

2015 Research Annual Report

Pediatric Dentistry

RESEARCH AND TRAINING DETAILS



[Click to view members](#)

Faculty	7
Joint Appointment Faculty	1
Support Personnel	3
Peer Reviewed Publications	4

CLINICAL ACTIVITIES AND TRAINING

Clinical Staff	22
Staff Physicians	9
Clinical Students	11
Other Students	4
Outpatient Encounters	33,294

Division Publications

1. Campbell RE, Levin L, Mauseth SE, Hu J, Zheng S, Wilson S, Saal H. **Prevalence of transposed teeth as seen on panoramic radiographs in children with cleft lip and palate.** *Cleft Palate Craniofac J.* 2014; 51:e88-93.
 2. Teng JM, Cowen EW, Wataya-Kaneda M, Gosnell ES, Witman PM, Hebert AA, Mlynarczyk G, Soltani K, Darling TN. **Dermatologic and dental aspects of the 2012 International Tuberous Sclerosis Complex Consensus Statements.** *JAMA Dermatol.* 2014; 150:1095-101.
 3. Thikkurissy S, Gosnell ES, Tatakis DN. **Dental Complications-Soft Tissue (Gingiva and Mucosa).** In: R Usatine, ed. *Color Atlas Of Pediatrics.* New York: McGraw-Hill Education; 2015:233-238.
 4. Wilson S. **Sedation of Pediatric Patients for Dental Procedures: The United States, European, and South American Experience.** In: KP Mason, ed. *Pediatric Sedation Outside of the Operating Room : A Multispecialty International Collaboration.* New York: Springer; 2015:423-459.
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Faculty, Staff, and Trainees

Faculty Members

Stephen Wilson, DMD, MA, PhD, Professor
Leadership Division Director

Richard Campbell, DMD, MS, Assistant Professor
Leadership Director of Orthodontics

William Fye, DDS, Assistant Professor

Elizabeth Gosnell, DMD, MS, Assistant Professor

AnnMarie Matusak, DDS, Adjunct

Kyle Reynolds, DDS, MS, Assistant Professor

Sarat Thikkurissy, DDS, MS, Professor
Leadership Director of Residency Program

Joint Appointment Faculty Members

Ronald Hathaway, DDS, MS, Professor (Plastic Surgery)

Clinical Staff Members

- **Kaitlin Blomer, DMD**
- **Marie Callen, DMD**
- **Lauren Capozza, DMD**
- **Murray Dock, DDS, MSD**
- **Laura Goodell, DMD**
- **William Greenhill, DMD**

- **Anthony Kamp, DMD**
- **Giulia Pagano, DMD**
- **Lisa Rudolph, DMD**

Trainees

- **David Anderson, DDS, PL-1, University of Texas**
 - **Amanda Buff-Lindner, DMD, PL-1, Medical University of South Carolina**
 - **Laura Doss, DDS, PL-2, The Ohio State University**
 - **Molly Doyle, DDS, PL-1, University of Michigan**
 - **Stephanie Freudenthal, DDS, PL-1, Louisiana State University**
 - **Ann Kennedy, DDS, PL-1, University of North Carolina**
 - **Laurel Meriwether, DDS, PL-2, University of Tennessee**
 - **Adam Priestwood, DMD, PL-1, University of Kentucky**
 - **Patrick Ruck, DDS, PL-2, Virginia Commonwealth University**
 - **Amanda Tsoi, DDS, PL-2, University of the Pacific**
 - **Brent Tucker, DDS, PL-2, Meharry Medical College**
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Children With Cleft Conditions Far More Likely to Have Transposed Teeth



Howard Saal, MD



Richard Campbell, DMD, MS

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Campbell RE, Levin L, Mauseth SE, Hu J, Zheng S, Wilson S, Saal H. Prevalence of transposed teeth as seen on panoramic radiographs in children with cleft lip and palate. *Cleft Palate Craniofac J.* 2014;51(4):e88-93

PUBLISHED JULY 2014

Cleft-Palate-Craniofacial Journal

Researchers using panoramic radiography to analyze the prevalence of transposed developing teeth in children found surprisingly large disparities between children who had a repaired cleft lip or palate and those who did not.

The July 2014 study, published in *Cleft Palate-Craniofacial Journal*, was the first designed solely to quantify how often these unerupted teeth are aligned incorrectly in the gums. The goal of the study is to help identify children who need early dental and orthodontic interventions.

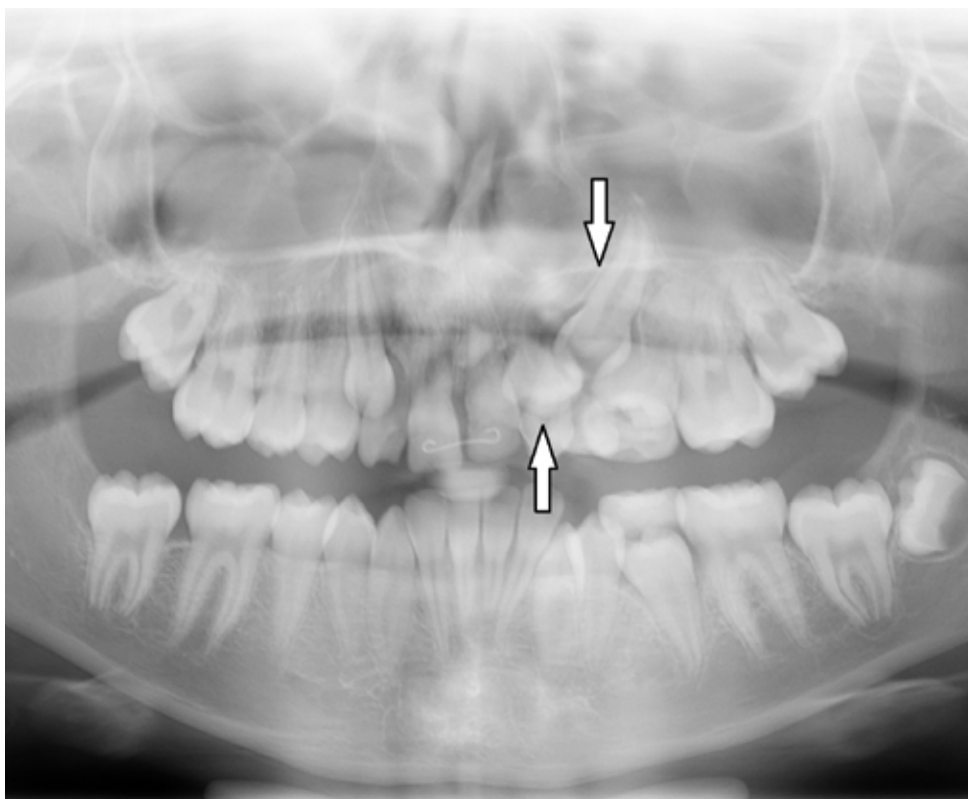
Researchers compared the images of 364 children who were born with a cleft lip or palate, and 364 kids who were not. Fifty-two children (14.3 percent) who were affected by a cleft condition also had transposed, missing or pegged teeth, compared to just one child (three-tenths of one percent) who did not. A tooth is considered transposed if it partially or fully occupies the space of an adjacent tooth.

The study was led by senior author Howard Saal, MD, Director of Clinical Genetics, and first author Richard Campbell, DMD, MS, Director of Orthodontics.

“Transposed teeth may be related to the overall smaller size of the upper jaw in children with clefts, which leads to more crowding, but that’s speculative at this point,” says Campbell. “Jaw size discrepancies are a fertile area for future research.”

Cleft lip and palate result from *in utero* malformations in which tissue fails to fuse, or connect. Corrective surgery is typically done when a child is nine months to two years old.

Full panoramic radiograph images show all the developing teeth and jaws, unlike close-up bitewing radiographs used in cavity detection. Earlier studies referenced tooth transposition in children with clefts, but not the prevalence compared to kids who did not.



This panoramic radiograph illustrates the prevalence of transposed developing teeth in children with cleft conditions. Note the transposition of the maxillary left canine (down arrow) and first premolar (up arrow) in this patient with unilateral left cleft lip and palate. This image also shows an apparent lack of development of maxillary right, left, and mandibular right third molars and a midline supernumerary tooth that developed after alveolar bone grafting and initial incisor alignment. The patient has a bonded retainer on the maxillary central incisors.

This study is the first designed solely to quantify how often unerupted teeth are aligned incorrectly.