

DENTAL SLEEP MEDICINE FELLOWSHIP

Program Overview

The Dental Sleep Medicine Fellowship program is designed to prepare orthodontists in the field of sleep medicine. Based at the Department of Orthodontics at University of the Pacific, Arthur A. Dugoni School of Dentistry, the program aims to provide excellent patient care, strong teaching, innovative clinical research and broad clinical exposure to dental sleep medicine.

The collaboration and integration of Stanford's otolaryngology-sleep surgery and sleep medicine programs with the Dugoni School's sleep orthodontic program will support an interdisciplinary approach. The fellowship program provides exposure to the fields of somnology and sleep surgery with a focus on dental sleep medicine.

Fellows will learn how to approach interdisciplinarity through didactics and patient care in the Dugoni School's Dental Sleep Medicine Clinic and rotations in the pulmonary, psychiatry, sleep laboratory and ENT departments at Stanford Health Care. The Stanford portion of the rotations will take place at the North Campus (Sleep Medicine and Sleep Surgery Clinics) and the Main Campus (Lane Operating Rooms).

Fellows will participate in screening, treatment planning and managing both surgical and non-surgical cases with Stanford Sleep Surgery. For non-surgical cases, sleep orthodontic fellows will select, fit and adjust oral devices and implement protocols for short- and long-term follow-up. For surgical cases, the orthodontic fellows will perform pre-surgical orthodontics, virtual surgical planning, and post-surgical orthodontics with the surgical team.

Dental Sleep Medicine Clinic

Dugoni School Rotation

During their regular clinic schedule, fellows will perform clinical history intake and examination; documentation of face-to-face follow-up appointments in a SOAP format (subjective, objective, assessment, and plan of care) will be part of the medical record documentation. The attending faculty will supervise all trainee activities during these clinical sessions, and teaching will occur utilizing a patient-centered interdisciplinary approach.

Clinical Focus

- Oral appliance therapy (mandibular advancement devices (MADs))
- Orthodontic growth modification for growing patients with sleep-disordered breathing
- Rapid palatal expansion, mini-screw assisted rapid palatal expansion (MARPE)
- Surgical orthodontics
- Maxillomandibular advancement orthodontic set-up
- Distraction osteogenesis maxillary expansion (DOME)

Stanford Rotations

Stanford University School of Medicine & Stanford Hospital

Residents will get to work with top faculty of the sleep medicine and sleep surgery departments in the world-class facilities at Stanford University in Palo Alto, California.

Stanford Sleep Medicine

Stanford Sleep Medicine is a division under the Department of Psychiatry and Behavioral Science that takes eight fellows a year. The Stanford Sleep Medicine Center was the first fellowship program accredited

by the American Sleep Disorders Association and is considered the world's leading training program for sleep disorders medicine. The sleep medicine fellows come from a variety of medical fields, including internal medicine, neurology, psychiatry, pediatrics, otolaryngology, family medicine, and anesthesia.

Sleep Orthodontic Fellows will gain experience in reading and interpreting diagnostic sleep studies, understanding growth and development, treatment planning for patients with sleep-disordered breathing, understanding the use and limitations of home sleep apnea tests (HSAT) during oral appliance titration, and recognizing the potential limitations and complications of treatment. Dr. Audrey Yoon, who runs the Dugoni School's dental sleep medicine clinic, will be supervising the fellows during this phase of the program.

Sleep orthodontic fellows will gain broad exposure to sleep medicine and valuable experience in working with sleep medicine fellows at the Stanford dental sleep medicine clinic. They will experience polysomnographic technology and learn how to read and interpret polysomnography. They will evaluate treatment plans and deliver dental treatment for sleep disorder patients at the dental sleep medicine clinic and work with sleep medicine fellows on patient care under supervision. Sleep orthodontic fellows will be provided rigorous, diverse, and rewarding multidisciplinary clinical training.

Stanford Sleep Surgery

Stanford Sleep Surgery is a division under the Department of Otolaryngology-Head & Neck Surgery that takes two surgical fellows a year. Sleep orthodontic fellows will be provided with an immersive experience early on to learn how to implement proper head and neck exams, with an emphasis on nasal and pharyngeal examinations focused on the upper airway. A series of lectures will be held in conjunction with Stanford's sleep surgery fellows on treatment algorithms, endoscopic interpretation (awake and sleep endoscopy), and the understanding of surgical procedures. The sleep orthodontic fellows will contribute to the didactic experience by teaching dental and facial/airway growth and development to the surgical team.

While the surgical fellows are primarily otolaryngologists, they can also be oral and maxillofacial surgeons. Dr. Stanley Liu is the Sleep Surgery Fellowship director, who will also be overseeing the activities of the Dugoni School's sleep orthodontic fellows at Stanford Sleep Surgery.

The regularly held Sleep Surgery Treatment Planning Conference (STPC) will be led by both the sleep orthodontic and sleep surgery fellows. Comprehensive patient workup and assessment will utilize dental, orthodontic, airway, psychological, and medical findings and data to develop recommended treatment plans. The STPC will comprise the academic faculty of oral surgery, otolaryngology, and orthodontics.

We expect the sleep orthodontic fellows to be involved with at least 5 complete workups of skeletal sleep patients, along with 5 observations in the operating room. The skeletal procedures for sleep surgery include distraction osteogenesis maxillary expansion (DOME), maxillomandibular advancement (MMA), and genioglossus-genioplasty advancement (GGA).

Stanford sleep surgery is the most comprehensive program of its type, and the sleep orthodontic fellow should take full advantage of the experience.

The sleep surgery volume at Stanford is approximately 80 skeletal cases for MMA and GGA, and 30 for DOME. Meeting the requirement is not expected to be a barrier to fellowship training. Additionally, it is

recommended that fellows observe 30 drug-induced sleep endoscopies and an equivalent number of awake endoscopies with Muller maneuver. Finally, a total of 30 cases including septoplasty, rhinoplasty, nasal valve surgery, tonsillectomy, uvulopalatopharyngoplasty (UPPP), and hypoglossal nerve stimulation is strongly recommended.

Research

As part of this rigorous program, you will be encouraged to participate in research activity to explore issues related to sleep medicine, clinical or otherwise. The program recommends conducting one cross-institutional research study. The research study does not have to be entirely clinical in nature. There are unmet needs in the integration of dental and medical/surgical care for OSA, particularly barriers to access. Such quality improvement (QI) studies are of high impact. One of our faculty, Dr. Stanley Liu, is also a Stanford Biodesign Faculty Fellow and can mentor projects focused on innovation of medical/dental device design and implementation.

The Pacific-Stanford Sleep Fellows Symposium

The Pacific-Stanford Sleep fellows will present their research and accomplishments at the annual Fellows Symposium, where sleep medicine, surgery and orthodontic fellows will lead the presentations.

Sleep Research Initiative

Faculty and fellows from the three programs (Pacific Sleep Orthodontic fellowship, Stanford ENT Sleep Surgery, and Stanford Sleep Medicine) will collaborate to conduct high-level sleep research, leading to obtaining external funding from sources including AAOF, AADSM and NIH.

Board Certification in Dental Sleep Medicine

The process to become board certified in dental sleep medicine is managed through the American Board of Dental Sleep Medicine (ABDSM). Fellows will be encouraged to take the board examination and will be guided during the application process. Emphasis is placed upon training the fellow to the standards for board certification.

For additional information, please contact Audrey Yoon, DDS, MS: ayoon@pacific.edu or audrey12@stanford.edu.

Fellows will be active participants in sleep lecture series, article reviews, research seminars and interdisciplinary case conferences throughout the program. Lectures will be conducted by faculty members and guest speakers on topics relevant to somnology and general and dental sleep medicine. Supplementary reading material will include articles relevant to the fields of somnology, sleep and airway surgery, and general and dental sleep medicine.

- Dental Sleep Medicine Mini-Residency Course at University of the Pacific, Arthur A Dugoni School of Dentistry (Accredited by AADSM)
- Tufts Pediatric Dental Sleep Medicine Mini-Residency Course
- Dental Sleep Medicine Seminars I, II, and III
- Clinical Management of Sleep Apnea Patients I, II, and III
- Overview of TMD and orofacial pain disorders
- Management of medical compromised patients
- Human growth and development
- Sleep Apnea and Snoring - surgical and non-surgical therapy
- Interdisciplinary complex cases seminars
- Research methodology
- Introduction to Biostatistics
- Epidemiology and Critical Thinking in the Practice of Dentistry

Faculty will continuously evaluate fellows during clinical activities focusing on collaborative patient-centered care, informal assessment of

cognitive skills, and teaching discussions. A bimonthly evaluation is done based on the following competencies.

1. Patient Care:

- Perform a thorough medical history and examination
- Order appropriate diagnostic tests
- Reading and interpretation of sleep studies
- Develop a clinical assessment and treatment plan; establish short and long term follow up care
- Interact with other health care providers

2. General Knowledge:

- Access and critically evaluate current medical information and scientific evidence relevant to sleep medicine and dental sleep medicine.

3. Practice-Based Learning and Improvement:

- Identify and acknowledge gaps in personal knowledge and skills
- Clinical case presentations
- Presentation during articles reviews
- Participation in research projects and publications.

4. Interpersonal Skills and Communication:

- Communicate effectively with patients
- Communicate effectively with sleep physicians, sleep surgeons and other health care professionals
- Presentations in clinical case conferences.

5. Professionalism:

- Carry out professional responsibilities and adhere to ethical principles
- Complete assigned duties, which includes clinical record documentation
- Attend required conferences
- Adhere to the principles of good clinical practice and patient safety
- Behave professionally towards patients, families, colleagues, and all members of the health care team.