

The Booming 'Grey Wave'— UBC DENTISTRY AT THE EDUCATIONAL FOREFRONT OF GERIATRIC ORAL CARE

BY HEATHER CONN

Mention “geriatric dental care” and negative stereotypes can abound: feeble seniors in wheelchairs, with full dentures, wasting away in an institution with no dental care. But in today’s world where “80 is the new 60,” baby boomers are living longer and better, thanks to advanced care and improved oral health. They are aging with at least 70 percent of their natural teeth—and they need knowledgeable dental professionals who will treat their probable complex dental needs over the long haul.

For the first time, our country has more seniors than people under the age of 15, according to a 2016 Statistics Canada census. As part of this tidal “grey wave,” the nation’s fastest-growing group is people 100 years or older. The mean age of seniors in a Providence Health Care facility in BC is 83 to 86, says Chris Wyatt, UBC Dentistry professor and prosthodontics program director.

UBC’s Geriatric Dentistry Program (GDP) provides dental services for more than 2,700 geriatric residents in 27 long-term-care

facilities on the Lower Mainland. Consider how this aging population and its oral care needs have increased in just one decade, from 2002 to 2012:

- the number of long-term-care residents accessing dental care almost tripled, from 894 to 2,668
- dental exams increased by half, from 996 to 1,504
- five times as many treatments were provided, from 201 to 1,073

In response to these changes, UBC Dentistry recently restructured and enhanced its dental geriatric content. Thanks to a new dedicated curriculum and recent research at UBC on geriatric care (see sidebar on page 19), the Faculty of Dentistry stands at the educational forefront of Canada’s response to the dental needs of a frail, elderly population.

In September 2017, the Faculty introduced the first of two new curriculum modules that focus solely on an elderly patient group; this is

part of a two-year rollout. The new Dentistry 430 Dental Geriatrics I for third-year undergraduates began in September 2017. A new fourth-year companion course, Dentistry 440 Dental Geriatrics II, will follow in the fall of 2018.

Also for the first time, UBC Dentistry has integrated geriatrics curriculum into its graduate students’ periodontics and prosthodontics clinical courses; this, too, started in September 2017. For graduate periodontics students, geriatric clinical and didactic courses began in 2011. But now, knowledge gained from research and from GDP clinical work has been integrated more deeply into the curriculum of both specialty areas, says Wyatt.

Current and future dentistry and dental hygiene students will now have thorough, concentrated training in care for vulnerable seniors. Shunhau To, program manager of UBC’s geriatric clinic, says: “We have graduates who are interested in geriatrics and want to serve that population. That didn’t happen before.”



For decades, UBC Dentistry covered geriatric dental care only in bits and pieces as a small component of different courses. No dedicated training or clinical and didactic content addressed this patient group until 2010. Now the new Dentistry 430 Geriatrics I module teaches third-year students a team-based, compassionate approach to patient-centred elder care, says To.

Both UBC dentistry and dental hygiene students are learning to spend time with elderly patients, to build caring relationships with them, and to view them as more than just an oral health challenge. Students are learning to feel at ease with frail seniors’ complex dental and medical conditions, including missing teeth, limited mobility, anxiety, dementia and Parkinson’s disease.

In 2015, UBC Dentistry served 40 patients over age 100; their five most frequent medical conditions were hypertension, dementia, osteoarthritis, osteoporosis and fractures. Each of these patients has at least two medical

conditions and is taking at least three or four prescribed medications.

“The more we expose students to clinical experiences, the greater their awareness and comfort level in providing care for seniors,” says Leandra Best, clinical professor and senior associate dean.

Students learn to understand and deliver collaborative interprofessional oral care to geriatric patients in both long-term-care settings and private practice. In third year, they observe how a dentist works with family members to decide on treatment. By fourth year, they understand how treatment can become a team effort involving a dentist, dental hygienist, nutritionist and nurse or doctor working together with the family.

Fourth-year students perform hands-on geriatric patient care in community settings, supervised by UBC faculty and other dentists. “We’re making a difference by training

students and exposing them to years of commitment to community service and outreach,” says To.

As a key part of community outreach, both dentistry and dental hygiene students are doing rotations at free clinics in two Vancouver seniors’ facilities: Villa Cathay Care Home and Simon K.Y. Lee Seniors Care Home. The students also rotate once a week to observe and assist with patient care at UBC’s Nobel Biocare Oral Health Centre.

The dental team overseeing these new undergraduates in clinical rotations has reported, according to To: “Students are much more respectful [to patients] than they’ve ever been. They’re aware of the issues and can see and appreciate the differences and the challenges [in geriatric care].”

Assistant professor Leeann Donnelly says: “They [students] might go in thinking that someone with a mental illness is crazy and come out wanting to advocate for that individual.”

From left to right: Dr. Chris Wyatt, Shunhau To, Dr. Leeann Donnelly, Dr. Leandra Best and Dr. Mario Brondani.

Fourth-year dental hygiene students do clinical work and preventive oral health care education for the elderly in the long-term-care home Broadway Lodge. Dental hygienists at UBC Dentistry have long had a strong focus on geriatric patients, having had geriatric course and clinical care requirements since 2001, says Donnelly.

The aim of the new Geriatrics I is to give dentistry students a clinical, social and psychological view on aging. They learn in small groups, blending both didactic and in-class activities with workshops and guest lectures. “We’re quite excited about this geriatric dentistry content being restructured and enhanced and giving it an actual focused presence in the curriculum,” says Best. “We have passionate faculty members who are promoting it.”

The modules are designed around five core competency areas: patient-centred care (holistic understanding of the patient, and appropriate assessment, diagnostic and

treatment-planning skills); professionalism (best practices, high ethical standards and a personal commitment to health and well-being); communication and collaboration (e.g., establishing a therapeutic relationship with patients and their families); practice and information management (e.g., evidence-based decision-making); and health promotion (addressing social factors that affect the patient’s health).

“This focused curriculum is important for us,” says Wyatt. “No other dental school in Canada has such a broadly integrated, geriatric-focused curriculum.”

He adds: “We think our students should be prepared to treat the geriatric population. It’s where we need to go. It’s something we want to build upon.”

Mario Brondani, UBC Dentistry associate professor who coordinates the geriatrics modules, says that for the first time, students are discussing issues such as palliative care,

informed consent and interprofessional care in a geriatrics-specific course. Previously, second-year students received some of the content now in Dentistry 430, but Brondani augmented the material and moved it to third year. By then, he says, students are more mature and have more medical knowledge and clinical experience to apply to what they’re learning. He adds, “By then, it’s not just theoretical. Keen students also get involved in research.”

A required text for Geriatrics I is the 2011 book *Oral Healthcare for the Frail Elder: A Clinical Perspective*, which is edited by Chris Wyatt, Frauke Müller and retired UBC Dentistry professor Michael MacEntee, and includes content written by Mario Brondani and Leeann Donnelly. Reading assigned chapters, students learn about issues from oral pain to dry mouth and medications, and how body image impacts social interactions.

“We are still developing content for Dental Geriatrics II,” says Brondani. Fourth-year students will visit long-term-care facilities and continue with the integrated, multidisciplinary approach of dental geriatrics, as well as discuss more advanced knowledge and clinical practice.

Wyatt says: “We’ve had a really good response from facilities and students. Students are now better prepared to deliver appropriate care to an aging population.”

Geriatric Dentistry Research

Cutting-edge research bolsters UBC’s commitment to provide the best dental care possible for our aging population. Why do specific dental challenges and outcomes occur in a frail, aging population? How do medical, social, financial and family factors influence dental care decisions for the elderly? What are successful dental treatments for geriatric patients?

Using scientific evidence from recent studies, UBC’s Geriatric Dentistry Program (GDP) is answering some of these questions while further exploring others. Research results will not only enhance UBC’s geriatric dentistry curriculum, but will deepen students’ knowledge applied in clinical rotations.

In the late 1990s, UBC Dentistry geriatric research focused on oral disease and prevention, such as caries in older patients, examining the links between oral health and a patient’s overall health. Today, the GDP is researching dental challenges and outcomes, trying to document and understand variable conditions that will determine which treatments will best serve a frail geriatric patient, says UBC Dentistry professor Chris Wyatt.

Wyatt directs the GDP at 27 long-term-care facilities. Some of their elderly residents were the subjects of a 2017 pilot study that examined the survival rate of dental restorations in frail older adults. Wyatt and Chayanee Chatvanichkul, a visiting scientist from Thailand, wanted to know: How long do dental restorations last in frail older adults? If they last longer than average in a very challenging geriatric dental situation, why is that? What successes can GDP document?

In their small patient group, Wyatt and Chatvanichkul found that 64 percent of dental restorations had survived over a six-year period. They now plan to add their 2003-to-2016

data to draw conclusions from broader statistical analysis. The resulting knowledge will help justify specific treatments of patients. Wyatt says: “That’s where the future is on the research end: [to determine] what treatment is best based on the longevity of a restoration.”

In another 2017 study, Wyatt and Diego Ardenghi, an MSc graduate student in prosthodontics, conducted semi-structured interviews with 12 family members of frail, elderly patients. They wanted to explore the impact of UBC’s Geriatric Dentistry Program on patients’ relatives. They discovered that although patients’ relatives were worried about their loved one’s oral health, families reported that the GDP reduced their stress by providing easily accessible dental care.

UBC Dentistry associate professor Mario Brondani is a core member of a new team whose research results will enhance how geriatric research is conducted at UBC and both provincially and nationally. Representing Dentistry, he’ll join UBC researchers from Nursing, Family Practice, Sociology, Social Work, Kinesiology, Occupational Science, Health and Exercise Sciences, and other specialists to examine the topic: “Re-Imagine Aging: Creating Interdisciplinary Connections for Research Collaboration and Training.”

Their goal is to create a virtual, supportive, interdisciplinary environment that elevates aging research beyond what is possible within only a single discipline. This will likely involve online shared resources and a planning meeting over the next year to include other UBC researchers, says Brondani. They will apply their research results to help develop a healthy aging strategy for BC and to give input into Canada’s national seniors strategy.

As part of his PhD completed in 2007, Brondani wanted to



Dr. Nicholas Tong, supervising dentist on the day at Simon K. Y. Lee Seniors Care Home, listens to an elderly patient. Tong is currently an MSc candidate (year 1) undertaking geriatric dentistry research.

PHOTO BY JANE MERLING

understand the impact of oral disorders on the life of elders. He explored what values, beliefs and behaviours older adults held in relation to their oral health. He held focus group discussions among 42 residents, ages 64 to 93, at retirement homes and seniors’ centres. Based on data analysis, he concluded that participants had their own views on what a healthy mouth entails and adjusted their expectations and sought social support to accept some oral impairment and disability. For example, patients found that missing teeth did not always disrupt daily functioning; therefore, a full set of new dentures might not always be an ultimate goal.

A 2002-2007 study by the GDP followed 139 older patients in long-term-care facilities (i.e., 17 percent of residents) for five years. Treatment was recommended for 97 percent of them, but only 60 percent consented to receive care. Wyatt wants to know, simply: why? What factors influence whether families will consent to complex dental treatment for their elderly relative? Economic pressures could be at play, but sometimes the family simply concludes that getting a bridge, for example, is not appropriate for someone who’s 90. “There’s something other than money at stake there,” he says.

In the same five-year study, the GDP found that 40 percent of caries-free patients developed caries over the five years. During the same period, 43 percent of patients developed periodontal disease. Future research studies will explore this, Wyatt says. “This [research] is something that we want to build upon.”

UBC Dentistry’s ongoing research will continue to enrich new geriatrics curricula and students’ clinical rotations. Alumni will be well equipped to provide the best oral care for all generations.