



## Surveillance Spotlight: Current Concepts in Oral-Systemic Health

### Models for Interprofessional Practice: Innovative Collaboration Between Nursing and Dentistry

By Anthony M. Iacopino, DMD, PhD

In previous columns I discussed the importance of interprofessional health education and practice as they relate to oral-systemic health and emerging guidelines for co-management of patients.<sup>1-3</sup> It will become increasingly common for health professionals in medicine and nursing to collaborate with the dental team in multidirectional screening and referral networks, to mutually reinforce health promotion and wellness messaging, and to jointly develop treatment plans and comprehensively co-manage patients.

Within this context, it is important to disseminate new models of patient care as well as information related to the effectiveness and impact of these outcomes on overall patient health. An innovative collaborative practice approach to oral-systemic health has been developed at New York University (NYU), where the School of Nursing has merged with the College of Dentistry. This model is based on the premise that nurse practitioners can improve access to oral health care and enhance oral health promotion and disease prevention by working closely with the dental team from the first point of contact with patients.<sup>4</sup>

The NYU Nursing Faculty Practice is an onsite primary care practice that operates as a comprehensive diagnostic and treatment centre. A reciprocal referral and consultation mechanism was implemented for the nursing and dental clinics so that seamless oral-systemic health care can take place under one roof. The emphasis is on oral health being integral to overall health. Nurses have the opportunity to screen patients for poor oral health conditions such as caries, periodontal disease and various lesions, while dentists can screen for highly prevalent major systemic conditions such as diabetes and heart disease. In the case of periodontal disease, it can be co-managed with a range of other medical conditions, such as arthritis, osteoporosis and adverse pregnancy outcomes.

In the first 18 months of this operation model, the nursing practice recorded 510 new patient visits. Of these, 220 (43%) were referrals made by the dental school faculty or students for general health promotion services, diagnosis and management of systematic health problems, or for medical consultations before a dental procedure. Similarly, many patients who presented for primary health care at the nursing practice were subsequently referred to the dental school clinic for oral health screening and evaluation.

The nurse practitioners have done a considerable amount of work to familiarize faculty, students and dental clinic staff about the nursing profession, and, specifically, about the role and scope of their practice. The nurses now teach second-year dental students how to take a blood pressure reading. A chairside consultation project with the third- and fourth-year dental students was designed to raise their awareness regarding patient health risk profiles and the need for primary care and specialty referrals. The collaboration has resulted in presentations on healthy lifestyles by the nurses to dental clinic patients. Patient perception about the importance of obtaining dental services in addition to primary care services has changed markedly.

The dental faculty and students have reciprocated by providing nursing practitioners basic instruction in general oral health screening and the importance of oral health for overall health and well-being. The nurses are able to identify obvious caries, signs of periodontal disease and poor oral hygiene, and counsel patients regarding the potential connections between poor

oral health and chronic inflammatory diseases and conditions, such as diabetes, cardiovascular disease, arthritis and adverse pregnancy outcomes. Patients have been very accepting of the dental referral and have been more than willing to add the oral health evaluation and treatment component to their comprehensive health care plan.

As patients continue to be managed cooperatively at the NYU clinics, it will be interesting to evaluate the health outcomes data that emerge from this new model of care. If overall patient health is improved, we may soon see the model used throughout the nursing and medical professions. This would mean huge changes not only in the way dentistry is practised, but also in how the health care system in general functions. And that is something none of us could have even imagined just a few years ago when oral–systemic science began to gain major traction within the public health discourse. ♦

### References

1. Iacopino AM. Practising oral–systemic medicine: the need for interprofessional education. *J Can Dent Assoc.* 2008;74(10):866-7.
2. Iacopino AM. New “syndemic” paradigm for interprofessional management of chronic inflammatory disease. *J Can Dent Assoc.* 2009; 75(9):632-3.
3. Iacopino AM. Management of systemic inflammation by dentists and physicians: new guidelines. *J Can Dent Assoc.* 2009;75(8):564-5.
4. Haber J, Strasser S, Lloyd M, Dorsen C, Knapp R, Auerhahn C, et al. The oral-systemic connection in primary care. *Nurse Pract.* 2009; 34(3):43-8.

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*The views expressed are those of the author and do not necessarily reflect the opinions or official policies of the Canadian Dental Association.*

Cite this article as *J Can Dent Assoc* 2010;76:a16



## BCDA Launches Educational Resources on Children’s Oral Health

The British Columbia Dental Association (BCDA) has produced an educational CD on children’s oral health designed for parents and caregivers of children under 3 years of age.

Entitled *How to Take Care of Your Child’s Teeth*, this new resource educates and encourages parents to become partners in their child’s oral health. Caregivers are provided with practical advice on how to minimize the risk of early dental decay with information on nutrition and hygiene, including use of the “lift the lip” brushing technique. The CD also provides parents with tips on how to prepare for, and what to expect, during a child’s first dental visit.

This resource was developed by a task force of dental professionals and public health hygienists, and funded through a partnership with the provincial Ministry of Healthy Living and Sport.

The educational CD, along with a supporting tip sheet and poster available in multiple languages, can be accessed online at [www.bcdental.org](http://www.bcdental.org).

Cite this article as *J Can Dent Assoc* 2010;76:a17

## Case Report on Suspected Association of Denture Creams and Neuropathy

Health Canada published a case presentation relevant to Canadian dentistry in the January 2010 edition of its *Canadian Adverse Reaction Newsletter*. The case discusses the potential risks of neurologic disease associated with the excessive use of denture adhesive creams. The case is reprinted in its entirety below.

### **Chronic, excessive use of denture adhesive creams: suspected association with neuropathy**

Denture adhesives are used as a means to enhance denture retention, stability and function.<sup>1</sup> In Canada, denture adhesives are regulated as medical devices. Active ingredients in current formulations can include combined polymethyl vinyl ether-maleic anhydride (PVM-MA) zinc and calcium salts with carboxymethylcellulose.<sup>1</sup> Chronic, excessive ingestion of zinc can result in copper deficiency, which is an established and increasingly recognized cause of neurologic disease.<sup>2</sup> This may manifest as weakness and numbness of the extremities. Some marketed denture adhesive creams, including certain Fixodent and Poli-Grip formulations, contain zinc at levels of about 17 to 34 mg/g.<sup>2</sup>

In November 2006, Health Canada received a report of a 52-year-old woman who had used Ultra Poli-Grip Denture Adhesive Cream over a period of years and was reported to have ingested large amounts of the product. The patient experienced numbness in both of her legs (date not reported).

In September 2009, Health Canada received a report of a 56-year-old woman who had used Fixodent Original Denture Adhesive for 7 to 8 years. She recently experienced unexplained pain, numbness and loss of sensitivity in her limbs.

Similar cases have been published of neurologic disease suspected of being associated with the overly liberal use (more than one 68 g tube per week) and chronic, excessive ingestion of denture adhesive creams containing zinc.<sup>2,3</sup>

Health Canada encourages the reporting of similar suspected adverse incidents involving denture adhesives to the Health Products and Food Branch Inspectorate through the toll-free hotline (1-800-267-9675).

### **References**

1. Grasso JE. Denture adhesives: changing attitudes. *J Am Dent Assoc*. 1996;127(1):90-6.
2. Nations SP, Boyer PJ, Love LA, Burritt MF, Butz JA, Wolfe GI, et al. Denture cream: an unusual source of excess zinc, leading to hypocupremia and neurologic disease. *Neurology*. 2008;71(9):639-43.
3. Spain RI, Leist TP, De Sousa EA. When metals compete: a case of copper-deficiency myeloneuropathy and anemia. *Nat Clin Pract Neurol*. 2009;5(2):106-11.

Reprinted from *Canadian Adverse Reaction Newsletter*. January 2010. Vol 20(1). Available: [www.hc-sc.gc.ca/dhp-mps/medeff/bulletin/carn-bcei\\_v20n1-eng.php#\\_case\\_presentation](http://www.hc-sc.gc.ca/dhp-mps/medeff/bulletin/carn-bcei_v20n1-eng.php#_case_presentation) (accessed 2010 Jan 14).

**Health Canada has recently launched a more user-friendly version of the Canada Vigilance Adverse Reaction Online Database. For more information about the database and how to report an adverse reaction, visit [www.healthcanada.gc.ca/medeffect](http://www.healthcanada.gc.ca/medeffect).**

## DENTAL INDUSTRY

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### Nobel Biocare Appointments

In January, Nobel Biocare made 2 significant staffing announcements, appointing Melker Nilsson as senior vice-president of business development for North America and John Cox, currently the general manager of Nobel Biocare Canada, as senior vice-president of sales for North America.

“With Melker Nilsson joining John Cox and the rest of Nobel Biocare’s North American management team, we feel confident that we have a leadership team with the experience and capability to sustain and strengthen Nobel Biocare’s market-leading position in North America,” said Bill Ryan, president of Nobel Biocare’s North American operations.

Nobel Biocare is the world leader in innovative restorative and esthetic dental solutions, including dental implants, all-ceramic crowns, bridges and laminates, guided surgery planning, scanners and biomaterials.

For more details, visit [www.nobelbiocare.com](http://www.nobelbiocare.com).

Cite this as *J Can Dent Assoc* 2010;76:a19



John Cox

### Alliance H. and OraFresh Enterprises Join Forces

In November, Alliance H. Inc. (AHI) became a major shareholder in OraFresh Enterprises Inc. (OFE). As a result, Michel Hart, current chair of Alliance, will become chair and CEO of OraFresh.

Mr. Hart welcomes the opportunity to be involved with OFE, which offers the dental profession products to treat oral infections while contributing to overall health. “The addition of AHI as a key stakeholder strengthens OFE in the areas of marketing, logistics and manufacturing while improving access to the North American dental markets,” adds Anne Bosy, head of OFE scientific affairs.

OFE is a Toronto-based manufacturer of products for the treatment of oral infections and chronic halitosis. AHI is a Toronto-based manufacturer of dental equipment, cabinets and infection control products.

Visit [www.orafresh.ca](http://www.orafresh.ca) or [www.alliancehinc.com](http://www.alliancehinc.com) for more information. ➤

Cite this as *J Can Dent Assoc* 2010;76:a20

## BC Authorities Seek Dentists’ Help with Patient Identification

The police department in Victoria, BC, is hoping that dentists can help identify a missing person, believed to have undergone a sex change from man to woman. Ronald Wayne Siemens (born January 8, 1956) is thought to have assumed the female identity Kyla Dawn Siemens. Victoria police are looking for dental records to help facilitate a positive identification.

Any dentist who may have treated this patient can contact Sgt. Rhys Wickes of the Victoria police department’s major crime section at (250) 995-7244. ➤

Cite this as *J Can Dent Assoc* 2010;76:a21

## OBITUARIES



### Dr. James P. Lund

Dr. James (Jim) Lund of Montreal passed away December 8. Dr. Lund was an influential figure in Canadian dentistry, most notably serving as dean of the faculty of dentistry at McGill University from 1995 to 2008.

Originally from Lancashire, England, Dr. Lund spent his formative years in Southern Australia. After graduating from the University of Adelaide in 1966, Dr. Lund emigrated to Canada to attend the University of Western Ontario, where he received his PhD in physiology in 1971. Dr. Lund then embarked on a 24-year career at the University of Montreal, culminating with an 8-year term as vice-dean for research at the faculty of dentistry.

In the early 1990s, McGill's faculty of dentistry was threatened with closure because of low research productivity. However, under the guidance and leadership of Dr. Lund, McGill transformed itself into a research-intensive institution through interprofessional collaboration.

Dr. Lund was instrumental in establishing the Centre for Bone and Periodontal Research, the Centre for Biorecognition and Biosensors and the Alan Edwards Centre for Research on Pain at McGill. He was also the driving force behind the creation of McGill's Dental Outreach Program, a program that provides free dental care to vulnerable populations.

Dr. Lund is survived by his wife Dr. Jocelyne Feine, his daughters Michelle and Katherine, and his grandchildren Laura and Mihai. A Facebook page dedicated to sharing memories of Dr. Lund has been established at: [www.facebook.com/group.php?v=wall&ref=nf&gid=193283317897](http://www.facebook.com/group.php?v=wall&ref=nf&gid=193283317897). ♦

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Cite this as *J Can Dent Assoc* 2010;76:a22

**Bogue, Dr. Laurence J.:** A CDA Life Member, Dr. Bogue of North Vancouver, British Columbia, passed away October 12. He graduated from the University of Toronto in 1947.

**Bunt, Dr. Richard D.:** Dr. Bunt of Trenton, Ontario, passed away October 5. He graduated from McGill University in 1959.

**de Billy, Dr. Godefroy:** Dr. de Billy of Quebec City, passed away November 22. He graduated from the University of Montreal in 1952.

**Gilmour, Dr. Donald S.:** A CDA Life Member, Dr. Gilmour of Edmonton passed away November 30. He graduated from the University of Alberta in 1945.

**Johnston, Dr. Mark E.:** Dr. Johnston of Winnipeg passed away October 30. He graduated from the University of Manitoba in 1989.

**Lines, Dr. Andrew L.:** A graduate of the University of Alberta, Dr. Lines of Fort McMurray, Alberta, passed away October 4.

**Russell, Dr. William S.:** Dr. Russell of Chilliwack, British Columbia, passed away August 27. He graduated from the University of Queensland in 1975.

**Scanlon, Dr. David P.:** A 1981 graduate of the University of Toronto, Dr. Scanlon of Midland, Ontario, passed away November 12.

**Thompson, Dr. Jack G.:** A 1965 graduate of Dalhousie University, Dr. Thompson of Saint John, New Brunswick, passed away September 19.

**Verbic, Dr. Zlatko A.:** Dr. Verbic of Etobicoke, Ontario, passed away August 22. He graduated from the University of Toronto in 1964. ♦