Great Expectations

New Master of Dental Hygiene Program opens doors and new career paths.

BY TERRI PETERSON SMITH

these days it’s unusual to hear about someone who’s actually in demand in the job market. The idea of a job seeker “getting snapped up” by an employer seems like something from a bygone era. Yet, that’s the buzz as the first class to graduate from the School of Dentistry’s new Master of Dental Hygiene (MDH) Program begins to enter the job market. The inaugural class began with eight students in May, 2008 and six are graduating in 2010. Whether pursuing opportunities in academia or industry—the two educational tracks that the program offers—the school’s MDH graduates are finding that they are in demand.

Their success attests to not only the personal drive and qualifications of the people selected for the program, but also to the crying need for their talents in education, dental management and in the oral health care industry. Until now, though, there has been little opportunity for hygienists to tailor a graduate-level education to meet these needs. May, 2010 grad, Brenda Armstrong says, “After 23 years in clinical dental hygiene, I was looking for opportunities to expand my career options and to give back. Advanced education is a good way to do that. I started looking in 2000, but the options for a masters in dental hygiene were few

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and far between. Aside from an online program in Missouri, there was nothing in the Midwest.”

According to Assistant Professor of Dental Hygiene Christine Blue, who helped found the program and is the director of the Division of Dental Hygiene, “There are only about 18 graduate programs in the entire country and those are mainly located on the coasts. Yet nationally, there are about 300 education programs in dental hygiene, and 10 of those are in Minnesota alone.” The growth in dental hygiene programs has led to a shortage of dental hygiene educators to teach all those budding hygienists. “In addition,” says Blue, “the average age of dental hygiene faculty members is 52.”

In 2004, the Journal of Dental Education reported on a study concerning the status of allied dental faculty. The results indicated that 68 percent of dental hygiene programs surveyed would need to replace current full-time faculty members within five years and 73 percent of those replacements would be needed due to retirement. Says Blue, “Schools have faculty vacancies they can’t fill.”

The demand for hygienists with a graduate degree is also attributable to the fact that the role of the hygienist in practice has changed dramatically. Many dental hygienists have assumed responsibilities as managers of large dental clinics, practice management consultants, and entrepreneurs. These changes require of the hygienist knowledge and skills

Celebrating 90 Years of Dental Hygiene at the University of Minnesota School of Dentistry*

1800s University of Minnesota is founded as a preparatory school in 1851. In 1858, Minnesota becomes a state. In 1888, College of Dentistry is founded as a division of the Dept. of Medicine and is the 8th university-based dental school in the U.S.

1919 Minnesota authorizes licensure of “dental nurses.” University of Minnesota Board of Regents approves course. Minnesota is second such education program at a dental school. (California was first).

1920 First class of students is accepted. Six students take a major portion of their first six months of studying in nursing courses. Harold Leonard, DDS, is the first program director, followed by Cora Ueland in 1923.

1923–mid-60s Typewriting skills are required for entry into program.

1927 Eleven dental hygiene programs exist nationwide. Only two were two years in length, those at the University of Minnesota and the University of Tennessee. Others varied from eight months to less than two years.

beyond those acquired in pre-licensure education programs.

There’s also demand for MDH grads with a business background in the dental products industry. Says Blue, “In the oral healthcare products and services industry—companies like Pfizer, Colgate, Philips Sonicare, and 3M, for example—dental hygienists are highly sought-after employees because not only do they promote these companies’ products, but they know the science behind them.”

Ultradent, a leading developer of high-tech dental and hygiene materials, devices and instruments worldwide, provides a good example. Says Ryan Downard, the company’s senior marketing director, “We consider the entire staff of the dental practice as our customer base, including dental hygienists. Certain product lines we offer are meant specifically for the hygienist and the ability to impact hygienists’ at their level’ is extremely valuable.”

Creating a Program
What better place to establish a dental hygiene masters program than the School of Dentistry, smack in the middle of a major research university, with plenty of inter-professional collaboration and input from a world-renowned Academic Health Center, College of Education and Human Development, and the Carlson School of Management? Yet, even with all of these resources, setting up a new graduate program was no small task. Blue worked with Kathleen Newell, associate professor and former director of the Division of Dental Hygiene, on the project for a year-and-a-half. “Kathy came out of retirement to help make this happen. It was a dream of hers,” says Blue. They sought input from a special interest group in the American Dental Education Association, a well-regarded MDH program at

1927–28
In 1927, Minnesota amends practice act to refer to a “dental hygienist.” lone Jackson is named director of University of Minnesota School of Dental Hygienists in 1928 and continued in role for 39 years.

1930s
Curriculum reflects a move away from a nursing focus toward a more in-depth curriculum in dental hygiene and liberal education.
Old Dominion University in Virginia, and from dental hygienists themselves. “There was a rigorous University approval process to establish the program,” says Blue. “There were people on the committee from every school in the University’s Academic Health Center and they provided great support and feedback.”

“As it turns out, it was perfect timing,” says Blue. “The Carlson School of Management was already hearing from people in the medical and dental industries that their MBA graduates needed to know more about science.” As a result, the Carlson School established its Medical Industry Leadership Institute, which offers courses for MBA students desiring careers in the healthcare industry. MDH students take these business classes and others right along with MBA students. Says Blue, “The Carlson School was interested in getting dental hygiene grads into dental products companies and establishing relationships there, so it’s a win/win.”

Great program approved, Blue needed to let people know that the program was starting. She had to create awareness among companies that would offer internships and hire graduates, among dental hygiene schools and among the potential applicants themselves. Blue marketed the program to all dental hygiene program directors in the country and to all hygienists in Minnesota. “Most of the prospective students find out about us on the Web,” says Blue. “We also have several information sessions a year. Ultimately,” she says, “It’s all about cultivating relationships.”

Applicants to the program must have graduated from an accredited dental hygiene program and they must have a bachelor’s degree. The program lasts 16 months to two years and students may pursue one of the two tracks: dental hygiene education or management. All students take a core curriculum of courses: Research Methods in Health Sciences, Administrative Leadership and Professional Development, Biostatistical Methods, and Instructional Strategies for Effective Teaching.

Beyond the core classes, the education track requires courses that provide students with the knowledge and skills to teach didactic, clinic and laboratory courses in dental hygiene programs, to conduct research, and to assume administrative positions. These include The Discipline of Dental Hygiene, Curriculum and Course Development, Dental Hygiene Clinic Administration, Dental Hygiene Supervised Student Teaching, Principles of Educational & Psychological Measurement, and Web-Based Teaching/Learning Strategies. Students in the educational track must also complete directed research and a thesis.

Courses in the management track, on the other hand, provide students with the knowledge and skills necessary for positions within the healthcare industry, such as sales representatives, managers of marketing and professional relations divisions, managers of large dental clinics,

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1940–43 60 students accepted (1940); 46 graduate two years later. Enrollment declines during war years to nine students. Beginning in 1943, course is conducted on “accelerated plan” (four quarters/year) to meet increased demand for graduates.

1945 Of the 16 dental hygiene programs in existence, six are only one year in length.

1950 Dean William Crawford reports that “Enrollment in the School of Dental Hygienists remains about constant at 70–75 students in the two classes.”

1951–52 By 1951, all states require licensure of dental hygienists. University of Minnesota Program in Dental Hygiene is accredited by the ADA Commission with full approval in 1952.

1961 First National Dental Hygiene Board Examination is given.

1965–67 By 1965, 58 programs in dental hygiene operate across the U.S. In 1966, University of Minnesota Dental Hygiene Alumni Association is established. Donna S. Aker is appointed director of Program in Dental Hygiene (1967–85).
practice management consultants and entrepreneurs. They must take Financial Accounting, Marketing Management, Operations Management and several electives, all through the Carlson School. They must also complete a one-semester internship in a company or on the business side of a clinic, for which students receive credit. MDH students have had internships at Philips Sonicare, Procter & Gamble, and at the University of Minnesota Physicians Dental Clinic, to name a few.

First Class
Two soon-to-be MDH grads, Brenda Armstrong and Maria Nelson, exemplify the program’s students. After more than two decades in practice, Armstrong was a seasoned dental hygienist and ready to move to the next level. For her, that meant sharing her profession by educating new hygienists, and in particular, sharing her interest in providing access to dental care for those who are underserved.

“To achieve that,” she says, “I was looking for a program that offered face-to-face instruction and plenty of opportunity to actually work with students.” At the School of Dentistry, she received a great deal of student teaching experience, both in the clinic and through classroom experience teaching pre-clinical classes to first semester dental hygiene and dental therapy students. She spent two afternoons a week in the clinic and received both verbal and written feedback and mentoring, with Associate Professor in the Division of Dental Hygiene Jill Stoltenberg shadowing her.

She also conducted a research project focused on the relationship between service-learning and civic engagement at the dental school’s newest outreach site, located at Rice Memorial Hospital in Willmar. She says, “My passion is to keep students involved in civic engagement and the ideals they are taught in dental school, especially regarding access to care. With all that we do at the University to teach civic engagement, what do students do when they leave? Do they carry on? There’s not a lot of research about this.” She says, “Based on research, accreditation, and curricular reform, it is suggested that civic engagement instills in students the values of professional and social responsibility.”

Armstrong concluded that, “to be effective, service-learning should be coupled with an academic course that has civic engagement as a course objective. This should then increase civic skills desired and increase student abilities to act upon their intentions.”

On her thesis committee were Christine Blue; Kathy Newell; and Heidi Lasley Barajas, associate dean for engagement and faculty development, College of Education and Human Development. She defended her thesis in January. “It was a great experience and I passed with no revisions,” she says. Thesis under her belt, Armstrong has interviewed at universities and community colleges around the country—and she had multiple job offers. “I’m grateful for my experience at the U of M,” she says. “I’m prepared and confident in knowledge, skills and values for dental education.” Armstrong has accepted a faculty position, starting a new dental hygiene program at Thomas Nelson Community College in Williamsburg, Virginia.

Maria Nelson will also graduate in May, but in contrast to Armstrong, she had a fascination with the business world and opted for the management track after four years as a dental hygienist in Utah. The advice of one of her dental hygiene professors had stuck with her. “He said a master’s degree would open doors we didn’t even know existed,” she says.

“The clincher for me in choosing this program was when I read about the for-credit internship.” After completing her coursework, she worked as a marketing intern at Ultradent just outside Salt Lake City, Utah. “I haven’t eliminated the idea of teaching, but the business end seems exciting,” she says. “Most of my classes were in the University’s Carlson School of Management. I loved learning about marketing and communication, international marketing, and operations.” Her projects have included, among other things, work on the company’s catalog, Web site, and on an advertising campaign.

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1968
First male student is accepted. University is still Minnesota’s only dental hygiene program. Three new programs are established: Normandale Community College (1969), Mankato State University (1971), and U of M Duluth (1972).

1969
Minnesota legislature authorizes expanded functions and mandatory continuing education for re-licensure.

1974
Two classes accepted each year (in Sept. & Jan.). Now a seven-quarter program. Students no longer enter program directly from high school. Prerequisite college level courses in biology, speech and English are required.

1975
Bachelor Degree Completion Program in Dental Hygiene is approved by the Board of Regents in May 1975. Kathleen Newell heads program (1975–83).

1976–77
Peak enrollment: 271 students are enrolled in the G.D.H. degree program and 37 students in B.S. degree completion program. Program has more than 40 faculty members, including 20 full-time positions.

1979–80
Year of pre-professional coursework is required, extending program from a two-year to a three-year program.
“At Ultradent, it’s been really cool to see the manufacturing, partly because I had used the products clinically. I even worked on the line for a couple of hours.” Her supervisor at Ultradent, Ryan Downard, has been impressed with her enthusiasm. He says, “She has been seeking out various people within the sales and marketing groups here at Ultradent to gain a further ‘real world’ understanding of each of the various positions and their impact on the business. It’s obvious that her work ethic carries over in both academic and professional areas. The desire to complete a project on time (or earlier) and to ensure her part is complete and correct are extremely valuable.”

Nelson believes that as industry and academia get acquainted with the School of Dentistry’s MDH program, future grads will be in even greater demand. “The degree makes me unique,” says Nelson. “For example, at the Star of the North meeting a Procter and Gamble rep asked if I wanted an internship. They’re reaching out to people who know about dentistry.”

Perhaps the graduates themselves are the best advertisement for this new program. Says Ultradent’s Downard, “Maria Nelson has truly set a positive tone regarding the quality of people coming from the program. Maria and the MDH program are a cut above the average. The immediate familiarity the MDH students have with most of our products and the ability to speak from experience are both very valuable. Maria specifically has done the program a great service by being professional and interested in learning, not just putting in the time. She has been valuable to us from day one.”

Says Nelson, “The program exceeded my expectations. I tell everyone about the U of M.”

For more details on the program, see: http://www.dentistry.umn.edu/programs_admissions/advanced_programs/grad_hygiene/home.html

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**Mid-1980s**
Dental hygiene faculty begin to focus on dental hygiene research.

**1986**
Regents approve baccalaureate degree program in dental hygiene. First class starts in 1990 with 25 students.

**1987**

**2005**
Christine Blue is appointed Director, Division of Dental Hygiene.

**2007**
Study abroad program is initiated. Two students spend two months at University of Bergen, Norway.

**2008**
Master of Dental Hygiene Program is launched with eight students.