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in treating the whole patient, not just their teeth.”

— DR. JOAN GLUCH

THE FIRST FIVE YEARS

AN INNOVATIVE GRANT PROGRAM PROMOTES A HOLISTIC APPROACH TO TREATING VERY YOUNG PATIENTS

THANKS TO A \$1.53 MILLION GRANT from the U.S. Health Resources and Services Administration (HRSA), Penn Dental Medicine has announced a new focus on an important area of pediatric dentistry – care for children under the age of five. The grant includes supplemental funding for training in childhood obesity prevention, another area of critical need for American kids.

OPPOSITE: Dr. Joan Gluch (center) is the project director of the “first five” grant in conjunction with Dr. Betty Hajishengallis and Dr. Maria Velasco (to her left and right) of the Division of Pediatric Dentistry, who are helping to develop new educational modules and who supervise students working with children in the pediatric clinic.

Until now, Penn Dental Medicine students have had limited opportunities to care for children in this age group, who present some of the biggest behavioral challenges in pediatric dentistry.

“There’s an old joke among dentists: If a two-year-old walks into a dentist’s office, who’s more afraid — the child or the dentist?” says Dr. Joan Gluch, Chief, Division of Community Oral Health and Project Director of the grant. “The reality is that most general dentists have not had a lot of training in dealing with very young patients, and yet all dentists will need to treat them at some point. Through this grant, all of our predoctoral students will now have clinical experience with children in their first five years of life.”



Penn Dental Medicine was one of 11 dental schools nationwide to receive the “first-five” HRSA grant. By targeting the dental health of very young children as well as childhood obesity, the new curriculum promotes a holistic approach to pediatric dentistry.

“We’re very proud that Penn Dental Medicine is at the forefront of this movement toward holistic dental care,” says Dr. Gluch, who applied for the grant in early 2017 in conjunction with the School’s Division of Pediatric Dentistry, led by Division Chief Dr. Betty Hajishengallis. “We are leading a new generation of dental health educators in treating the whole patient, not just their teeth.”

FIRST FIVE YEARS

A SHORTAGE OF PEDIATRIC DENTISTS

The dental schools that received the HRSA grant are mostly in urban and rural areas, which are less likely to have pediatric dentists, says Deanne Wallaert, a public health dental hygienist and educator who is helping to implement the program. In these areas, pediatric dental care usually falls to general dentists.

“There are 67 counties in Pennsylvania, and 39 of them — about 60 percent — are without a pediatric dentist. Therefore, general dentists need to feel comfortable and confident in treating kids at all stages of development,” she says.

NEW LEARNING MODULES

To bring about this goal, Penn Dental Medicine is instituting a two-pronged program consisting of new classroom learning modules and added rotations in the pediatric clinic and at community sites. The didactic, or classroom, portion of the curriculum includes eight new pediatric dentistry and public health learning modules for second- and third-year students that will address cultural competency, health literacy, social determinants of health, behavior management, oral health prevention, and restorative dental care. (A new module on childhood obesity prevention will be added in fall 2018.)

The lessons on cultural competency and social determinants of health are especially relevant to students working in a community as culturally and economically diverse as West Philadelphia. “Cultural competency” and “cultural humility” are two phrases health care leaders use to describe the importance of understanding and respecting a patient’s ethnic background and how it may affect health care expectations and decisions. In the case of young children, family values and attitudes are an important piece of the puzzle.

Another key is the understanding of behavioral management in babies and toddlers, says Dr. Maria Velasco (D’10, GED’10), Assistant Professor of Clinical Pediatric Dentistry, who is helping to develop the new educational modules and supervises DMD students rotating through the pediatric clinic in conjunction with Dr. Hajishengallis.

“An infant, a two-year-old, and a four-year-old all present very different behavioral challenges to a dentist,” Dr. Velasco says. “An infant is usually examined on the parent’s lap, and students must learn to do a lap exam safely and effectively. A two-year-old might not want to sit still for treatment, whereas a four-year-old may have more fears. It’s important for the students to understand pediatric behavior at every age.”

EXPERIENCE IN THE CLINIC & COMMUNITY

Case studies and treatment plans introduced in the classroom will come to life in the School’s pediatric clinic, where second-, third-, and fourth-year students will assist Penn Dental Medicine pediatric residents and attendings in examining “first-five” patients. Penn Dental Medicine will add about 1,000 advanced practice appointments to its pediatric clinical schedule for the 2018-19 school year, vastly expanding pediatric clinical opportunities for students.

As always at Penn Dental Medicine, community outreach will be a cornerstone of the expanded pediatric curriculum. Second-year students will double their rotations at Penn-affiliated community health care sites, including Philadelphia FIGHT, Sayre Health Center, Homeless Health Initiative of the Children’s Hospital of Philadelphia, and Puentes de Salud.

Through these clinical experiences, students will learn how to treat all kinds of young patients, including those with special physical, mental, or social needs, who may require a referral.

“If a child has a cardiac condition and needs to have cavities filled, it may be imperative that he or she is referred to a specialist,” says Dr. Velasco. “Our students will learn when a referral is necessary for the safety and well-being of a patient.”

A KID-FRIENDLY APPROACH

“It takes patience, flexibility, and persistence to treat young children,” says Wallaert. “It’s intimidating to try to brush someone’s teeth who is crying and screaming.”

Through the new curriculum, students are learning to use games and role playing to make the process fun and help children relax.

“Animal puppets with teeth and large-scale toothbrushes are tools that can alleviate fears about going to the dentist, allow small children to feel more in control of their dental care, and educate them about their own teeth,” says Wallaert. “Letting a child count a puppet’s teeth is a natural segue into asking the patient to open wide so his or her own teeth can be counted.”





EARLIER CARE PREVENTS CAVITIES

Until fairly recently, parents were advised to schedule a child's first dental appointment in preschool, but in recent years, dentists have seen the effectiveness of starting earlier. Normally, a child's first tooth erupts between six months and a year, a great time for dentist and parent to discuss the need for brushing the new teeth after feedings and avoiding sugary foods and drinks to prevent cavities.

"Early childhood caries is a huge problem in pediatric dentistry," says Dr. Velasco. "Studies show that if a child receives five fluoride treatments by age three, the chance of tooth decay can be greatly reduced."

Early dental appointments often include what Dr. Velasco calls "anticipatory guidance" on a child's future dental needs.

"Is fluoride needed, and how much? What are the issues surrounding thumb sucking and pacifiers? Is drooling normal? We can discuss these questions with parents so they know what to expect as their child grows," Dr. Velasco says.

OPPOSITE: Hygienist Deanne Wallaert, who is helping to implement the program, with DMD students at a community site, where they worked with children in a Head Start program. (photos by Health Federation of Philadelphia)

ABOVE: Dr. Maria Velasco, Assistant Professor of Clinical Pediatric Dentistry, (left) and a DMD student working with a young patient in the pediatric clinic.

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OBESITY PREVENTION: TREATING THE WHOLE PATIENT

Late last year, Penn Dental Medicine received supplemental funding to include childhood obesity prevention as part of the educational and clinical activities in this project. In West Philadelphia, where as many as 45 percent of children are obese, the need for prevention training among all health care providers is great.

In partnership with Dr. Terri Lipman and Amani Abdullah of Penn's School of Nursing, Penn Dental Medicine is creating educational modules on obesity prevention training for predoctoral students to be introduced this fall. Nursing faculty will also work with Penn Dental Medicine faculty to design and implement clinical guidelines and educational programs regarding childhood obesity to be used with families in the pediatric dental clinic. Once again, students will learn funda-

mentals in the classroom and put them to use in the clinic and community setting.

Penn Dental Medicine plans to make height and weight measurements a permanent part of each's child's dental chart and share guidelines on obesity with families at the dental visit. Students will also learn best educational practices in providing families with resources for healthy eating, exercise, and nutrition to encourage healthy behaviors.

A child's weight may be a sensitive subject, especially for low-income families who may have a hard time affording fresh foods and providing a safe outdoor exercise space, Wallaert says. "Again, we will be teaching students to understand the cultural and social determinants of health, and to have empathy for each family and their circumstances."

PATIENTS AS PEOPLE

As students embrace new opportunities for working with young children, Dr. Gluch and her colleagues are thrilled to deliver an expanded level of learning and experience in pediatric dentistry. Dr. Gluch plans to track the outcomes of the new instruction, which she believes will be sustainable far beyond the five years of HRSA funding.

"Understanding our patients as people and learning how to tailor treatment to their specific needs," she says, "is really what this new initiative is all about." ■

— By Juliana Delany

 **THE POWER OF PENN DENTAL MEDICINE**

Visit www.dental.upenn.edu/powerofpenn to learn more about community initiatives that are part of the Power of Penn Dental Medicine campaign.