The New Interprofessionals

by Tina Cauller

To better meet the needs of Americans, healthcare in the U.S. is moving toward a more patient-centered whole-health model that bridges the current gap separating healthcare disciplines through collaborative partnerships between multiple professionals. Texas contains some inspiring examples of what this important change can look like in action.

A new emphasis on the whole-health team

Innovative models of dental care are necessary to meet the growing needs of underserved Texans. The state of Texas is home to an estimated 27.5 million people, and nearly 5 million of them live in underserved communities with limited or no access to dental care. According to 2014 data from the Health Resources and Services Administration, more than 1.5 million Texas residents reported that they had not received any dental care within the past twelve months. In these communities, poor oral health is often accompanied by unmet medical and psychosocial needs, and poor overall health.

Texas A&M Baylor College of Dentistry is taking action to address this critical situation, and was recently awarded $5.4 million in funding from the Health Resources and Services Administration of the U.S. Department of Health and Human Services to expand predoctoral and postdoctoral training. TAMBCD will embark on a new program of interprofessional training with the goal to integrate dentistry into the healthcare delivery system, while expanding opportunities in dental education. The new program is a collaborative effort between TAMBCD, Texas A&M Health Science Center, Dallas-area healthcare institutions and community partners.

TAMBCD recently expanded its community-based clinical training by partnering with North Dallas Shared Ministries, a non-profit clinic that provides social and health services to low-income residents in key areas of the Metroplex. TAMBCD students now augment the care provided by other volunteers, which enabled the clinic to boost the volume of patients served from 479 patients in 2013 to 1,719 patients in 2014.

North Dallas Shared Ministries strives to create a whole-health home for patients. At their appointment, patients receive a comprehensive assessment coordinated by a case manager to evaluate their overall health needs, including any pressing economic issues or behavioral health concerns. They receive medical and dental services, and may also see a social worker who helps connect them with other resources they need.

Creating a whole-health home requires building a whole-health team of care providers. TAMBCD students participate in the interprofessional experience at the clinic, performing not just basic vital measurements like blood pressure and heart rate, but also conducting BMI, diabetes and cholesterol screenings. The dental students work in tandem with nutritionists, family medicine residents, medical students, physician assistant students and social workers from UT Southwestern Medical School.

Paul Hoffmann, administrative director of community clinics and co-investigator for both grants explains, "This program is designed to impact the interconnected social determinants of health."

Educating for the future

The new focus on a patient-centered whole health model also means that new practitioners will need to be educated for the future. The five-year grant allows TAMBCD to make impactful changes to dental education by re-designing the Dental Public Health residency program with a new emphasis on interprofessional health. The graduate program, which once required a master's degree in public health in order to enroll, now allows select residency students to pursue a M.P.H. in combination with residency training. This expansion benefits all pediatric dentistry residents, including those who do not intend to pursue the M.P.H. The transition will begin with rotations at North Dallas Shared Ministries and gradually expand to all of the College's community-based training centers.

As this new model of care emerges, the health needs of the most vulnerable patients will finally be met more effectively and dental students will be prepared to provide the care that is needed, not in isolation, but as part of a professional whole-health team.

Putting patients at the center of interprofessional care

For patients with orofacial clefts, the interprofessional model overcomes a myriad of obstacles to quality care.

Although the stereotypic image of a patient with orofacial cleft is that of a young toddler, the exceptional medical and dental needs of individuals who were born with cleft lip and palate do not always end in childhood. Even after treatment, they may continue to have swallowing complications, speech difficulty, and psychosocial concerns. Medicare is cut off at age 19, which puts necessary care out of reach for many patients once they are officially classified as adults. The lifetime medical cost for a child with an orofacial cleft hovers around $100,000.

Survey data from orofacial cleft patients is now being collected as a foundation for a proposed cleft and craniofacial clinic at TAMBCD that would serve adults in collaboration with neighboring hospitals and health education programs. The intent is to coordinate half-day clinic sessions at TAMBCD twice a year, supported by expertise from restorative sciences, oral and maxillofacial surgery and orthodontics residents and faculty, as well as plastic surgeons, speech therapists and social workers.

All human fetuses have a cleft lip and palate in the earliest days of development. When growth proceeds normally, the clefts fuse together between the 6th and 11th week of pregnancy. If one or both of these clefts fuse incompletely, babies are born with a craniofacial anomaly known as an oral cleft.

Orofacial clefts are one of the most common birth defects. On an average day in the U.S., about 20 newborns enter the world with an orofacial cleft. In North Texas, one out of every 570 babies is affected by this condition. Up to 13 percent of cases involve co-occurring birth defects.

Babies with orofacial cleft have varying degrees of anatomical defect, ranging from a small malformation in the lip to a large separation of the palate. These children usually require several surgical procedures to normalize appearance and improve breathing, hearing, and speech and language development. Many need additional surgical procedures as they grow, and require long-term follow up.

Children born with orofacial clefts can often benefit from other types of treatments and services, such as special dental or orthodontic care or speech therapy. The American Cleft Palate - Craniofacial Association recommends that a child with cleft lip or palate should be treated by a multidisciplinary craniofacial team including an otolaryngologist, plastic surgeon, oral surgeon, speech pathologist, pediatric dentist, orthodontist, audiologist, geneticist, pediatrician, nutritionist, and psychologist.

Children with orofacial clefts require coordinated multidisciplinary services throughout childhood and adolescence. They sometimes have hearing problems resulting from frequent ear infections caused by fluid that builds up in the middle ear due to improperly formed Eustachian tubes. This can be addressed by an otolaryngologist, who may place tubes to drain the fluid. If a cleft involves the jaw, the growth of teeth and jaw alignment are often affected. In this case, evaluation and treatment by a pediatric dentist or orthodontist may be necessary. Severe clefts can interfere with eating, speaking, and breathing. When normal breathing is difficult because of palate and jaw malformations, surgery and oral appliances may be required. If feeding and speaking are impacted, a nutritionist and speech therapist who specialize in swallowing may be helpful.

In the past, orofacial cleft patients and their families would travel to appointments with numerous independent specialists in different locations, accruing hundreds of visits across a lifetime. The innovative approach taken by the Pediatric Plastic and Craniofacial Surgery Team at Children's Medical Center of Dallas treats cleft lip and palate more efficiently and effectively by making patients the literal center of leading-edge interprofessional care. Patients come to CMC for outpatient sessions, during which a bevy of specialist providers rotate through to see and evaluate each patient individually, and then work closely as a team to develop a treatment plan.

The adult cleft and craniofacial clinic at TAMBCD would allow residents, who are already involved in caring for pediatric cleft patients at CMC, to come together and provide grafts, dental bridges and lip and nose surgery revisions for adult cleft patients as part of an interprofessional team.

This innovative model effectively turns the circle of care inside out, repositioning patients at the center. At the same time, dental students are receiving hands-on educational experience that will prepare them for the future. The change yields an impressive reward that benefits both patients and practitioners who seek to provide the best possible care.