-making in situations where there is incomplete evidence and/or an absence of agreement on the best course of action as outlined in Figure 2 (Adler & Ziglio, 1996).

Figure 2 - Dalkey's model on informed decision making



It consists of a structured systematic process of repeating rounds of questionnaires and feedback, where each subsequent set of questions or statements is built on the responses to the preceding ones. Consensus is sought through the feedback of information and iteration and can be determined by the aggregate or pool of individual judgments (Delbeq, Van de Ven, & Guftafson, 1974), a move to a subjective level of central tendency or by the stability or consistency of answers between the successive rounds (Dajani, Sincoff, & Talley, 1979; Delbeq, Van de Ven, & Guftafson, 1974). Participants remain anonymous throughout the discussion of complex topics allowing them to be more open with their answers (Holey, Feeley, Dixon, & Whittaker, 2007). This is particularly relevant when it is necessary to engage participants from a wide range of backgrounds and expertise where power imbalances are a potential (Adler & Ziglio, 1996).

In this study, round one was a 28-item questionnaire with closed and open-ended questions that asked participants to provide and explain their answers to questions about priority populations and priority services or treatments in publicly funded dental programs (Appendix 1). Its' purpose was mainly to surface ideas for exploration in the subsequent rounds. Rounds two and three were planned to require panelists to rank or rate their level of agreement with the ideas generated (Holey, Feeley, Dixon, & Whittaker, 2007). Given that respondent fatigue is an issue with Delphi methods experts suggest the process outlined was limited to three rounds of questioning (Cramer, Klasser, & Epstein, 2008; Keeney, Hasson, & McKenna, 2001).

In order to disseminate the questionnaires, capture and analyze the data in a timely manner, an online survey format was chosen and developed using QuestionPro. QuestionPro Inc software allows for the design and analysis of complex questionnaires including skip logic, ranking and unlimited character capacity for open-ended responses. QuestionPro also allows participants to access the survey using mobile devices thereby increasing the ease with which participants could interface with the tool. The survey was made available to participants via an email message with the following link: <https://questionpro.com/t/AHPS0ZLmgT>

## **Ethics**

This study required the collection of data from human subjects, thus ethics approval from the University of Toronto Office for Research Ethics was required and obtained (Research protocol #27033).

## **Sample and recruitment**

In keeping with the Delphi methodology, a purposive sample was assembled to reflect the views of the variety of stakeholders who encounter rationing decisions in an attempt to achieve a balanced view of the issue (Bruni, Laupacis, & Martin, 2008; Coulter, 2001; Gibson, Martin, & Singer, 2005b). Participants were required to have at least two years experience with the issues of rationing publicly funded dental care in Ontario specifically or in Canada generally. The sample was constructed to reflect the opinions of those who have experience with funding decisions, those who view the issue from an academic perspective, those with expertise in the clinical aspects of dentistry, those with experience in major dental organizations (i.e. Canadian Dental Association and the Canadian Dental Hygienists Association), those with knowledge/experience in other healthcare or social service areas and those who can speak from the perspective of clients. While it was the intention to recruit actual patients it proved impossible to identify any who were able to take part in a timely fashion. All participants were blinded as to the identity of the other panel members in order to assure the anonymity necessary to minimize potential intimidation biases and elicit open, honest responses (Cramer, Klasser, & Epstein, 2008).

The researchers assembled a list of potential participants and an email invitation was extended to those identified (Appendix 2). For those who indicated an interest, telephone contact was made in order to orient them to the purpose and methods of the project and the Delphi process. A summary of the background of rationing publicly funded dental care in Ontario was provided to familiarize panelists with the content area and to stimulate thought. As well, an overview of the methodology was provided (Appendix 3). After being fully oriented to the methodology and purpose, each participant was again asked if they were interested in participating. Those who gave verbal consent were sent an email containing the link to the electronic survey instrument (Appendix 4).

Throughout this recruitment process, those we initially approached to participate made suggestions about additional stakeholders as potential participants. Where they met the inclusion criteria, the participant making the suggestion was asked to make the first contact with the individual he/she suggested via email. This was done in order to respect the privacy of the individual identified and to increase the likelihood of engaging new participants. The principal investigator provided the original email invitation, which was forwarded to the potential participant, who was then asked to direct make contact if they were interested in participating. Once contact with the principle investigator was made, the recruitment process continued in a manner consistent with those on the original list.

### **Survey instrument**

The first page of the online Delphi tool stated the purpose of the study, described the study process, identified the risks/harms, specified the participants' rights (including the right to withdraw) and provided contact information for the Principal Investigator, Linda McKay and her supervisor, Dr. Carlos Quiñonez (Appendix 5). The panelists were required to consent by checking a box indicating they had read and understood the consent form, that their participation was voluntary and they were 18 years of age or older. They were blocked from the survey instrument if they did not indicate their consent to participate.

The 28-item survey instrument was divided into three parts (Appendix 1). Part A contained questions that explored stakeholder opinion on the appropriateness of current rationing strategies. Part B required participants to make decisions on rationing dental care according to these strategies by choosing 'who' they would prioritize and 'what services' they would include and/or exclude. Finally, Part C asked if they felt any groups should receive a comprehensive package of services or if there were any groups who should have a restricted package of benefits. Prior to its dissemination, the instrument was pilot tested for clarity by five individuals from the academic staff at the Faculty of Dentistry, University of Toronto, or George Brown College in the Dental Hygiene program.

The distribution of questions related to the key areas of interest as follows:

1. Appropriateness of current rationing strategies
  - Rationing by population group alone (Question 1 – 3)
  - Rationing by service or treatment alone (Question 4 – 6)
  - Rationing by population group and service or treatment (Question 7 – 9)
2. Application of current rationing strategies
  - Prioritization of population groups by age alone (Question 10 – 12, 15 - 17, 20 - 22)
  - Prioritization by age and other criteria (Question 13,14, 18, 19, 23, 24)
  - Prioritization of service or treatment categories (Question 25)
3. Service level to population group matching
  - Comprehensive coverage (Question 26)
  - Limited coverage (Question 27)

The final question (Question 28) asked respondents for any additional comments or views they would like to share on the rationing of publicly funded dental care.

Given the nature of the question being addressed, the survey was designed to be largely open-ended. In order to best generate comprehensive responses, the survey tool was also designed to allow respondents to preview the questions prior to answering, if they wished. In addition, the software permitted participants to save and exit at any point. Upon re-opening the link, they were directed to where they had left off. Software logic was embedded which directed respondents through the questionnaire based on their responses to key questions. Each question encountered required an open-ended response and the survey allowed participants to enter an unlimited number of characters giving them the ability to fully express their thoughts. The flow of the questionnaire as well as the specific direction, intent and response categories for each question are detailed in Appendix 6.

### **Data analysis**

Data were exported from the QuestionPro platform, and managed and analyzed using Microsoft® Excel® for Mac 2011 version 14.1.4. Descriptive statistics for categorical variables included reporting mode and percentage of those in each category. Given that

this was to initially constitute a modified Delphi process, an *a priori* consensus level was established for categorical responses (Adler & Ziglio, 1996; Holey, Feeley, Dixon, & Whittaker, 2007).

Yet, as stated, given the extensively rich commentary provided by participants in the open-ended components of all questions, plus early evidence of aggregate opinion in most areas of the inquiry, it was clear that the qualitative aspect of the analysis was of paramount importance. Thus as described earlier, the research moved to undertaking and reporting a full qualitative thematic analysis of the data presented rather than simply summarizing the ideas presented in order to form the basis for the questionnaire required for Round 2 as initially proposed.

To that end, all open-ended text was analyzed for its implicit and explicit meaning using a thematic approach. Descriptive or open codes were created for relevant data segments line-by-line (Figure 3 and 4). Once identified, these open codes were then examined for their relationship and grouped into categories using axial codes. These categories became the rules for population eligibility and inclusion/exclusion criteria for treatments or services. In an iterative and inductive process, these categories were then further examined against the data and refined to produce the two themes that provided answers to the question regarding what principles guided stakeholders in determining who and what should be included in publicly funded dental care. Figures 3 and 4 provide an example of the codes, categories and themes derived from the data.

Figure 3 - Data analysis – Who ought to be eligible?

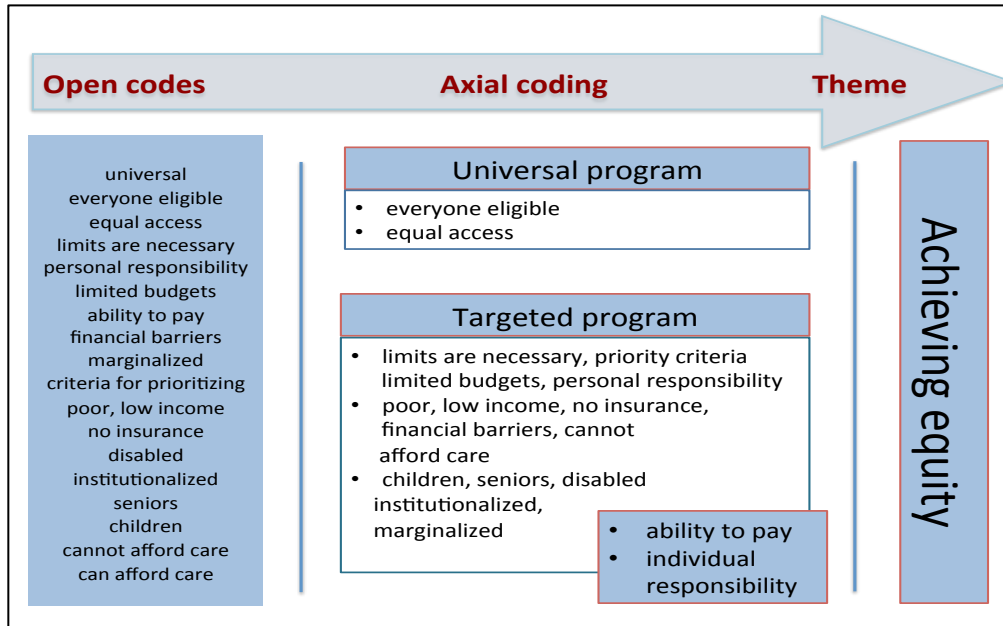
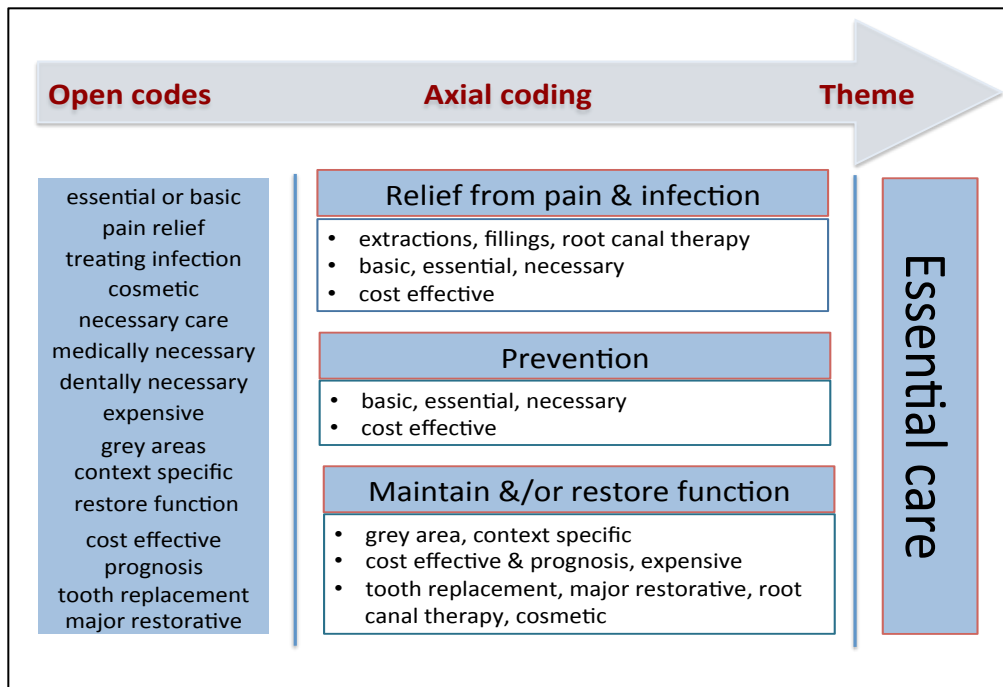


Figure 4 - Data analysis - Which services?



## Results

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Thirty-one potential participants were contacted to take part in the study. Five did not respond to the initial request, one declined claiming a conflict of interest, and another because of an inability to access the electronic survey. In all, 24 agreed to participate and completed the survey in its entirety. The sample composition is presented in Table 1.

*Table 1 - Participants and sectors in the sample*

<b>Sector</b>	<b># Invited</b>	<b># Participating</b>
Funders	7	4
Academics	4	4
Clinical experts	5	4
Dental organizations	5	5
Health & social service experts	7	4
Client representatives	8	3
<b>Total</b>	<b>31</b>	<b>24</b>

In answering our questions of what limits and why, stakeholders demonstrated that they believe limits are both necessary and unavoidable, and also demonstrated, either explicitly or implicitly, that their rationing decisions were guided by principles and defined by rules. Two important themes emerged early and remained consistent throughout their responses. These themes formed the foundation of what are referred to as the principles that stakeholders believed ought to shape publicly funded dental care. Additionally, the specific limits chosen through the prioritization exercises (i.e. who and what services) revealed useful rationing rules by which they attempted to achieve these principles.

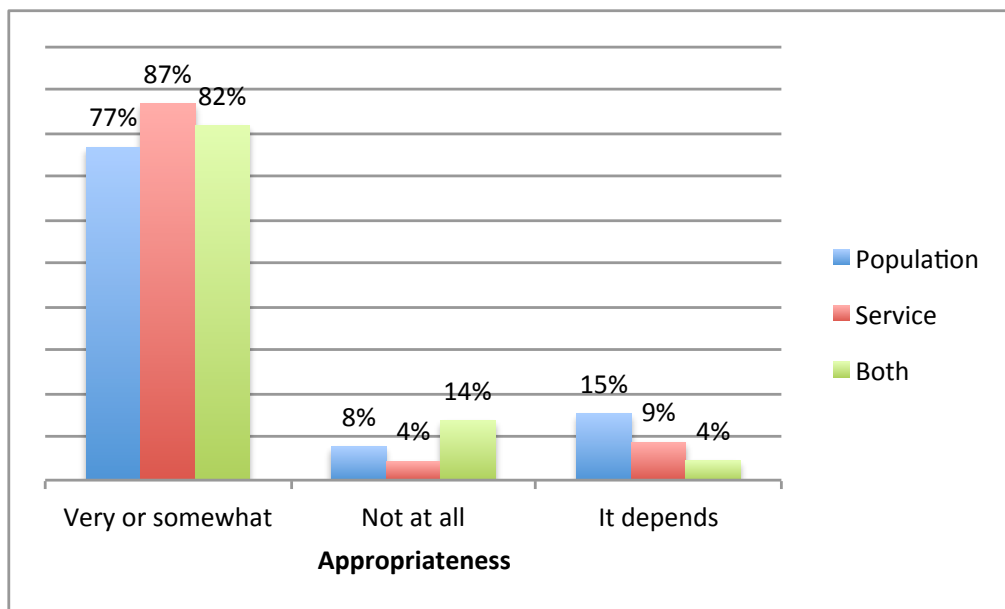
The findings of the study will be presented in three parts. The first section, titled *Setting limits to care*, summarizes stakeholders' positions on setting limits in general and

presents a model describing the principles and rules that emerged. The second part, titled *Guiding principles and rules for rationing*, details the responses that gave rise to the rationing rules associated with each of the principles. Finally, the third part provides stakeholders’ suggestions for improvements to rationing. Participants’ categorical responses to the closed-ended questions will be presented in charts as percentages where relevant. In addition, open-ended responses will be contextualized in tables and text that summarize the findings of the qualitative analysis.

### Setting limits to care

Part A asked, “How appropriate are the current rationing strategies?”. As demonstrated in Figure 5, there was overall agreement with limiting who is eligible, limiting what services are publicly funded, or combining both strategies as rationing strategies. In fact, 77% (18/24) indicated that it was very or somewhat appropriate to set limits based on particular populations, and approximately 87% (19/24) were similarly in favor of limiting services or treatments. Eighty-two percent (18/24) felt it was very or somewhat appropriate to limit both in terms of service and population group.

Figure 5 - Participant ratings of appropriateness of rationing strategies



Thus respondents could be seen to agree that limiting publicly funded dental care is appropriate and necessary. In their open-ended comments they explained that limits were

necessary to ensuring the best possible use of public dollars, and potentially an effective means by which to deal with the issue of disparity.

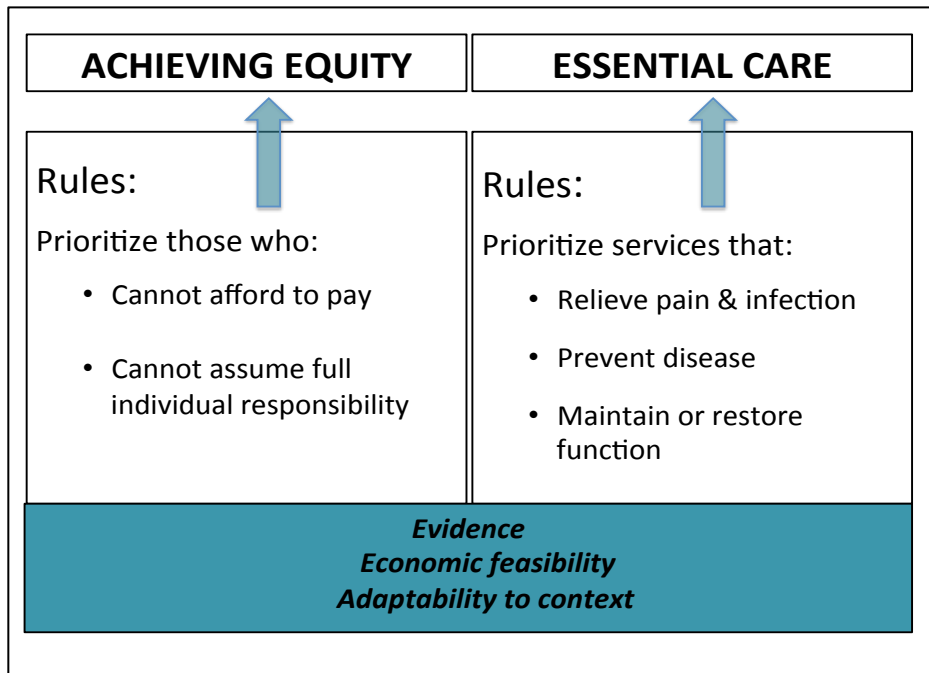
- “*There are not enough resources to deliver treatment without rationing in an appropriate manner.*” (N14)
- “*Rationing public oral health [services] is a cost-effective way of addressing oral health disparities.*” (R18)

Interestingly though, they also expressed the idea that the rationing of dental care should be better aligned with the decisions and approach used to ration medical services in Canada.

- “*We don’t make a distinction to population groups when it comes to medicare, why for dental care? Why is it any different?*” (M13)
- “*Dental care should be viewed in the same light as general health care and basic care for the population must be available.*”(J10)
- “*Ideally, like healthcare it may be appropriate to provide universal dental care for all. Given the expense of the private insurance plans perhaps a single payer may be a more affordable approach.* (K11)

Figure 6 shows the prevailing model that emerged relative to setting limits to publicly funded dental care. As will be developed throughout this chapter and demonstrated by evidence in the data, stakeholder considerations appeared to rest on principles of *achieving equity* and providing *essential care* as guideposts in the rationing of care. Most often, a universal program of essential services was seen by stakeholders as the ideal, however, in the absence any such program (or its political or economic feasibility), they stated that those who *cannot afford to pay* or *cannot assume full responsibility* for securing their own dental care should be prioritized (e.g., children and the disabled). They also stated that treatment should be limited to services required to *relieve pain and infection, prevent disease* and *maintain or restore function* (the latter depending on budgetary levels). Finally, stakeholders expressed that all inclusion/exclusion decisions should consider the best available evidence, recognize the realities of limited budgets, and must be sensitive to the context in which they are made (i.e., flexible).

Figure 6 - Proposed model for setting limits to care



### Guiding principles and rules for rationing

The following section details the responses that gave rise to the principles and rules used by stakeholders to arrive at a model of rationing publicly funded dental care (Figure 6). It is organized in subsections according to each of the principles and its accordant rules. In addition, Table 2 presents a summary of the two principles that emerged from the analysis as well as the key ideas associated with each that formed the foundation for the rules.

Table 2 - Principles, key ideas & respondent quotes on limits

Principle or theme	Key ideas	Respondent quotes
Equity	Universal program	Dental care is a health issue and should be universally accessible. (H8) Ideally, like health care, it may be appropriate to provide universal dental care for all. (K11) It is hard to exclude any group as all can make a case for support. (A1) We don't make a distinction to population groups when it comes to Medicare, why for dental care? Is it any different? (M13) Basic dental care should be part of OHIP. (T20)
	Targeted program	There are not enough financial resources to deliver treatment without rationing in [this] appropriate manner.(N14)
	*Limited budgets	Current financial circumstances make [universal care] an impractical goal. Thus it is acceptable (but not ideal) to provide for some and ration as equitably as possible. (G7) Limited funds are most appropriately used when directed to at-risk populations. (D4) Given the fiscal realities, we need to deliver care to those who need it most. (T20)
	*Individual responsibility	Coverage for people between employers could be less extensive to ensure an incentive to get work and get off OW. (19) Limits should be set to encourage as much personal responsibility as possible in oral health attainment. (X24) It is not logical to use public funds to pay for services for individuals who do not need the coverage (have dental insurance, have surplus wealth etc.). (V22)
Essential care	Basic services	A basket of basic services such as cleaning, filling cavities and oral health education should be covered. (N14) Only care that is essential for the maintenance of oral health should be covered. (C3) We should provide basic dental care to meet key objectives: prevention, freedom from pain and infections, maintain function. (J10) Some services are critical-such as prevention, oral health promotion and treatment of disease. (R18) Services which have a direct impact on health should be included. (U21) What [should be allowed] might be termed "basic dental care" i.e. emergency care, preventive care and basic restorative services. (P16)
	Elective services	Not appropriate to cover elective (e.g. cosmetic) services. (U21) Orthodontic treatment for cosmetic reasons has no place in publicly funded dental care. Veneers and tooth whitening also should be excluded. (B2) There are some services, such as teeth whitening that are not critical and should not be covered. (R18)

\*Decision criteria for recommending a targeted approach

## **On the principle of *Achieving Equity***

When asked to explain why limits are appropriate (or not), stakeholder comments revealed that their decisions are guided both by principle and practicality. On the issue of limits to population eligibility they appeared to be guided by their individual views on equity, but were also tempered by the practical limitations that result from a limited budget (i.e. economic feasibility). As a result, two key ideas emerged from their comments that represented options for addressing equity, namely universal or targeted programming. Stakeholder views on this divided largely along two divergent philosophical lines about where responsibility for oral health lies:

1. Oral health is a shared responsibility therefore basic oral health services ought to be provided universally with the costs shared by society.
2. Oral health is primarily an individual responsibility therefore basic oral health services ought to be provided in a targeted fashion only for those who are unable to assume this full responsibility.

A large percentage of participants, 63% (15/24), clearly indicated that universal programming is and ought to be the ideal. Importantly, however, most (12 of the 15) recognized that this was likely unrealistic given budgetary limitations. As a result, they moved to making choices that would form the basis of a targeted approach to the allocation of funds. In this way, the idea of universality as mitigated by budgets emerged.

- *“In an ideal world dental care should be part of OHIP [i.e. Medicare]. However given the present fiscal realities the most vulnerable people [...] should be given priority.” (T20)*
- *“Universal coverage of basic services is preferred but not realistic given the limited funding.” (G7)*

Alternatively, a few of those from a dental background (6/24) stated that a targeted approach was the preferred option. In their view, the need to set eligibility limits flowed from the idea that oral health is primarily an individual, not a shared responsibility, instead of from practical budgetary considerations, as above (Table 2).

- *“Oral health wellness requires in the main, personal responsibility. If one has universal access [this] adjusts the responsibility to the state rather than the person - thus rationing care to targeted populations allows for the*

*marginalized communities who are unable to or have no control over their personal health to receive care.” (X24)*

- *“Eligibility requirements are appropriate because there is some personal responsibility for maintaining and caring for one’s oral health. Those most eligible to receive care should be people who cannot take care [of] themselves.” (I9)*

Thus it became very clear that achieving equity, while the main outcome, was buttressed by either a philosophical stance on where the responsibility for health lies, or on the practicalities of budgetary realities.

### **Rules for *Achieving Equity***

Participants drew largely from two key ideas that formed rules for prioritizing population groups for a targeted approach to distributing resources (Table 3). They indicated that public programs ought to provide for those who:

1. Are unable to afford dental care.
2. Have a limited ability to provide fully for themselves such as children or those with a disability.

Table 3 - Rules for prioritizing populations

Principle or theme	Key ideas	Rationing rules	Respondent quotes
Equity	Targeted program	Ability to pay	<p>Public funds [...] are most appropriately used when directed to at risk populations who face financial problems in accessing care. (D4)</p> <p>Several populations currently fall through the cracks, equalizing their opportunity to receive care by removing financial barriers must occur before other factors can be addressed. (E5)</p> <p>I would argue that children, youths and adults living in poverty have a range of services suiting the preventive [...] and remedial work required. (L12)</p> <p>There are portions of the population who have the financial resources to obtain oral health services and the [...] government should focus on low-income individuals, including the working poor. (R18)</p>
		Limited personal responsibility	<p>Treatment for people between employers could be less extensive to ensure an incentive to get work and get off OW. Eligibility requirements are appropriate because there is some personal responsibility for maintaining and caring for one's oral health. (I9)</p> <p>Limits should be set to encourage as much personal responsibility as possible in oral health attainment. Essentially those individuals in society who have no control over their ability to care for themselves would benefit from [...] from comprehensive packages of [dental care]. (X24)</p>

### Applying the rules for *Achieving Equity*: Prioritizing populations

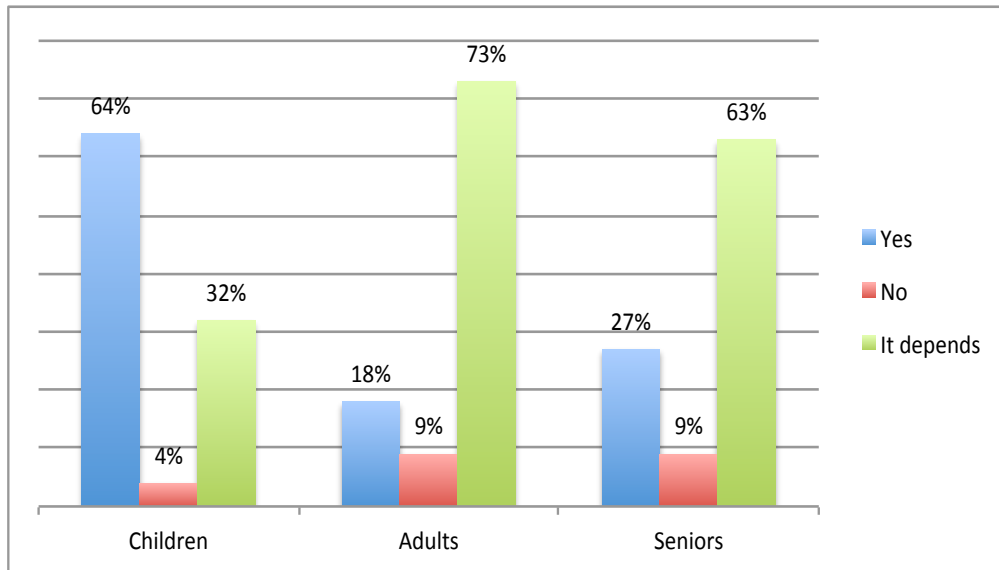
When asked to prioritize populations, participants could be seen to apply different weighting to the effect of personal responsibility across age categories. The words of one participant best summarize the overall sentiment with respect to children.

- *“Children are a high priority as they are a particularly vulnerable population [group].” (H8)*

In fact, 64% of them identified children as a priority (Figure 7). Another 32% indicated that children ought to be prioritized for publicly funded dental care on the basis of certain criteria, namely those who are from low-income families or are disabled.

- *“Individuals with disabilities and children are the primary groups. Essentially those individuals who have no control over their ability to provide care for themselves” (X24)*
- *“Children are unable to care for themselves, and if parents cannot afford treatment costs, it falls to the public programs to ensure their needs are met.” (I9)*

Figure 7 - Priority populations by age group



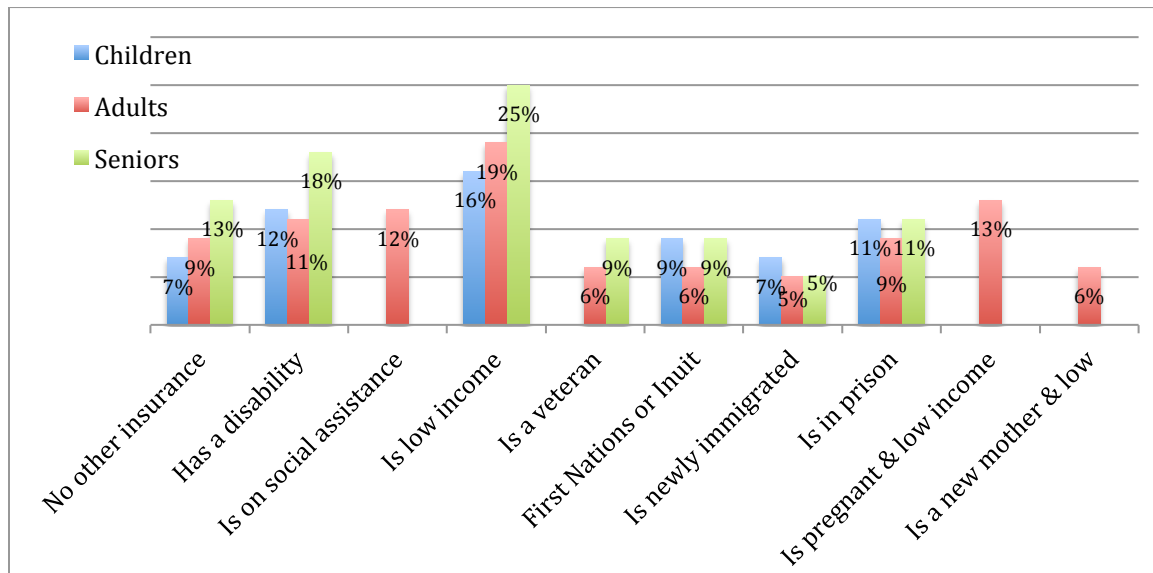
It is here that stakeholders introduced another important decision criterion; namely, the benefits of prevention and early intervention, including their cost-effectiveness ought to be considered when prioritizing population groups.

- *“Starting early in terms of preventive care [and] educational endeavors has to be considered a wise investment.” (P16)*
- *“Dental care, particularly preventive, at an early age will hopefully prevent problems later and reduce cost, time off work, improve the quality of life, etc.” (B2)*

Figure 7 shows that most also prioritized adults (73%) and seniors (63%), but in the case of these age group categories it depended more often on certain circumstances such as having a low income or a disability (Figure 8).

- *“Give high priority to low income, isolated, poor-health and dependent adults and low priority to others.” (D4)*
- *“Individuals with disabilities – essentially those individuals in society who have no control over their ability to provide care themselves would benefit from comprehensive package [of services].” (X24)*

Figure 8 - Factors in assigning priority to age groups



The prioritizing of adults and seniors was discussed or rationalized in the context of burdens on the medical system and/or society as a whole (e.g. parenting, employment) rather than as a benefit of taking a preventive approach.

- *“They are in their prime productive years, [...] responsible for grooming the next generation, oral health should be embedded in all the other health issues being discussed with them [...] to improve treatment outcomes not only for dental but other related illnesses.” (T20)*
- *“Access to affordable dental care would relieve much pressure and cost on health care.” (N14)*
- *“These are the primary productive years for employment, continuing education, etc. Poor oral health contributes to poorer outcomes in job seeking, quality of jobs, etc.” (H8)*

Three participants responded negatively to all questions regarding the prioritizing of the three age groups. One did so on the basis that universal programming was the ideal, which therefore precluded choosing one group over another. The others claimed that inability to pay and/or vulnerability were more relevant considerations in prioritizing access to dental services than age.

- *“Publicly funded dental care should be made available to any individual who faces financial barriers to access, independent of age or of the source of the barrier.” (C3)*

- *“It is hard to rank within these populations, we should really split the pie between all these groups. It is hard to exclude any group as all can make a case for support.” (A1)*

### **On the principle of *Essential Care***

As previously stated, stakeholders were largely in favor (87%) of limiting the services that should be publicly funded (Figure 5). The importance of properly defining what dental treatment constitutes essential care emerged early and remained consistent in the commentary across all questions on the issue of service limits. Thus it developed into the second important theme or principle presented in the analysis. In their words, care should be limited to that which is considered basic; a concept they defined as representing some essential quality to health or as being medically/dentally necessary.

- *“Only care that is essential for the maintenance of oral health should be covered.” (C3)*
- *“I think the population deserves to be allowed what might be termed ‘basic dental care’ i.e. emergency care, preventive care and basic restorative services.” (P16)*
- *“It is not appropriate to cover elective (e.g. cosmetic) services out of public funds [but] services which have a direct impact on the health of an individual should be included.”(U21)*

When asked to explain why service limits are appropriate, they raised the issue of accountability for, and the limits of, public spending as their primary rationale. Comments centered on the need to define for both professionals and patients what services are essential, and/or appropriately funded by public dollars.

- *“The current culture among providers is that they should be able to determine what treatment should be done for clients without limitations. However, the stark reality [...] is that this is unaffordable.” (T20)*
- *“[A]s much as we would like to think everybody works with integrity, it is not the case. There has to be limits to prevent abuse by providers and recipients.” (F6)*
- *“[We] [s]hould provide basic dental care to meet key objectives: prevention, freedom from pain and infection, maintain function. We do not have the resources to provide total dental care – address the disease (i.e. caries, [periodontal disease] and lesions of the oral cavity.” (J10)*

In what could be considered an important minority position, and in hearkening back to the issue of *achieving equity*, two participants argued that treatment services should not be limited in order to ensure equity in terms of the acceptability and appropriateness of care.

- *“Silver fillings and missing teeth are quite telling in terms of class identity [and therefore] all people should have access to the same array of services whether publicly or privately funded.” (L12)*
- *“Every kind of treatment has its place and there are no luxury items in dentistry as a category. Their use depends on the situation and treatment that best promotes health and function ought to be available.” (V22)*

### **Rules for defining *Essential Care***

There were three key ideas relative to defining the essentiality of care that formed the rules stakeholders applied in prioritizing treatments and services. Care was considered essential to health (i.e. medically or dentally necessary) if it was required to:

1. Relieve pain and infection.
2. Prevent oral or systemic disease.
3. Maintain and restore function.

While all three were consistently raised throughout the survey and well supported with reasons, it is important to note that these rules were not applied with equal weighting when prioritizing treatments. To be sure, the highest value was awarded to treatments or services that relieve pain and infection followed closely by those that prevent disease.

- *“The treatment of issues that could evolve towards systemic problems and the management of pain should be priorities.” (C3)*
- *“Immediate elimination of potential disease that can have systemic effects is a high priority.” (I9)*

Treatments or services aimed at maintaining and restoring function (such as crowns, bridges and dentures) were generally described as less urgent than those that relieve pain and infection or prevent disease.

- *“ [Dentures and major restorations] may be needed to restore function but this is often not urgent.” (B2)*

- “[Dentures and major restorations are] often elective care for non-urgent conditions for which there are less expensive alternatives.” (I9)

Care that was primarily cosmetic in nature was defined as elective or otherwise generally non-essential.

- “While desirable, elective procedures should be the responsibility of the patient.” (I9)
- “I do not believe that cosmetic treatment should be placed as the responsibility of Canadian taxpayers.” (U21)

Beyond these rules, they indicated that inclusion/exclusion decisions should be informed by evidence on the effectiveness/benefits of interventions.

- “There is a large range of cost/benefit ratios for various dental treatments to be considered.” (V22)
- “[W]hen allocating scarce resources it is important to maximize the benefit gained for the resource expended. Not all dental services offer equal value.” (D4)

Additionally, they consistently indicated that inclusion/exclusion decisions will reflect the fiscal realities of the limited budgets for dental care.

- “Understandably there are financial constraints to consider when determining which services are essential.” (L12)
- “Unfortunately current financial considerations require that we limit some services.” (G7)

Finally, they noted that rules should be flexible in order to allow adaptability to the individual context(s) to which they may apply.

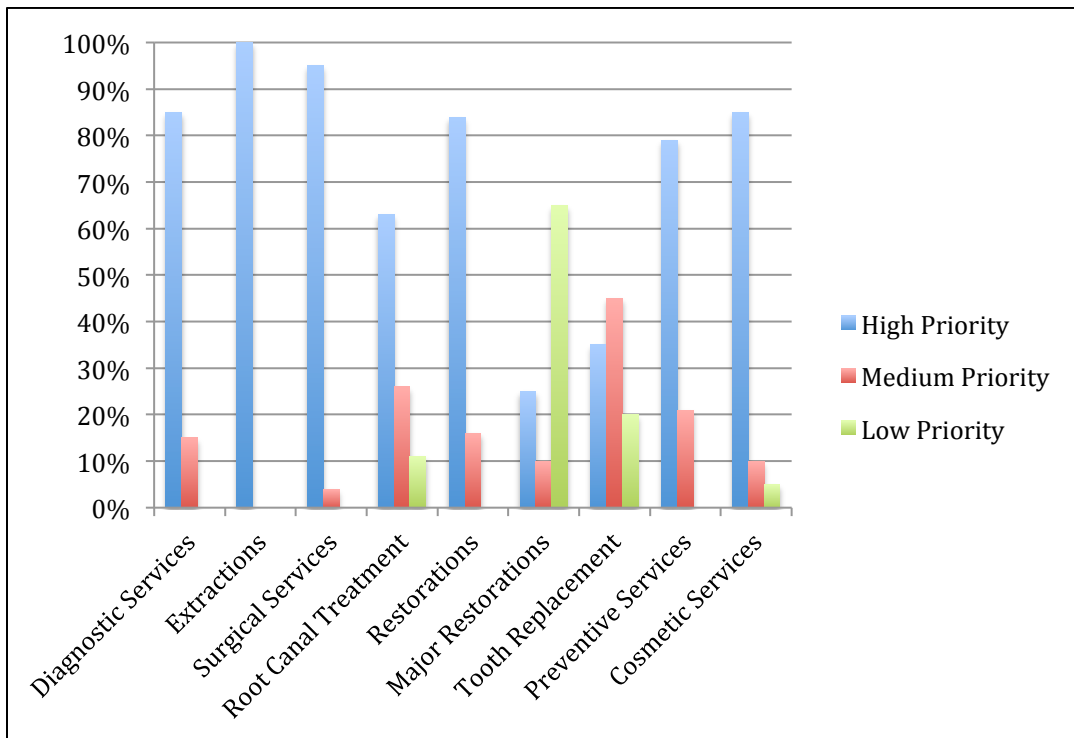
- “The biggest failure of most if not all publicly funded oral health care plans is their inability to take into account individual needs in the determination of coverage.” (C3)
- “The specific benefit in one patient’s situation may be markedly different than that for another [...].” (B2)

### Applying the rules of *Essential Care*: Prioritizing treatments/services

Participants were asked to rate specific categories of care as high, medium or low priority in a publicly funded dental program (Figure 9). Care was grouped into the following nine categories:

- Diagnostic services (i.e. examination and x-rays)
- Extractions
- Surgical services (i.e. removal of infected tissues, cysts or tumors)
- Root canal treatments
- Restorations (i.e. basic fillings)
- Major restorations (i.e. crowns and bridges)
- Tooth replacement services (i.e. dentures and implants)
- Preventive services (i.e. regular check ups, tooth cleaning/scaling, polishing, fluoride treatments, dental sealants)
- Other - cosmetic services (i.e. orthodontics and tooth whitening)

Figure 9 - Dental services according to priority ranking



The results of the priority rating exercise are summarized in Table 4 according to whether the categories were considered essential or elective.

Table 4 - Essential & non-essential categories of care – Respondent ratings and quotes

	Key idea	Service category	Group rating	Individual respondent ratings and quotes	
<b>Essential Care</b>	Basic services	Diagnostic Services	High (85%)	High	These are essential to providing any care, part of provider practice standards (B2)
				High	These are necessary for knowing what treatment is required (T20)
				High	In order to treat you must do an examination and take appropriate tests like radiographs-anything less would not meet standards of practice. (J10)
				Low	Too much is spent in emergency dental services diagnosing and radiographing obvious infections. (V22)
		Extractions	High (100%)	High	This is necessary to relieve pain. (F6)
				High	The same as removal of infection similar to treatment of any infection in the body-one would not leave an abscess in an ear for example. (X24)
				High	Immediate elimination of potential disease that can have systemic effects is appropriate. (K11)
				High	People without the funds to pay for dental services will live with infected [...] teeth [...]. This often leads to other serious health risks. (L12)
		Surgical services	High (95%)	High	These are an essential part of health care. (H8)
				High	Treatment of issues that could evolve towards systemic problems and management of pain should always be priorities. (C3)
		Fillings	High (85%)	High	This is one of the major groups of procedures for dealing with the effects of caries. No questions these should be in the program. (Q17)
				High	A basic service needed to function. (U21)
				High	Prevent progression of dental disease. (K11)
		Root canal treatments	High (63%)	High	A common procedure required by many and marginalized individuals should get access. (L12)
High	Needed to treat pathology and preserve function. (O15)				
Medium	Effective treatment in certain situations and for some clients (T20)				
			Low	These are very expensive procedures that should be limited to teeth that can be reliably restored with a promise of longevity. (I9)	

Table 4(cont) - Essential & non-essential categories of care – Respondent ratings and quotes

	Key idea	Service category	Group rating	Individual respondent ratings and quotes	
<b>Essential care</b>		Preventive care	High (79%)	High	Prevention is the key [and] will save money in the end; prevent pain and suffering. (J10)
				High	We should start from oral health education, providing preventive care to all Ontarians who cannot afford dental bills. In the long run, we will have healthier Ontarians and save health care dollars. (W23)
				Medium	No prevention alone will restore a damaged dentition so it needs to follow rehab or be used to prevent [disease] in the young. (A1)
	Basic services (cont)	**Tooth replacement	no consensus	High	Replacement of missing front teeth is necessary to restore self-esteem and to improve the opportunity for employment and social activity. Replacement of all missing teeth may not be fiscally affordable. (T20)
				High	Replacing missing teeth is important for proper nutrition. (K11)
				Medium	Dentures for replacing many teeth, with a limit on cost and frequency of replacements. (V22)
				Medium	Dentures may be needed to restore function and esthetics. (B2)
<b>Non-essential care</b>	Elective services	**Major restorations	Low (65%)	Low	Only when [it] would improve the persons ability to be employed. (A1)
				Low	Cost is a primary concern with this treatment and rarely is this treatment urgent. (B2)
				Low	This is not basic or essential. (W23)
				Low	This should be considered when there is adequate funding and more expanded access to care. (Q17)
				Low	Services to improve appearance are not critical to health. (G7)
		Other (i.e. ortho, cosmetic procedures)	Low (85%)	Low	Anything for cosmetics must be [have] a user fee. (W23) Only if necessary for prevention or health risk or for meeting basic societal and hygiene requirement (S19)
		**Sometimes essential			

It is important to note that for some of these services, assigning priority was straightforward. There was large-scale agreement in priority ranking and consensus regarding the rationale for the decisions. In fact, it appeared some inclusion/exclusion decisions were straightforward, or rather *black and white*. While for others, much more complexity existed resulting in greater variation in the priority rating and in fact, most described these categories or treatments as *grey areas*. The details of this rating exercise are presented below according to the areas of consensus and variation.

### **Areas of consensus**

There were six categories where there was consensus on the priority of care and consistency in the supporting rationale. Five (diagnostics, extractions, surgical services, basic restorative and preventive services) were deemed high priority and thus essential in publicly funded dental programs and are detailed below as inclusions. The sixth (other - cosmetic and orthodontic services) was deemed low priority and non-essential and therefore is presented as an exclusion.

#### *Inclusions*

The group agreed that extractions (100%) and surgical services to remove pathologies (95%) were high priority on the basis of their ability to relieve pain and infection. Stakeholder commentary revealed that these treatments were essential to addressing urgent and often painful oral conditions.

- *“Extractions are basic services are needed to alleviate pain.” (U21)*
- *“Extractions and removal of lesions are required for the management of pain and infection and thus should be a priority.” (C3)*

Most also awarded basic restorative (85%) and preventive services (79%) a high priority. In their comments, stakeholders appear to have drawn from all three rules in this case: relieving pain, restoring function and preventing disease (or further deterioration). They indicated that evidence ought to be used to set specific limits to these treatments, such as the type of filling material and the frequency of preventive visits.

- *“[Silver] restorations are relatively inexpensive procedures which have proven to last therefor tooth colored fillings should be limited to esthetic areas of the mouth...” (I9)*

- *“Prevention is necessary [...] however should be tailored to individual needs. For example, not everyone individual benefits from topical fluoride [treatments]. There should be some way to assess and use evidence to limit unnecessary care in publicly funded dental programs.” (T20)*

Eighty-five percent (20/24) of stakeholders rated diagnostic procedures as a high priority. These procedures were deemed necessary to identifying disease and thus the rules were used for including/excluding treatments were not applicable. These procedures were considered a standard of practice required for accurate diagnosis and treatment planning.

- *“Diagnostics are the key for identification of oral disease and construction of a treatment plan.” (Q17)*

That said, three participants raised specific concerns about the budget impact and overall value of diagnostic services in publicly funded programs.

- *“Too much money is spent in emergency dental services diagnosing and [x-raying] obvious dental infections. While necessary, these services could be greatly discounted as they take very little time and effort, relatively speaking. We want to encourage [...] getting treatment done.” (V22)*
- *“Being able to diagnose pain or infection in any population is important and must be provided, however it should not become the only care that is received as is often the case.” (A1)*

### *Exclusions*

All agreed that any procedures required solely for cosmetic reasons (i.e. tooth whitening or other cosmetic procedures and orthodontics) were a low priority for which public funding was not appropriate. However, a minority (7/24) raised the issue of flexibility and indicated that cosmetic procedures ought not to be wholly excluded on account of the biological and social considerations of mal-aligned and discolored teeth.

- *“Low priority [unless] necessary for the prevention of health risk, or for meeting basic societal hygiene and appearance requirements.” (S19)*
- *“Consider a minimal subsidy if there is a biological or extreme esthetic need” (V22)*

### **Areas of variation**

There were three categories of care - major restorative care (crowns and bridges), tooth replacement services (dentures and implants) and root canal treatments - where

stakeholders' opinions about priority varied. All three categories were described as *grey areas* where decisions depended greatly on context including but not limited to urgency, prognosis, cost-effectiveness and budget levels. In fact, the complexity of decision-making in these areas derived from the interplay of all the influencing factors. To be sure, any of these services could either concurrently or separately provide relief from pain and infection, aid in preventing future disease and restore necessary function. However, many respondents felt these were expensive treatments that depending on the individual situation, could lead either to improvements in health or to further treatment needs. Thus inclusion/exclusion rules ought to allow a degree of flexibility. They recommended that these categories should not be wholly included, without limits, nor wholly excluded. Simply put, these were categories of care that could be best described as *sometimes essential*. Examining each of the three more closely provides an important glimpse into the unavoidable limitations and unruly complexity of trying to establish a simple list of included/excluded services.

For example, while most (65%) rated major restorative treatment as a low priority, opinion was mixed. As previously indicated, most crowns and fixed bridges constituted non-urgent and costly procedures for which there are generally less expensive options. As a result, stakeholders downgraded the priority of this type of treatment overall. However, 25% rated crowns and fixed bridges as a high priority on the basis that this is part of basic care that prevents disease and ensures function.

- *“High priority as [crowns and bridges] are all basic services which if not provided to will lead to worse outcomes.”* (S19)
- *“Crown and bridgework is critical to how the individual’s existing teeth hold firm.”* (L12)

In the case of tooth replacement services, all comments noted the importance of this type of treatment to restoring and maintaining function but ultimately most stakeholders (65%) downgraded its priority (to medium or low) due to a lack of urgency and concerns about cost. Replacing teeth, while deemed important to biologic and social functioning, was seen as a *nice to do* not as a *need to do* thus its inclusion should/would be largely dependent on budget levels.

- *“Replacement of missing front teeth is necessary to restore self esteem and to improve the opportunity for employment and social activity however it may not be fiscally affordable.” (T20)*
- *“While replacement of missing teeth for some reasons is desirable, limits should be in place to control costs as procedures come with high price tags.” (I9)*

Root canal treatments (RCT) also provided unique insight as to how the decision rules came to be applied as well as their complexity. In their comments, stakeholders raised the same concerns about cost and prognosis that they tabled for major restorative care and tooth replacement services. As with the two previous categories, 18 of the 24 cautioned that decisions to include or exclude root canal therapy be case specific, driven by evidence regarding effectiveness.

- *“RCT can be done on any and every tooth. However, the cost and prognosis of certain types of care must be taken into account when determining what should be part of a government-funded program. Clinicians tend to use RCT as an interim step before extraction.” (T20)*
- *“RCTs are very expensive procedures. These should be limited to teeth that can be reliably restored with some promise of longevity.” (I9)*

However, it seems there was one significant difference between RCT and the other grey areas – RCT provides relief from pain and infection, and is sometimes necessary before providing other basic care (e.g. crowns). Thus, despite these significant concerns, there was consensus or agreement that RCTs are a high priority (63%) in a publicly funded dental program on the basis of urgency of need (Figure 9).

- *“[RCT] is very expensive care however is necessary for pain relief.” (B2)*
- *“This is a common procedure required by many for pain relief and marginalized individuals should have access.” (L12)*
- *“Treating abscesses means prevention of systemic infection, pain [and] loss of income.” (H8)*

In the case of RCT then, concerns about evidence seemed to be outweighed by the urgency of addressing pain and infection. In the simplest of terms, it appeared that relieving pain and infection trumps, at a minimum, concerns about costs and budget impacts.

## Stakeholder suggestions for improvements

Stakeholders' suggestions for improving the present allocation grouped into three categories and divided across professional boundaries. All of those from professions other than dentistry, and a few from dentistry, suggested that the present distribution be redefined to align more closely with Medicare by providing universal access to essential services using an administrative structure that is more efficient than the present system.

- *“Dental care must be viewed in the same light as general health care and basic care for these at risk populations must be available.” (J10)*
- *“[Access could be improved] through simplification and collapse of all the different programs. There should be no wrong door to access funding/administration. It should be simple and easy and part of the culture to look after teeth and mouths.” (S19)*

Most of those from a dental background however suggested ideas for improvement that largely resemble what we presently do, namely improving the distribution with a more robust targeted approach that extends funding beyond children and those with a disability to include all those who are unable to pay. They also identified the need to fund services that constitutes basic care for those deemed eligible. Their reasons for these suggestions, as previously stated, derived either from the practical reality of the limited resources or the philosophical belief that responsibility for oral health lies with the individual.

- *“Given that we are faced with an economy of diminishing resources, it is clear that any public funded program needs to address the most marginalized in communities.” (L12)*
- *“There are several population groups that fall through the cracks and do not receive care. Equalizing their opportunity to receive care by removing financial barriers must occur first.” (E5)*
- *“What has not worked in the past is to fund only emergent needs/pain/suffering. This is wrong minded and costs the system far more than if preventive and basic oral services were covered.” (S19)*

Lastly, one participant suggested cost sharing on services, either for all services or just for those considered external to the essential basket of oral health care goods. In this way, those with public funding could be encouraged to share responsibility for health while benefitting from access to basic services.

- *“I believe in a model that relieves the burden of cost on a disadvantaged groups without making the service completely free of cost. The patient needs to invest in his own care and feel responsible for it. Plans could pay for basic services [fillings] and patients could pay the difference for crowns, bridges, and cosmetic filling materials.” (V22)*

# Discussion

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## Key findings

This study, which set out to explore rationing decisions within publicly funded dental care, or the ‘why’ behind the ‘what’, represents the first of its kind in dentistry. The results confirm that stakeholders believe limits are necessary but that they ought to be set so as to more equitably distribute essential dental care among the population. In fact, their position strongly suggested universal access to dental care, mitigated by the limited resources available. In addition, they revealed a set of specific rules for achieving equity and defining essential care that could inform future rationing decisions. This analysis also revealed that the inclusion/exclusion decisions relative to dental care are no less complicated by evidence, budget considerations, political and professional positions and individual values than the same types of decisions in medicine. There is little hope that distributing resources for dental care fairly will be as simple as producing lists of what or who is ‘in or out’ but rather will require the development of a deliberative process that considers values, evidence and resources. That said, this preliminary work would indicate that more explicit decision tools based on clear, transparent and evidence-based criteria can be developed and used to make decisions that set limits more fairly.

The significance of these key findings, as outlined below, will be detailed in the sections that follow:

1. Limits are necessary and should reflect a more equitable distribution of basic, or essential, dental care.
2. Stakeholders’ two guiding principles and five decision rules form the basis of a framework for future rationing discussions (Figure 6).
3. Rationing decisions for dental care mirror the complexity of those for health care generally.

## The necessity of limits

While idealizing universality in dental care, stakeholders in this study agreed that limits were necessary. In fact, they stated that limits are required to define both *who* is eligible

for publicly funded care and *what services or treatments* should be included. While this is perhaps the simplest of findings, its importance cannot be overlooked, for it forms a foundation for defining those limits and speaks to concerns among technical experts that extending rationing discussions beyond those with the required knowledge and expertise will invariably lead to unreasonable expectations and demands.

Daniels and Sabin (2008) argue that in countries such as Canada, where there is a universal health care system, there is a general societal acceptance that limits are inevitable. In what they describe as a degree of social learning, the public-at-large can be seen to understand both the need for limits (i.e. the scarcity of and competing demands for resources) and the complexity of establishing what those limits ought to be. Given this, they argue that public systems ought to include broader consultation on these limits as a way of ensuring the system reflects the values of the society for which it is designed. This idea of public consultation can certainly be seen as a current and notable trend in health care. These findings indicate its appropriateness in public dental care programming, which up to this point may have been underestimated by technical and policy experts.

Importantly, the findings from this study also suggest that stakeholders from a broad range of professional backgrounds shared much common ground, regardless of their technical knowledge of dentistry. As above, they agreed that an ideal system would be universal, and that essential dental services ought to be available to those who need them, irrespective of the ability to pay. In addition, they were aligned in thinking that treatments that provide relief from pain and infection and prevent disease ought to be considered essential and be prioritized in publicly funded programs. Given the current knowledge of common risk factors for disease, the benefits (both known and perceived) of interdisciplinary management of chronic conditions, and the connection between oral and systemic health, there is little question that broader stakeholder consultation in *all things healthcare* is necessary and unavoidable and as suggested by this study perhaps unexpectedly beneficial.

## **Principles and rules for new limits**

In examining the rationale for their limit setting decisions, it was clear that stakeholders place a high value on equity in the distribution of dental care. To that end, their limit setting decisions seemed to derive from guiding principles best described as ‘achieving equity’ in the provision of ‘essential dental care.’ Beyond identifying these underlying principles, the specific limit setting decisions they made uncovered a set of practical rules that could be used to inform future rationing decisions about who should be eligible and for what services. In an effort to achieve equity, in the absence of the feasibility of a universal program, they suggest targeting funding to those unable to afford care and those unable to assume full personal responsibility for their own care due to age, disability or institutionalization. Of note, their decisions and associated comments revealed that much of what lies below this question of eligibility derives from unique views of responsibility in health, a point that will be addressed shortly.

With respect to which treatments or services should be included in publicly funded dental care, respondents were clear that any program should include or be limited to care that is medically necessary or essential to health. In accordance with Ozar (2006), they determined care to be essential according to rules that asked whether it was necessary to relieve pain and infection, prevent disease and/or restore physiological and/or social functioning (such as eating or finding employment) and excluded any care that was considered to be purely cosmetic. In keeping with previous opinion studies on publicly funded dental care, stakeholders agreed that, in addition to prevention, public funds ought to be used to treat active disease and its sequelae (Bedos, Levine, & Brodeur, 2009; Quiñonez & Locker, 2007; Quiñonez, Figueirido, & Locker, 2009). This has particular importance as is it represents a significant departure from the dental profession and its historical position that has predominantly privileged prevention in public systems (Quiñonez, 2009).

The principles and rules discussed and derived from those who participated in this study provide a framework for establishing clear, transparent criteria which can be used for more explicit limit setting. By representing the ‘values’ that are necessary to limit setting discussions, these rules can be used to lever change for the development of criteria that

are also based on the best available evidence. For instance, if it is determined that basic restorative treatment is valued on the basis of its role in maintaining and restoring function, what follows is to use the best available evidence to detail the specific restorative materials and procedures that fit this criteria. With respect to root canal therapy, having established that RCT is a priority according to its value as a treatment that provides relief from pain and infection yet still sits in a grey area based on prognosis, further deliberation would need to specifically address the evidence regarding its effectiveness and ultimate therapeutic benefit.

### **Complexity of rationing decisions**

Rationing decisions represent a complex mix of considerations that include evidence on the effectiveness of particular treatments or service, budgetary restrictions, as well as political and professional influences and values (Baltussen & Niessen, 2006; Daniels & Sabin, 2008; Flood & Erdman, 2004; Ham & Robert, 2003). In fact, experts warn that it is unlikely that there will ever be full consensus on the principles or rules that ought to guide rationing decisions as “even people who want to cooperate in steering societies health system(s) will hold diverse moral and religious views. Their individual value systems will lead them to disagree morally about what constitutes a fair allocation of resources” (Daniels & Sabin, 2008, p. 2). Nevertheless, one must arrive at social policies, and the search for mutually acceptable guiding principles and rules narrows the scope of disagreement and provides grounds for deliberation (Daniels & Sabin, 2008).

This study provided clear examples that in dentistry these types of decisions are as complicated as the experts describe. For even with convergence of opinion around the guiding principles of achieving equity for essential dental care, it was clear not everyone agreed on the finer points of how to achieve these ends. All stakeholders expressed the importance of equity, however, they had differing moral viewpoints on the degree to which individual responsibility ought to factor into allocation policy.

As well, while there were definite areas of agreement on what should be included or excluded in a basket of essential services, there was also disagreement or “grey areas”. Thus the results of this survey provide evidence of the range of ideas among stakeholders

about what constitutes essential dental care and who ought to have care that is provided through publicly funded programs. In essence it supports the findings of experts on rationing in medicine who claim, “that even among those who want to cooperate in steering a society’s health system, there will be diverse moral [...] views on what constitutes fair allocation of resources (Daniels & Sabin, 2008, p.2).

Daniels & Sabin (2008; p.4) argue that in the “absence of a broadly accepted consensus on principles for fair distribution, the problem of fair allocation becomes one of procedural justice”. There was a strong voice among the stakeholders that flexibility or rather an ability to modify the ‘rules’ is essential to improving the acceptability of any program. In essence, they agreed that treatment decisions inevitably reflect a degree of uncertainty and variability (Baltussen & Niessen, 2006) and thus are not characterized by a one size fits all approach. Arguably these stakeholders can be seen to be framing a discussion that calls for the development of a fair process, such as Daniels & Sabin propose, for allocation decisions regarding dental care that is publicly funded. Both the idea of individual responsibility in health and the need for a fair process for allocation decisions will be detailed in the sections that follow.

#### *Individual versus social responsibility for health*

In their categorical responses to the question of whether limiting eligibility for publicly funded dental care is appropriate, our stakeholders demonstrated strong agreement with setting limits. However, when asked to explain why, most responded that limiting eligibility is the only option given the scarce resources available. Thus the response of “yes” to limiting who gets care is valid only if one considers the current budget constraints. Simply put, “yes we must limit who” was a practical response to a real world problem brought about by budget restrictions and policy positions.

That said, while the idea of equity was shared by all and thus represented a guiding principle, stakeholders held differing viewpoints on what defines equity. For some it meant removing financial barriers for everyone thereby providing equal opportunity to access a fixed array of necessary oral health services in a manner that is consistent with

Medicare. For others, it meant equalizing opportunity only for those least likely to provide for themselves or their families or rescuing only those deemed most needy (Baltussen & Niessen, 2006). While both views are valid, what lies behind them are unique and important concepts of responsibility in health. In this way, the notion of responsibility for health was explicit in and became central to this inquiry.

Experts agree that, in many cases, illness is not something that just happens but rather is predicated by the care with which we take to live prudently (Wikler, 2004) and few would argue against the idea that our risk of developing dental disease increases when we fail to practice common preventive behaviors such as brushing properly, flossing regularly, avoiding sugary foods and visiting the dentist routinely. On this point, Wikler (2004) suggests that there is a shared or social responsibility to provide a system of prevention and therapy as well as an individual responsibility to use preventive information and behaviors to reduce the need for care. The key for defining social policy lies in determining the balance of this division in labor between society and the individual in a way that is optimal (Wikler, 2004).

In this study, stakeholder views on this balance between individual and social responsibility in health divided across professional lines. All those from non-dental backgrounds took the position that a health need is a health need, regardless of its origins and thus is equally deserving of concern and attention. Conversely, a few of those from a dental background explicitly stated that individual responsibility for health is paramount and ought to be reflected by social policies. Although not all dental professionals took this stance, this discrepancy in views raises the question: why do they view individual responsibility for oral health in a manner that is so inconsistent with the way Canadians view health and thus value health care in general?

In Canada, personal responsibility has been a prominent theme in the philosophy of dental practice for at least 100 years (Quiñonez, 2009). Despite a growing body of evidence suggesting that health is influenced by determinants that extend far beyond our personal behaviors (Locker, Maggariis & Quiñonez, 2011; Watt, 1999), it has formed the basis for our dental policy and is arguably the cornerstone of dental practice today. In contrast to the medical system, our privately funded system of care implicitly assumes

that those who take risks with their health (i.e. fail to brush, use dental floss, visit the dentist and eat healthily) ought to be individually responsible for the costs of their care. Conversely, the health care system in Canada is constructed on the premise that health needs are deserving of a social response regardless of what gave rise to them. Diabetics who fail to follow important dietary and pharmaceutical protocols are extended the full benefits of our health system at no additional cost. Smokers are not denied full and free access (at least at the point of delivery) to treatment for the diseases they develop that are known to be associated with their behavior. So, why then make oral health an exception?

The answer arguably lies woven in the complicated history that framed dentistry within the Medicare discussions of the 40's, 50's and 60s, and established it as a privately funded system of care. Dentistry and medicine both opposed the move to a government-funded system of care. However, in what could be considered evidence of the ever changing and evolving nature of society, those in the medical profession have ridden the tides of change brought about by their inclusion in a publicly funded system. Seemingly, like citizens, medical professionals largely offer a view of responsibility in health that is less influenced by the economics of providing care in a free market system. Whereas having successfully remained outside a public system of care, dentistry's view continues to be formed largely by a conservative ethos, one that privileges the business, or economic side of what it does.

The dental profession resists the expansion of publicly funded services as an intrusion on their independence as practitioners and a threat to the value it assigns to individual responsibility. However, by rallying against social policies that would support universal programs, dental professionals are caught in the position of feeling pressured to provide for those in need on a charitable basis. They experience tensions that lie, in part, in the contradiction that exists between their desires to help those in need and their right to be paid for the services they provide (Ozar, 2006b). Beyond creating conflict in practitioners this also allows the responsibility for oral health, in reality, to be divided only among those who need service and those who provide service. Ozar (2006b) indicates that the remedy lies with the profession calling for broader social responsibility in oral health by

actively advocating for more robust public programming or he cautions it will suffer the consequences of being an institution that is undervalued in society.

*Fair allocation of resources requires a fair process*

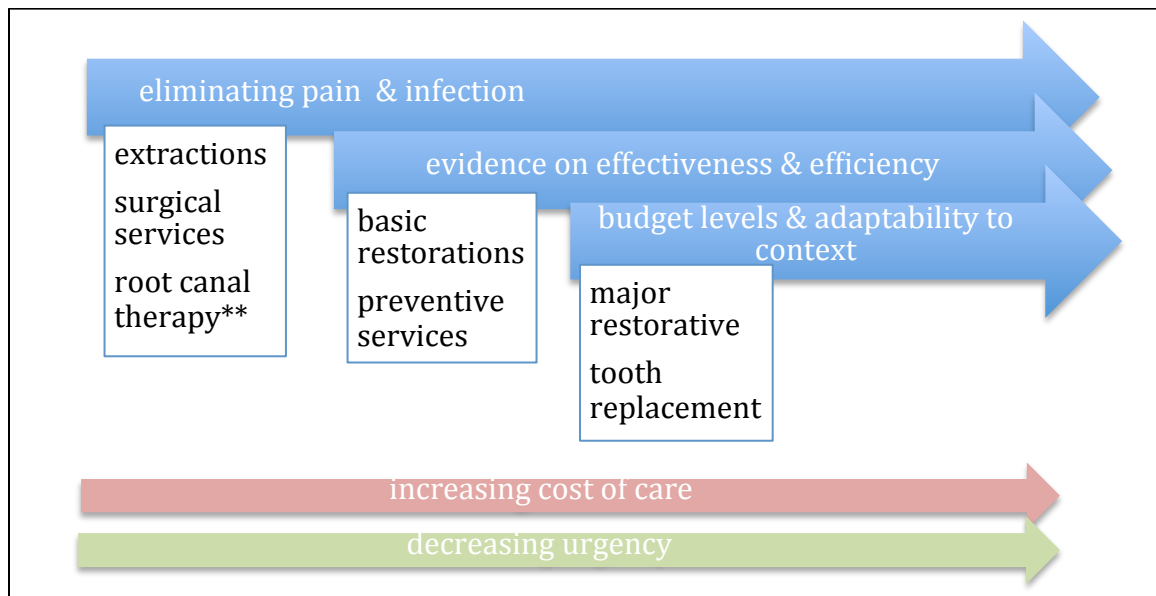
This study demonstrated that, while principles and rules can be defined and helpful as guides, in general they do not represent the type of fine-grained decision tools required for practical decision-making (Daniels & Sabin, 2008). Stakeholders were absolutely clear that flexibility in the rules is a necessity in the system. In their view, what is appropriate care in one case may be highly inappropriate in another. In this way, they emphasize the importance of decision-making that is adaptive and flexible to individual circumstances.

Consider the case of root canal therapy (RCT), respondents were asked to rate RCT for priority in a publicly funded dental program. There was consensus that RCT was a high priority, which as Baltussen & Niessen (2006) suggest was based largely on the urgency of the associated need and the ability of the treatment to relieve pain and infection. However, this was one of three categories of care described as a *grey*. Ten of the respondents who assigned either a high or medium priority, on the basis that it was important for relieving pain and infection, simultaneously cautioned about prognosis and cost-effectiveness concerns. Thus prioritizing RCT provides a real life example of how rationing decisions draw upon value judgments – namely the value of relieving urgent and painful conditions - in addition to evidence of effectiveness and budget levels.

In what could be described as a layering of decision criteria, stakeholders could be seen to balance the value of service/treatment and the urgency of the situation on the one hand against cost, the need for evidence and budget restrictions on the other (Figure 10). Where relief from pain and infection was the primary objective, as with extractions, surgical services and in this case RCT, the issues of cost-effectiveness and prognosis seemed to all but disappear when prioritizing. By extension, these criteria seemed to weigh these more heavily when care was non-urgent and required more for restoring and maintaining function or prevention. Finally, as seen with tooth replacement services and major restorative work that are again lower on the urgency scale, the additional criteria of

budget levels became significant. In this way, it can be demonstrated that stakeholders require that the ‘rules’, and/or the weight with which they are applied, differs depending on the individual context of the decision. In essence, this details what they describe as necessary flexibility in the rules. But if rules, once established are manipulated dependent on circumstances, how then ought we to determine fairly when a treatment is appropriate and when it is inappropriate or when an individual is eligible or ineligible?

Figure 10. Layering of decision criteria for service limits



Daniel and Sabin (2008) suggest that in the inevitable absence of consensus on fine-grained decision tools, the fair allocation of resources for health depends upon a fair process for deliberation regarding the limits. Given the inherent complexity and likelihood of moral disagreements on what is appropriate and fair such as those demonstrated in this study, they argue that the problem of rationing becomes one of procedural justice and propose a framework for decision-making that is explicit, transparent and accountable.

In their model, ‘Accountability for reasonableness’ (A4R), they suggest four conditions that limit setting decisions must meet. Firstly, decisions and their associated rationales must be publicly accessible (**Publicity Condition**). For publicly funded dental care, this would mean detailing carefully and explicitly for all members of society exactly who and what is covered in a way that is easily accessed and comprehensive. If accomplished, this alone would move us a significantly forward. Presently, both citizens and clinicians struggle to ascertain the specific details of who is covered and for what services. Using Ontario Works as an example, the description of benefits includes emergency dental care. However, in reality funding of dental services is discretionary and determined on an individual basis by a claims administrator in the absence of published criteria. Details about what defines emergency care and any associated limits are near impossible to discover until claims for care are submitted for adjudication. To be sure the multitude of programs that serve children in Ontario do a better job of providing the criteria for eligibility to the public however they too, fail to provide much in the way of detail regarding eligible treatments.

The second condition outlined by Daniels & Sabin (2008) is that the rationale for these allocation decisions must appeal to evidence, reasons and principles that fair-minded people accept as relevant (**Relevance Condition**). In the case of publicly funded dental care, the principles and rules determined by this study can be seen to form the foundation for the development and establishment of evidence based criteria that reflect the values of the society. For example, using the principle of *achieving equity* to determine eligibility, it could be argued that publicly funded dental care be made available, and limited to, those unable to afford to pay for care themselves for services that *relieve pain & infection*.

In addition, the A4R model requires that there be mechanisms for challenging decisions as well as opportunities to revise and improve policies in light of new evidence or effective arguments (**Revision and Appeals Condition**). Stakeholder opinion in this study echoes the necessity of flexibility in the rules, or rather the necessity to consider the context in which eligibility or coverage decisions are made. This condition would provide a mechanism for citizens (and clinicians) to request consideration of individual and

unique circumstances that ought to influence allocation decisions. Again, using the case of Ontario Works recipients as an example, where care is limited to emergency treatment to relieve pain and infection, an appeal could be made for tooth replacement services for those unable to chew. These appeals could then be used to assess the appropriateness of the criteria (i.e. principles and rules) used in making initial allocation decisions.

Finally, the model requires voluntary or public regulation of the process that ensures the first three conditions are met (**Regulation Condition**). In this case it would seem sensible, perhaps even intuitive, for the public agencies providing funding for dental care to require that the criteria for eligibility and included/excluded services be publicly accessible in a way that is easily understandable by all end users. There exists already a mechanism for reporting on spending which could be adapted to require evidence of explicit and publicly accessible posting of eligibility and inclusion/exclusion criteria.

Gibson et al. (2005b) suggest one further condition to the original A4R model that ought to be considered here. **Empowerment** acknowledges that some stakeholder voices are more influential than others and in a fair process steps need to be ensure that there is voice given to those most disempowered. This work details the importance of including a broad range of stakeholders in allocation decisions for publicly funded dental care however it also identifies challenges to including those most served by the system. End users or client voices, in addition to those of the public-at-large, are critical to establishing a system that reflects the values of society rather than those of special interest groups. As in medicine, it is easy for those with the greatest technical knowledge, the greatest self-interest and/or the loudest voice to unduly influence the system. Given the marginalization of end-users of publicly funded dental care, care must be taken to better ensure their voice is recognized and included in discussions.

In summary, this work surely demonstrates the unlikely reality of creating a simple and comprehensive list of eligible persons and included services – or the fine-grained tools required for practical decision-making. That said, stakeholders were clear that limits are required for accountability for both clients and providers, but must be adaptive to context. Thus it would suggest the need for a deliberative process for decision-making relative to the fair allocation of public funds for dental care such as the one proposed by Daniels and

Sabin (2008) and modified by Gibson et al. (2005b). The principles and rules identified by these stakeholders contribute much to defining the vision or values that underpin rationing decisions; a step necessary to the development of a fair process that includes the conditions suggested by the authors above - publicity, relevance, revision and appeals and empowerment conditions. As stated earlier, it is the *values piece* that this work attempts to contribute to the process of establishing clear, transparent, evidence based rationing criteria for the fair distribution of publicly funded dental care.

This study demonstrates the complexity of the task of detailing eligibility and inclusion/exclusion criteria where treatment or coverage decisions are rarely linked to 'life or death' circumstances and where costs of care largely fall to the individual. It uncovered but a small sample of the complexities that will undoubtedly emerge from any future exercises designed to define an essential basket of dental services but it did provide a glimpse into the reality that they exist in dentistry as much as they do in broader health care arenas. In this way, the work detailed here can serve to inform efforts in other similar areas of the health care system, such as eye and hearing care, physio and occupational therapy and fertility treatment where the impact on health can be significant and yet the costs of care fall outside our national health care system.

### **Strengths and limitations**

There is little question that the primary strength of this work comes from the commitment of the panel members to provide the long open-ended responses to the necessary but very complex questions. Their collective knowledge and experience allowed the exploration of this complicated issue. The extent, honesty and richness of their comments presented an opportunity to fully explore the *why* that lies behind the *what* with this type of qualitative analysis.

### **Methodology**

Given that the predominant question was *why* do stakeholders make the limit setting decisions they do, the inductive nature of the type of qualitative work presented here allowed a deeper understanding of the complexities of rationing dental care than has been available to this point. Using more traditional quantitative approaches, Quiñonez et al.

(2007, 2009) reported that dentists and citizens are united in voicing dissatisfaction with the present system however they hold different views about what government funded dental care ought to look like (Quiñonez & Locker, 2007; Quiñonez, Figueirido, & Locker, 2009). Dentists prefer that government efforts focus on preventive measures such as water fluoridation and the provision of publicly insured services ought to be targeted to people with disabilities, people on social assistance, those in long term care and the homeless (Quiñonez, Figueirido, & Locker, 2009). The majority of Canadians, on the other hand, reported a desire for universal coverage for a wide variety of dental services (Quiñonez & Locker, 2007). This work provides a better understanding of why these views seem to differ and as such makes an important contribution to what we already know.

As described in the methods section, with consensus as the initial objective, a Delphi methodology was chosen. While face to face encounters such as interviews would have provided an opportunity to probe for meaning and clarification of comments, using a survey approach allowed respondents the time and privacy to freely express their thoughts without concerns about what others would think or whether others appeared more knowledgeable. Delphi methods, such as the one proposed here, are useful where discussion is necessary but power differentials are possible (Adler & Ziglio, 1996). Our stakeholder panel certainly drew from participants with a wide range of training and experience, and as such, those more knowledgeable on the intricacies of oral health could have overtaken a face-to-face discussion. The format also allowed us to include stakeholders from a wide geographic area which given the regional variation in public programming was central to this inquiry. That this work did not ultimately include the iterative phases of a Delphi inquiry is certainly a shortcoming. However, the richly detailed responses of the stakeholders in the first round provided surprisingly more than enough depth for the analysis of this study. The results certainly provide a foundation for further work, which includes the iterative process first proposed for this study. Finally, while this type of work allows for the exploration of new ideas, as with qualitative work generally, the findings expressed are limited to those involved and must be interpreted with this in mind. Care must be taken not to assume their views wholly represent those of others.

## **Survey instrument**

The electronic format of the survey made distribution, participation and data collection relatively easy and seamless. The open-ended format provided unlimited space for participants to provide their reasons and rationales. That said, despite extensive pilot testing, there were issues with particular items in the questionnaire as well as the overall design. For instance, it proved redundant to ask about combining limiting strategies (i.e. who is eligible and for what) after having asked questions of both approaches independently. Additionally, in the section on prioritizing services, the treatment categories were broad by necessity however that created some frustration for the participants and led to ambiguity. For example, the inclusion of implants for tooth replacement divided the focus of participants and some concentrated on this treatment specifically rather than commenting on the category overall. Finally, while largely similar, the treatment categories would have been better constructed to match those used in the oral health component of the Canadian Health Measures Survey so as to allow for comparison.

## **Sample**

Decades of work on rationing in medicine have taught that there is no widespread agreement about the right way to distribute limited health care resources. As such, the fact that previous studies uncovered a disconnection between patients and providers was not entirely a surprise (Canadian Medical Association, 2010; Ozar, 2006; Quiñonez & Locker, 2007; Quiñonez, Figueirido, & Locker, 2009). The varied value systems of individuals in society quite naturally lead people to disagree morally about what constitutes a fair distribution of resources for health care (Daniels, 2001; Daniels & Sabin, 2008; Yule, van Amerongen, & van Shaik, 1986). Therefore in keeping with the recent trends in the medical literature on the subject, the participants of this survey were specifically chosen to represent a range of experience with publicly funded dental care. This sampling strategy allowed us to purposefully extend the conversation about limits beyond the traditional reliance on technical experts and include people whose experience and/or expertise lies outside of dentistry. In this way, we were able explore value systems

of those other than dental professionals and thus hopefully get a more balanced view of the issues (Coulter, 2001).

That being said, the limitation of this type of non-probability sampling strategy is that the thoughts expressed and captured may not mirror those of the broader population or profession. In fact, care must be taken not to assume their views are representative of others. Thus, as stated previously, the findings expressed are limited to those involved and must be interpreted with this in mind.

Although the panel of participants was fairly well balanced with respect to stakeholders who have experience with publicly funded dental care, it failed to achieve proper representation from end-users and the public-at-large. While the intent was to include participants who use or have used publicly funded dental programs, the snowball method of finding these participants proved painstakingly slow. Beyond the issue of identifying and making contact with clients, the electronic format of the survey contributed to the problem, as many clients with experience with publicly funded dental care do not have computers. For this reason, the views of clients may well be underrepresented by the sample.

Beyond clients, the inclusion of members of the public would have provided additional insight which is perhaps missing with this sample. Public systems are meant to reflect the values of the society for which they are designed and in this case their views are arguably absent. Thus while the findings of this work aligns with others who detail more fully the client experience within the public system (Bedos et al., 2003; Bedos et al., 2005; Bedos, Levine, & Brodeur, 2009; Quiñonez & Figueiredo, 2010; Quiñonez & Locker, 2007; Wallace & MacEntee, 2012), further investigations that explicitly engage patients as end users and members of the public-at-large as payers would make a significant contribution to the field.

### **Policy considerations and future research**

With a view that has been echoed by citizens, policy makers, academics and dental professionals alike for a number of years, those involved in this study expressed a desire to see a change in publicly funded dental care (Bedos et al., 2005; Bedos, Levine, &

Brodeur, 2009; Canadian Dental Association, 2005; Leake, 2006; Mouradian, Wehr, & Crall, 2000; Muirhead, Quiñonez & Locker, 2007; Quiñonez, Figueiredo, & Locker, 2009; Wallace & MacEntee, 2012; Welsh, 2007a; Welsh, 2007b). Their ideas are not new, nor are they particularly revolutionary or innovative, but rather represent reasonable common sense suggestions that recognize current limitations. So why then, with these and other experts willing to direct change, have we not found a better way to distribute resources for publicly funded dental care? In fact, even with the availability of new funds, we continue to allocate resources in much the same way we always have by extending and improving coverage for children (Canadian Center for Policy Alternatives, 2011; King, 2012; Province of Ontario, 2008).

The answer quite likely lies in the inherent complexity, moral controversies, and power structures associated with the types of decisions necessary to rationing health care. Determining what health care someone gets is not simply a budget decision nor is it entirely determined by scientific evidence, but rather requires a consideration of social context and the professional groups involved. In essence, this work provides the ‘values’ piece that is necessary to developing clear, transparent, evidence based rationing criteria for more fairly distributing resources for publicly funded dental care. It calls for policy change that would support a more equitable distribution of basic dental care; one that allocates resources according to values of Canadian society and in accordance with the best available evidence.

To that end, two recommendations come to mind. In an approach that is perhaps the simplest and politically facile, governments could focus their attention on determining who is eligible and leave decisions about treatment to patients and providers. Block subsidies could be awarded to eligible persons for a given time period for any dental care required, thus leaving the intricacies of determining what services in the hands of those involved in the transaction. While politically efficacious, this solution would do little to address the larger issue of transparency and explicitness in rationing rules.

Conversely, governments could decide to engage specifically in developing more explicit rationing using clear, transparent and evidence based criteria to define both eligible persons and treatments. Policy in this case would focus on identifying both who and what

services are appropriately funded by public funds. It would require further deliberation to develop a clear and demonstrable process by which to determine what and who is in or out. While this is certainly the most complex and politically charged approach, it would do much to move public dental care policy along the spectrum of fairness and transparency.

Now that these principles and rules for rationing publicly funded dental care have been detailed, further testing of them with the subsequent iterative Delphi rounds as detailed in the methods is warranted and would do much to validate them. Rounds 2 & 3 could ask stakeholders to rate their level of agreement with *achieving equity* and *essential care* as broad principles and *ability to pay* and *individual responsibility*, as rules for eligibility. Similarly, stakeholder agreement on the rules for determining essential care could be rated. Once this process has been completed for Ontario, it should be conducted nationally to gain the perspective of Canadians in other regions.

Additionally, these principles and rules, once properly detailed through iterative rounds, should be tested for applicability, acceptability and usefulness in stakeholder focus group sessions using simple and complex counterfactual situations.

## **Conclusions**

This work identified a desire to define a level or range of dental care that is considered essential to health and therefore necessarily available to all. While consensus exists on some of what would constitute this essential basket of services, it is clear from this work that a process for determining what is fair and appropriate care at an individual level will still be required.

The stakeholders in this study provided evidence of being guided by principles and rules in making rationing decisions relative to who ought to be eligible for publicly funded dental care and what services ought to be covered. On the question of who ought to be eligible, they suggest allocation decisions reflect a principle of *achieving equity* through providing at a minimum, more robust targeted funding that includes those who are unable to afford care and those who limited ability to take responsibility for their own care either as a result of a disability, age or institutionalization for example. In addition, they

identified *essential care* as a principle that ought to guide decisions related to what services should be funded. Care that is essential, in their words, is that which provides relief from pain and infection, prevents disease and restores or maintains function (the latter dependent largely on budget levels).

Within its limitations this study demonstrates that there is a will to redefine the current limits to publicly funded dental care in a way that more equitably distributes essential dental care to Canadians. In other words, dental care that relieves pain and infection, prevents disease and maintains or restores necessary social and biologic function should be accessible to all. Public funding, at a minimum, should focus on removing financial barriers for anyone whose income level is such that they are unable to afford care and for anyone who cannot assume full individual responsibility for the care they require.

# Appendices

## Appendix 1. Survey instrument

### **Publicly Funded Dental Care in Ontario: Achieving Stakeholder Consensus On Rationing Rules**

The survey is broken into three distinct components. In Part A, you are asked to rate your level of agreement with 3 strategies commonly used to set limits or ration publicly funded dental care in Ontario. In Part B, you are asked to identify specific population groups and explain why you feel they should be a priority for publicly funded dental care. Part C asks you to indicate what services/treatments you feel should be specifically included in publicly funded dental programs. Part D asks you to indicate if you feel priority populations should receive either a full or partial array of services. In each section you are presented with a statement about an approach to rationing and then asked to answer the questions that follow. For the most part, the questions are open-ended; please include as much detail as possible in your responses as it is VERY important to better understanding this complex issue. Thank you for taking the time to complete this questionnaire. It will take approximately 30 minutes.

## PART A

In this first section you are presented with three common approaches to rationing or limiting publicly funded dental care in Ontario. You are asked how appropriate you feel these approaches are and to explain your reasons.

**Publicly funded dental care should be rationed by putting limits on who can access dental services or treatments (i.e. prioritizing some patient populations over others).**

Q1. Overall, to what extent do you agree that this is an appropriate approach for rationing the public dollars for dental care for the citizens of Ontario?

- Very appropriate (*respondent directed to Q2*)
- Somewhat appropriate (*respondent directed to Q2*)
- Not appropriate (*respondent directed to Q2*)
- It depends (*respondent directed to Q3*)

Q2. Please explain your answer in the box below. Remember to provide as much detail as possible. (*Respondent directed to Q4*)

Q3. What does it depend on? Please provide as much detail as possible. (*Respondent directed to Q4*)



**Publicly funded dental care should be rationed by putting limits on what types of services or treatments are funded.**

Q4. Overall, to what extent do you agree that this is an appropriate approach for rationing the public dollars for dental care for the citizens of Ontario?

- Very appropriate (*respondent directed to Q5*)
- Somewhat appropriate (*respondent directed to Q5*)
- Not appropriate (*respondent directed to Q5*)
- It depends (*respondent directed to Q6*)

Q5. Please explain your answer in the box below. Remember to provide as much detail as possible. (*Respondent directed to Q7*)

Q6. What does it depend on? Please provide as much detail as possible. (*Respondent directed to Q7*)



**Publicly funded dental care should be rationed by putting limits on both who can access dental services or treatments and what types of dental services or treatments are funded.**

Q7. Overall, to what extent do you agree that this is an appropriate approach for rationing the public dollars for dental care for the citizens of Ontario?

- Very appropriate (*respondent directed to Q8*)
- Somewhat appropriate (*respondent directed to Q8*)
- Not appropriate (*respondent directed to Q8*)
- It depends (*respondent directed to Q9*)

Q8. Please explain your answer in the box below. Remember to provide as much detail as possible. (*Respondent directed to Q10*)

Q9. What does it depend on? Please provide as much detail as possible. (*Respondent directed to Q10*)



The following sections (Parts B, C & D) ask you to expand on how **you** would use the three strategies outlined in Part A to set limits for access to publicly funded dental care. Given that these are approaches are commonly used today, your opinion on how to best apply them will enrich our knowledge about current practices.

## PART B

Imagine that there has been a recent government decision that stipulates priority population groups must be identified and used as a basis for distributing publicly funded dental care. The next few questions ask you to think about who these priority groups should or could be.

Q10. Would you consider children a priority population for publicly funded dental care?

- Yes (respondent directed to Q11)
- No (respondent directed to Q12)
- It depends (respondent directed to Q13)

Q11. Please indicate whether you feel they are:

- High priority
- Medium priority
- Low priority

Please explain. (*Respondent directed to Q15*)

Q12. Please explain, in as much detail as possible, why you feel children are not a priority for publicly funded dental care? *(Respondent directed to Q15)*



Q13. What does it depend on? Please check all that apply. *(Respondent is directed to Q14 where a table is presented and populated by his/her choices below)*

- Child has no other dental insurance
- Child has a disability
- Child is of First Nations or Inuit descent
- Child is a new immigrant
- Child lives in a low-income family
- Child has a parent on social assistance
- Child is living in foster care
- Child is living in prison
- Other \_\_\_\_\_

Q14. Please explain why these criteria are important in making your decision about whether children should be considered a priority. *(Respondent directed to Q15)*

	Comments
Child has no other dental insurance	
Child has a disability	
Child is of First Nations or Inuit descent	
Child is a new immigrant	
Child lives in a low income family	
Child has a parent on social assistance	
Child is living in foster care	
Child is living in prison	
Other	

Q15. Would you consider adults (aged 18 - 64) a priority population for publicly funded dental care?

- Yes *(respondent directed to Q16)*
- No *(respondent directed to Q17)*
- It depends *(respondent directed to Q18)*

Q16. Please indicate whether you feel they are:

- High priority
- Medium priority
- Low priority

Please explain. *(Respondent directed to Q20)*

Q17. Please explain why you feel adults (aged 18 - 64) are not a priority for publicly funded dental care? *(Respondent directed to Q20)*

Q18. What does it depend on? *(Respondent is directed to Q19 where a table is presented and populated by his/her choices below)*

- |   |   |
|---|---|
| <input type="checkbox"/> Has no other dental insurance        | <input type="checkbox"/> Is in prison                       |
| <input type="checkbox"/> Has a disability                     | <input type="checkbox"/> Is pregnant                        |
| <input type="checkbox"/> Is on social assistance              | <input type="checkbox"/> Is pregnant & has a low income     |
| <input type="checkbox"/> Is a veteran                         | <input type="checkbox"/> Is a new mother                    |
| <input type="checkbox"/> Is of First Nations or Inuit descent | <input type="checkbox"/> Is a new mother & has a low income |
| <input type="checkbox"/> Is newly immigrated                  | <input type="checkbox"/> Other _____                        |

Q19. Please explain why these criteria are important in making your decision about whether adults should be considered a priority population? *(Respondent directed to Q20)*

	Comments
Has no other dental insurance	
Has a disability	
Is on social assistance	
Is a veteran	
Is of First Nations or Inuit descent	
Is newly immigrated	
Is in prison	
Is pregnant	
Is pregnant & has a low income	
Is a new mother	
Is a new mother & has a low income	
Other	

Q20. Would you consider seniors (aged 64+) to be a priority population?

- Yes *(Respondent directed to Q21)*
- No *(Respondent directed to Q22)*
- It depends *(Respondent directed to Q23)*

Q21. Please indicate whether you feel they are:

High priority

Medium priority

Low priority

Please explain. *(Respondent directed to Q25)*

Q22. Please explain why you feel seniors (aged 64+) are not a priority for publicly funded dental care. *(Respondent directed to Q25)*

Q23. What does it depend on? *(Respondent is directed to Q24 where a table is presented and populated by his/her choices below)*

- Has no other dental insurance
- Is a veteran
- Has a disability
- Has a low income
- Is of First Nations and Inuit descent
- Is newly immigrated
- Is in prison
- Other \_\_\_\_\_

Q24. Please explain why these criteria are important in making your decision about whether seniors should be considered a priority population? *(Respondent directed to Q25)*

	Comments
Has no other dental insurance	
Is a veteran	
Has a disability	
Has a low income	
Is of First Nations or Inuit descent	
Is newly immigrated	
Is in prison	
Other	

## PART C

Imagine this time, that the government has recently decided that dental services or treatments must be rated according to priority. These priority rankings can then be used to determine what services will be publicly funded.

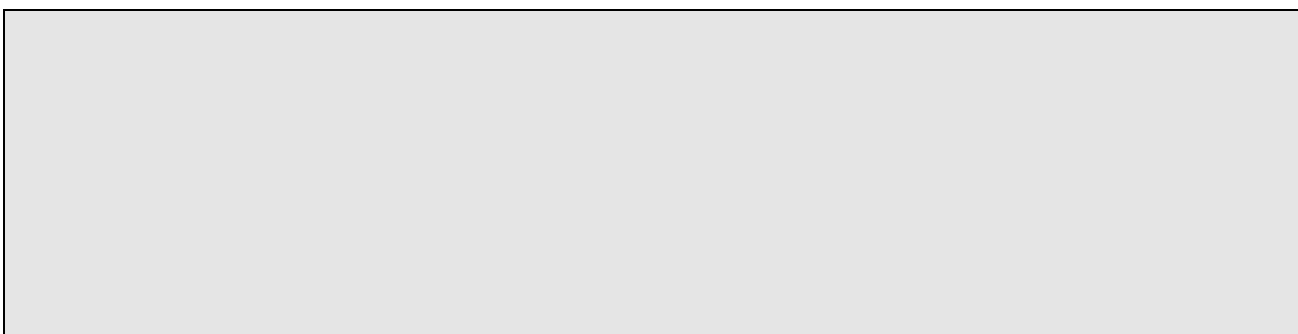
Q25. What should those priority services or treatments be? Please provide the reasons for your answers in as much detail as possible.

	High Priority	Medium Priority	Low Priority	Please Explain
Diagnostic Services (i.e. examinations, x-rays, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Extractions (i.e. infected or decayed teeth, wisdom teeth)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Surgical Services (i.e. removal of infected tissues, removal of cysts or tumors, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Root Canal Treatments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Fillings & other restorations (i.e. temporary fillings, silver fillings, tooth colored fillings, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Major restorations (i.e. gold crowns, tooth colored crowns, fixed bridges, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Replacement of missing teeth (i.e. dentures, implants, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Preventive care (i.e. regular check ups, tooth cleaning/scaling, polishing, fluoride treatments, dental sealants, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Other (i.e. orthodontics, cosmetic procedures, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

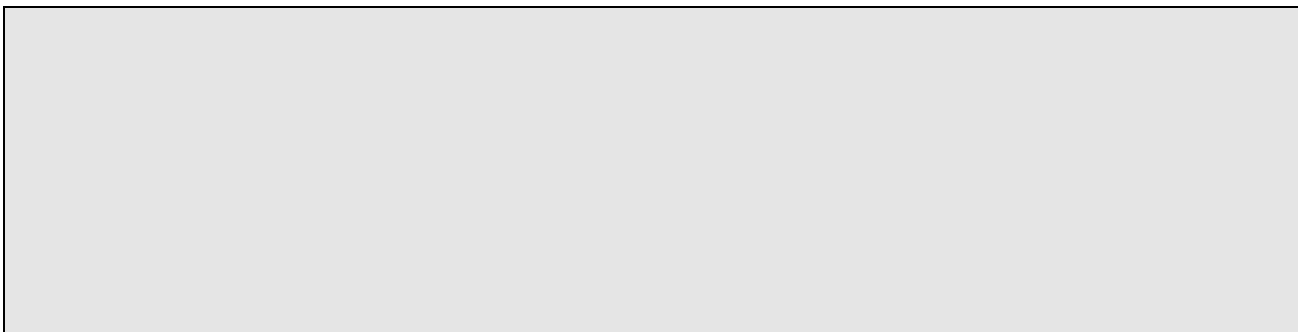
## PART D

This final section asks you if there are instances where you would match a priority group to a particular package of dental services or treatments.

Q26. Do you feel that any of the priority groups you identified in Part B should be eligible for a comprehensive (inclusive) package of dental services/treatments? Please list all that apply and specify your reasons.



Q27. Do you feel that any of the groups you identified as priorities in Part B might be eligible for a more limited package of dental benefits? Please list and explain.



Q28. Are there any other comments you would like to share about your views on rationing publicly funded care?



## **Appendix 2. Initial participant contact email message**

Subject: University of Toronto Survey on Rationing Public Dental Care

I am contacting you to request your participation in a survey about publicly (government) funded dental care programs in Ontario. Dr. Carlos Quiñonez recommended that I contact you, as your expertise will help contribute to this work.

As part of my Masters degree, I am conducting a survey to investigate stakeholder opinion on who should be eligible for publicly funded dental care and what services they should receive.

As you know, money for health care services is limited and publicly funded dental care programs are no exception. It follows then that limits must be set. After decades of investigation in medicine, attention is now being paid to the value of stakeholder opinion on these limit-setting or rationing decisions. My survey parallels this movement in medicine by attempting to consult with stakeholders from the health care professions, funding organizations, academics, community agencies and community members regarding what those limits should be for publicly funded dental care.

I am hoping that you would agree to participate. If not, could you suggest someone else I might contact. Please let me know either way. If you are willing, I would like to set up a quick telephone meeting with you to detail the survey process.

Thank you,

Linda McKay, RDH, BScD

### **Appendix 3. Participant orientation script for telephone contact**

Hello \_\_\_\_\_,

Thank you for agreeing to participate in this study. I would just like a few minutes to introduce myself and orient you to the purpose and the methodology of the work. Forgive me if I seem to be reading, it is important that I cover necessary details consistently with all participants. Feel free to ask any questions you have at any point.

I am a dental hygienist by training with 25 years of experience in practice and education. Along with being a student myself, I currently work as an educator in the dental programs at publicly funded institution post secondary institution. This study represents the research component of a Masters in Dental Public Health from the University of Toronto.

This study **one** aspect of a multi-part study that asks how publicly funded dental care in Canada is rationed in an effort to inform policy debates on rationing dental care in the future. Our purpose & the specific aim of this study is to determine rules that should or could ration publicly funded dental care by asking stakeholders to provide and explain their opinions on who and what should be covered.

It starts by examining the strategies used currently to ration care, namely targeting particular populations and services. As such, it will ask you to provide your opinion on who should receive publicly funded dental care and what services should be publicly funded for the populations identified as a priority. We are using a methodology that attempts to determine if there is **consensus or agreement** on these questions.

#### Background:

**Rationing** simply means setting limits on what dental care is paid for by public dollars. Rationing or limit setting is unavoidable & is evidenced, in most, if not all public health care systems around the world. While setting limits sounds simple enough, in reality, it is nothing if not complex because it represents a mix of economic & political challenges layered on top of moral controversies. In every rationing or limit setting decision some people win and other lose. And, as we have seen in Ontario with dental care, inevitably citizens, dental professionals &/or policy makers at some point ask for the details about

who is covered and for what, and why? We have heard them ask things like, Why low income children and not adults? Why does coverage vary for some groups from region to region? Why posterior composites and not anterior crowns/bridges? Certainly the answers always boil down to limited resources, but beyond that it is not easy to determine how or why the specific decisions are made – there is a lack of explicitness and transparency or openness regarding the criteria for this decision-making.

Fortunately, there is an abundance of evidence in the literature on this subject relative to medicine. Rationing or limit-setting decisions have traditionally been made by technical experts (physicians, dentists, health administrators etc). However, given the considerable moral controversies that exist when we limit eligibility for public funding, the opinions of **other stakeholders** now thought to make an important contribution. This study draws from that ideology by involving dental experts, academics, funders, other health care & social service experts and clients.

### Methodology

We are using a Delphi survey technique, which is designed to generate ideas and determine if consensus exists among a panel of stakeholders. It has been widely used in both social science and health care research but not as much in dentistry. It is similar to focus group work but useful when participants cannot come together. Delphi methods consist of multiple rounds of surveys interspersed with feedback and in this case, we have planned 3 rounds of questionnaires.

The first round, which will be released on or before Jan 15, asks a series of mostly open-ended questions that explore your opinions about the present rationing strategies of limiting the treatments that are covered and prioritizing specific population groups. We are interested in whether you agree with the strategies as well as how you would apply them, given that they are the current approach.

The second round, scheduled for mid February will present a summary of ideas and consensus from the first round. It also provides you an opportunity to consider your position/rationale in light of the input of others as well as exploring new ideas that arise from the first round.

The final round scheduled for mid March, will again provide a summary of ideas & consensus as in round 2 and ask for final practical suggestions for rationing strategies.

I hope given this summary, that you are still willing to participate. Are you still willing?

**If yes>>>>>>>**Can I confirm your email address? The surveys will be sent electronically and will each require about 30 minutes to complete. **The success of this work depends on your ability to commit to completing all three surveys and your willingness to supply the reasons or rationale for your decisions.** It is from that the richness of the discussions will flow. The reasons for your opinions are very important to explore & share. Thank you and I look very forward to working with you on this.

**If no, >>>>>**Thank you for your time.

#### **Appendix 4. Email message with survey link**

Dear {FIRST\_NAME} {LAST\_NAME};

This is the first of three surveys investigating stakeholder opinion on what limits could or should be set for publicly funded dental care in Ontario. Specifically, this survey asks for your comments on the appropriateness of current rationing strategies and how you would apply them. As you move through the survey, it is important that you include the reasons for your opinions in as much detail as possible, as this adds to the richness of the data, and will help form the basis for subsequent questions and the remaining two surveys. The survey tool does not force you to provide an answer to each question, but I hope you will take the time to respond fully to all the items.

The options provided for priority population groups and service/treatment categories were derived from a review of the literature on rationing of publicly funded dental care internationally. Again, space is provided for you to add your thoughts to the list should they differ.

Follow the link in this message to connect to the survey tool. Your prompt attention is greatly appreciated. Please submit your completed survey by Jan 31, 2012.

<SURVEY\_LINK>

Survey Tool Instructions:

-Please be advised that once you have entered a response & moved to the next question, you cannot change your answer.

-If you would like to preview the survey prior to answering, hit "CONTINUE" at the bottom of each page. On the final page, click "EXIT SURVEY" in the upper right corner. This will allow you to view the questions without submitting your response.

-By clicking on the "SAVE & CONTINUE LATER" button you can save all responses provided & exit. When you return to the survey at a later date, you will begin where you left off.

Thank you,

Linda McKay, RDH, BScD

[linda.mckay@utoronto.ca](mailto:linda.mckay@utoronto.ca)

## **Appendix 5. Survey consent page**

### **Publicly Funded Dental Care in Ontario:**

#### **Achieving Stakeholder Consensus on Rationing Rules**

Rationing, or setting limits to, publicly funded health care services is an inevitable reality. An increased array of available treatments/services combined with budgetary pressures has caused governments and citizens alike to struggle to determine what constitutes fair limits. Publicly funded dental care is no exception. Research on this issue in medicine has identified the importance of stakeholder opinion in determining limits that reflect societal values and thus can be perceived as fair. To that end, this study serves as an initial step towards investigating how to most fairly insure oral health services for Ontarians. Your decision to participate or decline participation in this study is completely voluntary. You have the right to terminate your participation at any time without penalty however your participation in all rounds of questioning is important to success of this research and its policy implications. Your participation will be completely confidential and all data will be averaged and reported in aggregate. Possible outlets of dissemination may be major dental and public health journals. There are no risks to participating and the benefits include the opportunity to participate in the development of expert advice that better informs policy makers on explicit criteria for rationing publicly funded dental care. If you have any questions about the survey or the procedures, please contact Linda McKay or or Carlos Quiñonez by email as specified below.

Linda McKay, Dip DH, BSc  
[linda.mckay@utoronto.ca](mailto:linda.mckay@utoronto.ca)

Dr. Carlos Quiñonez, DMD, MSc, PhD,  
FRCDC(C)  
[carlos.Quiñonez@utoronto.ca](mailto:carlos.Quiñonez@utoronto.ca)

Thank you very much for your time and support. Please indicate your willingness to participate by checking the box under the statement below and you will be admitted to the survey tool.

**I have read and understand the consent form above, I certify that I am 18 years of older and am willing to participate voluntarily in the study.**

## **Appendix 6. Synopsis of structure & purpose of questionnaire items**

### PART A: Appropriateness of current rationing strategies

**Questions 1** - This question assessed how appropriate respondents feel it is to ration dental care by limiting the people that are eligible for coverage. Participants were asked to rate this approach as Very appropriate, Somewhat appropriate, Not appropriate or It depends. For the purposes of analysis, the first two categories were collapsed into one.

**Questions 2 – 3** - Subject to their response to Question 1, they were directed to an open-ended question that asked them to explain their previous answer providing as much detail for their reasons as possible.

**Question 4** - This question assessed how appropriate respondents feel it is to ration dental care by limiting the services or treatments that are covered. Participants were asked to rate this approach as Very appropriate, Somewhat appropriate, Not appropriate or It depends. For the purposes of analysis, the first two categories were collapsed into one.

**Question 5 – 6** - Subject to their response to Question 4, they were directed to an open-ended question that asked them to explain their previous answer providing as much detail for their reasons as possible.

**Question 7** - This question assessed how appropriate respondents feel it is to combine the two previously mentioned approaches and ration by limiting both the people that are eligible and the services or treatments that are covered. Stakeholders were asked to rate this approach as Very appropriate, Somewhat appropriate, Not appropriate or It depends. For the purposes of analysis, the first two categories were collapsed into one.

**Question 8 – 9** - Subject to their response to Question 7, they were directed to an open-ended question that asked them to explain their previous answer providing as much detail for their reasons as possible.

## PART B: Application of current rationing strategies

In this section participants were first instructed to imagine that a recent government decision required them to identify priorities for population groups and for treatments or services that should be included in publicly funded dental care. Questions 10 – 24 asked them to imagine they were required to choose priority populations.

**Question 10** – This question assessed how likely the respondent was to prioritize children ( $\leq 18$  years) for publicly funded care. The three possible responses provided were Yes, No or It depends.

**Question 11** – Those who responded Yes in question 10 were directed to this question in which they were to rank children ( $\leq 18$  years) as High priority, Medium priority or Low priority and then to explain their reasons.

**Question 12** – Those who responded No in question 10 were directed to this question, which asked them to explain why they would not prioritize children ( $\leq 18$  years).

**Question 13** - Those who responded It depends in question 10 were directed next to this question. Its purpose was to determine what factors, beyond age, were important in the prioritization of population groups. As such it provided the following list of additional population group characteristics, derived from the literature, as possible responses; child has no other dental insurance, has a disability, is of First Nations or Inuit descent, is a new immigrant, lives in a low-income family, has a parent on social assistance, is living in foster care, is living in prison and other (please specify). Participants were asked to identify all that applied.

**Question 14** – The responses from Question 13 were extracted, tabulated and presented to the participant in this question where they were asked to explain why these criteria were important to their decision-making.

**Question 15** - This question assessed how likely the respondent was to prioritize adults (18-64 years) for publicly funded care. The three possible responses provided were Yes, No or It depends.

**Question 16** – Those who responded Yes in Question 14 were directed to this question in which they were to rank adults as High Priority, Medium Priority or Low Priority and then to explain their reasons.

**Question 17** – Those who responded No in question 14 were directed to this question, which asked them to explain why they would not prioritize adults (18-64 years).

**Question 18** - Those who responded It depends in question 15 were directed next to this question. Its purpose was to determine what factors, beyond age, were important in the prioritization of population groups. As such it provided the following list of additional population group characteristics, derived from the literature, as possible responses; has no other dental insurance, has a disability, is on social assistance, is a veteran, is of First Nations or Inuit descent, is newly immigrated, is living in prison, is pregnant, is pregnant and has a low income, is a new mother, is a new mother and has a low income and other (please specify). Participants were asked to identify all that applied.

**Question 19** – The responses from Question 18 were extracted, tabulated and presented to the participant in this question where they were asked to explain why these criteria were important to their decision-making.

**Question 20** - This question assessed how likely the respondent was to prioritize seniors (64+ years) for publicly funded care. The three possible responses provided were Yes, No or It depends.

**Question 21** – Those who responded Yes in Question 20 were directed to this question in which they were to rank seniors (64+ years) as High Priority, Medium Priority or Low Priority and then to explain their reasons.

**Question 22** – Those who responded No in question 20 were directed to this question, which asked them to explain why they would not prioritize seniors (64+ years).

**Question 23** - Those who responded It Depends in question 20 were directed next to this question. Its purpose was to determine what factors, beyond age, were important in the prioritization of population groups. As such it provided the following list of additional population group characteristics, derived from the literature, as possible responses; has no other

dental insurance, is a veteran, has a disability, has a low income, is of First Nations or Inuit descent, is newly immigrated, is living in prison, and other (please specify). Participants were asked to identify all that applied.

**Question 24** – The responses from Question 23 were extracted, tabulated and presented to the participant in this question where they were asked to explain why these criteria were important to their decision-making.

**Questions 25** - In this case, participants were first instructed to imagine that a recent government decision required them to rate dental services or treatments according to priority in order that dental care could be rationed using their ratings. This question captured the priority placed on categories of treatment/service by participants. They were presented with the following categories of care; diagnostic services (i.e. examinations, x-rays, etc.), extractions (i.e. infected or decayed teeth, wisdom teeth, etc.), root canal treatments, fillings and other restorations (i.e. temporary fillings, silver fillings, tooth colored fillings, etc.), major restorations (i.e. gold crowns, tooth colored crowns, fixed bridges, etc.), replacement of missing teeth (i.e. dentures, implants, etc.), preventive care (i.e. regular check ups, tooth cleaning/scaling, polishing, fluoride treatments, dental sealants, etc.) and other (i.e. orthodontics, cosmetic procedures, etc.) and asked to rate them according to the categories of High priority, Medium priority and Low priority. In all cases, they were then asked to explain their answer, providing as much detail as possible.

### PART C: Service level to population group matching

**Question 26 - 27** – These open-ended questions assessed whether participants felt there were some population groups who should receive a comprehensive package of dental services or treatments and others who should receive a more limited array of services or treatments. In both cases, respondents were asked to explain their reasons with as much detail as possible.

**Question 28** – This question provided an opportunity for respondents to provide any information or views they held on rationing of publicly funded dental care that was not directly elicited by the previous questions.

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