Enhancing Systems of Care for Children with Intellectual and Developmental Disorders

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Introduction

The University of Texas Health San Antonio School of Dentistry has been awarded a US HRSA grant to establish a new clinic to provide care to patients with intellectual and/or developmental disorders (IDD). Our study assesses the pre-existing, baseline patient pool receiving care, the patients' diagnosis and the care provided these, our efforts to increase training in the care of these patient populations and the impact of our educational components of our enterprise.

Objective

Our Project goal is to increase the training in the oral healthcare of children with complex medical conditions (CMC) with IDD as well as patients of all ages with IDD. Under this project, we have measured baselines of disease incidence and delivered oral health care to pre-existing patients with IDD in our School's internal and outreach clinics. These baseline measures will be compared to the disease incidence and oral health care subsequently delivered to new patients in our Special Care Clinic.

Methods

IRB approval was obtained for this investigation. Existing patient records in our electronic health record system were searched using keywords for complex medical diagnoses and intellectual and developmental disorders. Patients ranged in age from 1 month to 18 years. Data obtained included patient diagnoses and quantity of care delivered. Baseline and subsequent data in aggregate is being reported with no patient identifiers.

We created an educational component training dental students in the care of this population. We assessed the effectiveness of our classroom and clinical experiential learning opportunities for our students.

Training in didactic and clinical elements for dental students was conducted. The learning methods reinforced didactic material and promoted development of clinical skills. Learning outcomes and clinical performance toward required competencies were measured and assessed. Clinical evaluations of student performance included pre- and post-surveys assessing knowledge, attitude, access, and confidence, faculty evaluation of student performance, and student evaluation of the rotation.

UTHSA IRB Protocol 20230013HU

Clinical Relevance

According to the 2017–2018 National Survey of Children's Health, 18.5% of children from birth to 17 years (in the United States, or 13.6 million children, has Special Health Care Needs. Studies of dental and dental hygiene programs through the 1990s and early 21st century found that more than 50% of dental students reported no clinical training in the care of patients with such specific care requirements, and 75% reported little to no preparation in providing such care. Only 10% of general dentists in a study indicated that they treated children with cerebral palsy, intellectual disability, or medically compromising conditions often or very often.

In Texas, only 12% of graduating students across the then 3 state dental schools reported caring for more than 4 patients with developmental disabilities (DD), and 32.5% reported no such clinical experience. 57% of students were dissatisfied with their clinical training for caring for patients with DD. 79% of students who did not plan to care for such patients indicated "insufficient preparation" was a reason.

Results

147 unique patients were seen in internal and outreach clinics from 07/01/2022 to 06/30/2023. Presenting diagnoses included:

47%	Autism
14%	Down Syndrome.
15%	Other syndromes
23%	Unspecified

Other patient diagnoses included the syndromes: DiGeorge (2.7%), Goldenhar (2%), Williams (2%), and Glass, Angelman, Marshall, Li-Fraumeni, Lennox-Gastaut, Noonan, West, Cornelia de Lange, Cri du Chat, Lamb-Shaffer, and Hurlor, (incidence less than 1%).

Results

218 Year 3 and 4 dental students attended a new didactic course. New clinical rotations built on the didactic lectures and provided learning experiences in the delivery of patient-centered oral health care for patients with special health care needs. Students' learning outcomes and clinical performance were measured and assessed. Clinical evaluations included pre- and post-surveys assessing knowledge, attitude, access, and confidence, faculty evaluation of student performance, and student rotation evaluation. Students gained knowledge and skills in caring for child patients with IDD and achieved required competency measures.

Future plans: we will continue to measure the patient number, medical conditions, care delivered, efficacy of care, and the cost of care for patients with these same conditions in our new special care clinic. We will also continue to measure the outcomes and efficacy of our training for future providers to include AEGD residents, dental hygiene students, nurse practitioner students, physician assistant students, residents in a special care fellowship program and preceptors from the practicing community. We also will establish selective educational opportunities for dental students and continuing education and fellowship offerings for new and established community oral health providers.

Conclusions

Currently, active clinic patients meeting the study parameters are provided care in our clinics. An increase in care to affected patients has occurred in our new clinic for patients with special needs. Effective training of Year 3 and 4 dental students is possible when performed in a dental school clinic designed for the care of patients with intellectual and developmental disabilities.

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