ONTARIO DENTAL ASSOCIATION | SPECIAL REPORT

Oral Health Issues for Ontarians

Oral Health and Aging:

Addressing Issues and Providing Solutions

Ontario Dental Association

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A United Kingdom study reported that 72 percent to 84 percent of LTC residents were unable to effectively brush their own teeth, and 78 percent to 94 percent of denture wearers found it difficult or impossible to clean their dentures themselves.[5]

Introduction

Your oral health is directly related to your overall health.

In April 2008, the Ontario Dental Association (ODA) presented its first Special Report, *Tooth Decay in Ontario's Children: An Ounce of Prevention — A Pound of Cure*, designed to assist parents and government in understanding what was needed to help kids achieve the healthiest mouths and lives possible. But the ODA knows there is more to be done.

Brushing and flossing, the good oral hygiene habits so critical for preventing cavities in children, can in seniors hold the key to preventing much more serious problems — including heart disease, pneumonia, and the complications of diabetes.

Many of us know someone over the age of 65 and we understand the importance of providing quality health care to seniors. That is why we are bringing you our second Special Report, *Oral Health and Aging: Addressing Issues and Providing Solutions*.

We are grateful to know many healthy, happy elderly people in our community. However, we also know that some seniors, particularly those living in long-term care (LTC) homes, are among the most vulnerable members of our society. In fact, some are frail, have less ability to cope with difficulties, and often suffer from a variety of health-related problems that range from mild to severe. The ODA wants to help.

"You cannot be healthy without oral health. Oral health and general health should not be interpreted as separate entities. Oral health is a critical component of health and must be included in the provision of health care and the design of community programs".

~Oral Health in America:
A Report of the Surgeon General 2000.

Why Now?

Good oral health is about much more than a bright white smile. It is about better overall health, and a better quality of life. It may seem simplistic to say that brushing your teeth can help prevent heart attacks, but it is also correct.

There is increasing and disturbing evidence of a connection between poor oral health and several major chronic diseases.

However, research has made it clear that through quality oral care, some diseases can be detected earlier or, in some cases, avoided altogether. This may, in addition to reducing the likelihood of premature death[1], also result in considerable savings to the health-care system.

This report has been produced to highlight several issues:

- A lack of understanding of the importance of good oral health.
- The serious concerns about the quality and availability of oral health-care services for frail seniors living in Ontario.
- Some recommendations for what needs to be done to achieve and maintain good oral health for all seniors.

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Growing Older and Oral Health

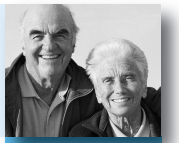
The aging process can be as hard on our mouths, teeth and gums as it is on other parts of our bodies. As we get older, we are more susceptible to the buildup of plaque and the weakening and cracking of older fillings. In addition, there is a tendency for our teeth to become brittle, and many seniors suffer from diminished muscular control, which can make chewing or wearing dentures more difficult. Finally, the older we get, the more vigilant we need to be against developing gum disease.

It is extremely important to remember that for generally healthy, functionally independent seniors, these potential changes need not present a serious risk. In fact in a recent survey done for the ODA, 69 percent of Ontarians believed that poor oral health is not an inevitable consequence of old age. The habits that kept our mouths healthy when we were younger will help to keep them healthy as we age. By practising vigilant oral hygiene at home, including thorough brushing (using fluoridated toothpaste) and flossing twice a day, and by visiting a dentist regularly for a comprehensive oral examination and diagnosis, professional cleanings and to keep fillings in good repair, seniors can prevent, and in some cases reverse, potentially serious oral disease.

Dentists can also detect signs of nutritional deficiencies, as well as symptoms of a number of systemic diseases including early diabetes, adverse drug reactions, oral cancers, infections and immune disorders.[4]

However, the story is a different one for frail or functionally dependent seniors. These are people who need assistance to maintain even the most basic levels of personal care, whether at home or in a Long Term Care (LTC) facility. They are most vulnerable to oral disease, because in many cases they simply cannot perform their own oral care.

A study published in the British Dental Journal found that the risk of malnutrition triples when the mouth is unhealthy.[14]



Dementia, particularly Alzheimer's disease, increases in prevalence with age. Unless regular, effective assistance is provided, the progressive loss of intellectual function and memory inevitably leads to neglect of oral hygiene.[6] Elderly people suffering from dementia often forget to brush and may vehemently resist efforts to assist them, making care very challenging. Over time, dental treatment also becomes increasingly difficult as many patients cannot tolerate lengthy procedures and are unable to understand the reason for treatment.

Assistance with daily oral hygiene is also often needed for older adults with loss of strength, mobility, dexterity or any other functional loss. Conditions that make self-care extremely difficult include tremors, inability to grip a toothbrush (possibly the result of arthritis, Parkinson's disease or stroke), visual impairments and difficulty swallowing.

Good oral hygiene is as important in our later years as it was when we were children. Adults who are able to take care of their oral health must do so, and adults who cannot must be helped. The consequences otherwise can be severe.

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Consequences of Poor Oral Health

Most of us have been told since childhood about the importance of good oral hygiene. Dentists and parents tell their children that regular brushing and flossing can help us avoid tooth decay and cavities.

We know that good oral hygiene leads to good oral health.

What is not as well-known is that there is a critical association between good oral health and good overall health in general, and that link only becomes more important as we age.

Without question, people are living longer than ever before. Often, the older we get, the more likely we are to develop one or more chronic diseases (for example, diabetes). A great many of these diseases (more than 100) can affect our oral health.[7] In fact, most changes in the oral health of seniors are the consequences of chronic disease and medications, accompanied by physical disability and/or cognitive impairment.

Of even greater concern than the link between chronic disease and poor oral health is the reverse connection — the one that suggests that poor oral health can put one at higher risk for other diseases. There is a growing body of scientific research suggesting a relationship between periodontal (gum) disease and various systemic or chronic diseases.

Respiratory Infections (Pneumonia)

Bacterial pneumonia is the leading cause of death of LTC residents[8] and there is a disturbing link between gum disease and pneumonia. The microorganisms that cause pneumonia are commonly found in significantly high concentrations in the dental plaque of elderly people with gum disease. Many studies have demonstrated that poor oral hygiene in older adults is a major risk factor for pneumonia, in particular a strain called “aspiration pneumonia”, which is caused by bacteria-laden saliva accidentally entering the windpipe and travelling to the lungs.[9]

In 2009, there were 1.7 million Ontarians over the age of 65. That represented almost 14 percent of the population.[2] By 2031, it is estimated that there will be 3.6 million seniors, or 21.9 percent of the province's population.[3] Simply put, seniors are the fastest growing sector of our population. They are also the fastest growing potential patient group.

Pneumonias are the most threatening and dangerous consequence of poor oral hygiene for elderly people, and an argument has been made by one prominent researcher that "the expense of aspiration pneumonia as a nursing home complication makes dental hygiene a potentially cost-saving intervention."[10]

Current scientific literature now strongly supports effective oral health-care interventions for reducing the risk of pneumonia among the frail elderly, especially those living in nursing homes.[12]

Cardiovascular Disease (Heart and Stroke)

Several studies have shown that having gum disease increases one's risk of developing cardiovascular disease (CVD). Inflammation is a major risk factor for heart disease, and the bacterial accumulations associated with periodontal disease can increase inflammation levels throughout the entire body. When bacteria in infected gums break free, they can enter the bloodstream, attach to blood vessels and cause clots, which aggravate high blood pressure and increase the chances of a heart attack or a stroke.

Diabetes

Research overwhelmingly indicates a two-way association between gum disease and diabetes. Because diabetics are particularly susceptible to contracting infections, they are at greater risk than most people of developing gum disease. At the same time, oral infections can increase the severity of diabetes by increasing blood sugar levels, leading to such complications as premature degeneration of the eyes, kidneys, nerves and blood vessels.

Malnutrition

There is a clear relationship between poor oral health and malnutrition in the elderly. Older individuals with good oral health benefit from being able to eat a much broader variety of nutritious foods than those with pain, discomfort or tooth loss. One large UK study, which recorded details of the oral health and past dental care of more than 1,000 LTC residents, found very high levels of cavities, plaque retention and poor denture care. Subjects reported inflammation and

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soreness of the mouth, difficulty eating, problems with taste and difficulty caring for their own mouths. The researchers concluded that poor dental health, combined with diminished ability to communicate, can cause weight loss, dehydration and infirmity.[13]

Other Benefits of Good Oral Health

In addition to helping prevent the conditions listed above, good oral health and hygiene have been associated in less direct ways with the prevention of other diseases.

Osteoporosis

Osteoporosis, one of the most common human bone diseases, affects approximately two million Canadians, including over one-third of women over the age of 65. The disease is characterized by decreased bone density and weakened bones. As it progresses, osteoporosis can compromise bones to the point that they break under otherwise normal stresses. It is often considered a "silent disease" that has few symptoms in its early stages.

There is a strong relationship between bone metabolism and oral health, and dentists are in a unique position to help identify people with low bone density.

Early signs of osteoporosis can often be seen in the mouth and detected through oral examination and dental X-rays.

Rheumatoid Arthritis

There is also evidence that treating severe gum disease may alleviate some of the symptoms of rheumatoid arthritis (RA) in people suffering from both conditions. RA and periodontitis are both common chronic inflammatory conditions. Researchers have concluded that non-surgical periodontal therapy had a beneficial effect on the signs and symptoms of RA, regardless of the medications being used to treat the condition.[15]

How Can We Improve the Health Status of the Frail Elderly?

At present, the level of awareness among citizens in general, and also of government, of the clear and direct relationship between oral health and general health is unfortunately low.[16] Not surprisingly then, the quality of oral health care (and access to it) varies greatly among Ontario's LTC homes.

Clearly, there is a need to raise the profile of oral health care for the frail and vulnerable elderly, and to improve the quality of care received by seniors across the province. Seniors who are able to take care of their own oral hygiene must be encouraged to do so, and those who need assistance taking care of themselves must receive it.

The ODA, which has a long tradition of promoting enhanced access to quality oral care for the people of Ontario, including the frail elderly, believes this can be accomplished through the following recommendations:

Recommendations:

LEGISLATION/REGULATION:

By enshrining oral and dental health as a "required program" through regulation, and by mandating the following elements of care, the government could take a major step towards improving both the general health status and quality of life of the large and growing population of elderly persons in LTC homes.

- Upon admission, and on a yearly basis thereafter, all LTC residents should receive an oral examination by a dentist. This dental examination would look for evidence of disease and pain and would determine the need for preventive oral hygiene services or restorative treatment by a dentist.* An individual oral health plan of care for each resident would be developed accordingly.

  *Note: Such a service is currently mandated in Prince Edward Island.[17]

- All LTC homes should allocate permanent space for a health-care/wellness room, in order to provide residents with in-house services from dentists and other regulated health professionals (for example, optometrists, audiologists and chiropodists) as required. The wellness room should be equipped with a dental

chair. This would facilitate performance of dental examinations, minor dental treatments and many preventive procedures within the LTC home itself, and also result in cost savings by eliminating the need for expensive ambulance transfers to hospitals and dental clinics.

- Twice daily oral health care (brushing of teeth and flossing) must be provided to all LTC residents who are unable to manage their own care, and there should be clear standards established pertaining to this.
- All long-term care personal support staff should be educated on the importance of thorough daily oral care for residents, and trained and equipped to provide that care.

PUBLIC AWARENESS/ EDUCATION:

By bringing this Special Report forward the ODA is beginning the process of education and responsibility.

We believe that hand-in-hand with legislation, an education program must be launched to increase public awareness about the relationship between oral health and overall health. There should be specific emphasis on the connection between poor oral health and serious disease (and resulting lower quality of life) in the elderly population.

The program should include user-friendly educational materials that would be readily available online for those caring for elderly persons at home.

ECONOMIC ANALYSIS:

The ODA understands that health-care dollars are scarce. We also understand that preventive care can lead to cost savings further down the road. That is why the ODA is encouraging the Ontario government to conduct an economic analysis to determine the extent of the financial burden on the health-care system created by untreated oral disease among the frail elderly. Given the size of the aging population and the extent of chronic and systemic disease among this group, it seems clear that by mandating preventive daily oral health services (brushing teeth) for elderly persons in LTC homes, the government could avoid considerable health-care costs associated with treating other serious diseases.

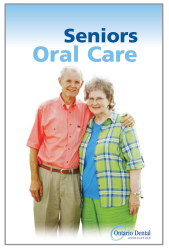
All long-term care personal support staff should be educated on the importance of thorough daily oral care for residents, and trained and equipped to provide that care.

HELPFUL MATERIALS FROM THE ODA:

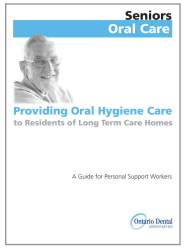
The Ontario Dental Association has several materials available on our website designed to assist with the oral health care of seniors including:

Seniors' Oral Care – Daily Oral Care for Persons in Residential Care
Developed for those who care for seniors, this brochure uses simple graphics to demonstrate brushing and flossing techniques.

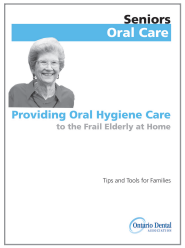
Dental Care for the Patient with Alzheimer's disease
Ensure the patient with Alzheimer's disease knows how to conduct their routine dental care.



Seniors' Oral Care
This 12-page brochure provides an overview of dental care related to aging. It will offer your senior patients the skills and knowledge needed to protect their gums and teeth against oral disease.



Oral Care for Seniors: A Guide for Personal Support Workers
A step-by-step guide, including graphics, to help personal support workers provide daily oral health care (brushing teeth)



Oral Care for Seniors: A Guide for Families
Tip sheets for those caring on a daily basis for the elderly at home.

Conclusion

The connection between oral health and good overall health is clear.

We know, as we have since childhood, that the key to good oral health is almost always good, basic oral hygiene — brushing, flossing, and regular trips to the dentist. For many seniors and Ontarians this is a straightforward, simple piece of overall good health.

But we also know that there are some seniors who need more help than that and those seniors deserve our attention. They deserve good oral health care.
The ODA thinks it is time to act on behalf of those seniors.

Full references can be viewed online at youroralhealth.ca.

Ontario Dental Association

Oral Health Issues for Ontarians

Oral Health and Aging:
Addressing Issues and Providing Solutions

Ontario Dental Association

4 New Street, Toronto, ON M5R 1P6
416-922-3900 | info@oda.ca
www.youroralhealth.ca

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