

Pediatric Dentistry at the University of North Carolina: Improving Children's Lives Through Better Oral Health



Tim Wright DDS, MS
Bawdin Distinguished Professor

J. Timothy Wright DDS, MS

J. Timothy Wright DDS, MS- Brief Biosketch 2015

Dr. J. Timothy Wright was an undergraduate chemistry major and received his DDS degree from the West Virginia University in 1978. After serving in the West Virginia Public Health Department as Director of the Cable-Huntington Dental Clinic he pursued specialty training in Pediatric Dentistry receiving his specialty certificate and Masters of Science degree from the University of Alabama at Birmingham. He also completed and NIH Cariology Research Fellowship while at UAB. He joined the faculty at UAB and served as the Pediatric Dentistry Graduate Program Director. In 1990 Dr. Wright joined the faculty at the University of North Carolina at Chapel Hill and served as Pediatric Dentistry Department Chair from 2004 - 2014. He currently serves as the UNC School of Dentistry Director of Strategic Initiatives and Interim Chair for the Department of Endodontics.

Dr. Wright was named the James Bawden Distinguished Professor and has received numerous awards and honors including an American Dental Association Teacher Training Fellowship, the William J Gies Award from the Journal of Dental Research, and was selected as the first Robert Gorlin Visiting Professor at the University of Minnesota School of Dentistry. He is a Diplomat of the American Board of Pediatric Dentistry and a Fellow of the American Academy for the Advancement of Science. Dr. Wright's research has helped advance our understanding of mineralized tissues and developmental defects of teeth and bone through his characterization and study of human hereditary conditions. His research has focused primarily on defining the phenotype and genotype relationships and a variety of craniofacial conditions such as amelogenesis and dentinogenesis imperfecta, and the ectodermal dysplasias. His recent research includes investigation of the genes involved in tumorigenesis and specifically genes involved in odontogenic tumors such as ameloblastoma. He has had research funding from the National Institutes of Health and other organizations for his genetics studies for over 25 years and has published over 185 scientific manuscripts, edited two texts and contributed numerous text chapters.

Dr. Wright has served as the Chair of the Council for Scientific Affairs for both the American Academy of Pediatric Dentistry and the American Dental Association. He was elected as the American Association of Dental Research to serve as the Trustee at Large in 2013 and has served on several AADR committees. He also served in the AADR Mineralized Tissue Group as Consultant and President. He serves on multiple editorial boards and serves on Scientific Advisory Boards for several family support groups. Dr. Wright lectures nationally and internationally on a variety of topics ranging from pediatric dentistry to genetics. He continues to participate in private practice where he treats a diverse patient population including a spectrum of special needs patients.

The University of North Carolina is a public institution established in 1794. The UNC campus has over 28,000 students in the undergraduate and graduate programs and includes internationally recognized programs in Public Health, Medicine and Dentistry. The School of Dentistry is located next to the UNC Hospital, School of Public Health, Cancer Research Center and is in close proximity to the Schools of Social Work, Nursing, Pharmacology and others. The School of Dentistry opened in 1954 and was the only dental school in the state until 2011. The UNC School of Dentistry accepts 85 dental students per year, has an Oral Biology PhD program, graduate programs in all the dental specialty areas, as well as, programs in dental hygiene and dental assisting.

The Department of Pediatric Dentistry was established in 1960 and has graduated over 100 residents. The graduate program involves 3 years of study beyond dental school and requires all residents to complete a research project and Masters Degree. Residents manage a diverse population of patients ranging in age from infant through adolescence. Services provided are similarly diverse including a full range of prevention and restorative therapies as well as a variety of non-pharmacological behavior management approaches. Services offered by the residents include approximately 150 conscious sedations and over 400 general anesthetic cases annually. Residents treat a very diverse

population of special needs and medically compromised patients while working in the Hospital Dental Clinic, Special Patient Care Clinic, Craniofacial Team and graduate clinic. Residents manage patients with neurological disorders, bleeding disorders, cancer, facial clefts, syndromes, organ transplants as well as many other conditions. Experience is gained in trauma and pulp/periodontium management by providing 24-hour emergency coverage to the hospital emergency department and through a joint seminar and clinic with the Endodontics Department. Residents provide orthodontic care using full-banded therapy and other treatment modalities one day per week.

The graduate and undergraduate pediatric dentistry programs provide diverse inter and intra-professional experiences. Residents rotate through a variety of medical areas including 4 weeks with anesthesia, emergency department, pediatric medicine, hematology-oncology and the craniofacial team. These rotations provide an introduction for the residents who will then work closely with faculty from these different disciplines to provide patient care to the diverse patient populations they encounter through the hospital and other clinics. The department has 10 dental assistants so the residents learn to work in a team setting. Dental assistants can complete coronal polishing of teeth, provide prevention education, and assist chairside for surgical and operative procedures. They also provide patient care with dental hygiene and assisting students in a variety of settings. The Craniofacial Clinic has representation from psychology, audiology, ENT, plastic surgery, oral surgery, orthodontics, pediatric dentistry and other specialists as needed. The diversity of the patient population allows virtually all residents to have experience managing individuals with hypodontia or ectodermal dysplasia, amelogenesis imperfecta and other developmental defects of the dentition. During their 3rd year residents participate as Graduate Teaching Assistants in a variety of clinical settings for the dental student students including our Special Patients Clinic.

The residents are provided a variety of opportunities to work in community clinics through weekly rotations with health departments and through a private practice elective. Residents learn how to set up a private practice and gain knowledge of the different approaches to private practice through a course that is run by pediatric dentists that practice across North Carolina. The private practice elective is available to 3rd year residents and allows them to provide patient care in a private practice. Working in these different clinical settings allows residents to gain an understanding of the many different financial systems involved in the delivery of oral health care in the United States. Approximately 50% of children in the United States are covered through insurance programs. Medicaid is the largest insurer of oral health care for children and is funded through both federal and state resources. Special needs patients may be covered on Medicaid or other government supported programs such as Social Security. In addition to government-supported insurance, there are many private insurance programs that are provided by employers or can be purchased by individuals or families. Each program is different with regards to services covered and amount of reimbursement making exposure to these programs a valuable learning experience for residents.

The DDS curriculum in pediatric dentistry involves total patient care for a group of children that is assigned to each student. Dental students receive their first pediatric dental patient during their second year of the program and follow manage the oral health care needs of that child until they graduate. Each patient is treatment planned with full time faculty members from the Departments of Pediatric Dentistry and Orthodontics. Students will provide preventive and restorative needs and must be competent to develop a comprehensive treatment plan including behavior, growth and

development, prevention and restorative care. They also must be competent to take and interpret bitewing radiographs, place pit and fissure sealants and place occlusal resin restorations. In addition to their patient care students will gain additional patient care credits and experience through a variety of clinical rotations available in the operating room, Special Needs Clinic, community health clinics, the Baby Oral Health Program to name a few.

The UNC Pediatric Dentistry Programs operate in a variety of clinical settings to provide comprehensive oral health care to diverse populations with a broad range of health care needs. The graduating dental student is educated to be comfortable and competent to provide oral health care to much of the pediatric population. Pediatric Dentistry specialists are equipped to provide oral health care to patient populations with complex oral and or medical needs.

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1 Introduction of North Carolina and Chapel Hill.

How may dental school and history in NC? and the role of your dental school at Chapel Hill

2. Education of pediatric dentistry and special needs dentistry for the handicapped children for undergraduate student

3. Clinical training course for resident to be speciality of pediatric dentistry

4. Clinical activity of your section including at University Hospital for child patients who have systemic disease and/or developmental disorder

how many at each year, how may percent of each disease,

5. Cooperation between home dentist and your section of university dental hospital
cooperation between Pediatrician and pediatric dentist at University Hospital

6. Each role of Dental hygienist and Dental assistant

7. medical insurance for patients at University hospital and home dentist in NC

【日本語要旨】

ノース・カロライナ大学は1794年に設立され、現在、学部、大学院合わせて28,000名を超える学生が学んでいます。歯学部は大学病院、公衆衛生学部や癌研究センターに隣接し、PhDプログラム、大学院教育プログラム、歯科衛生学やデンタルアシスタントの教育プログラムを含む多種の専門教育を行っています。

小児歯科学部門では、3年間の大学院教育プログラムに入学したレジデントは修士号を取ることが求められます。レジデントの診療は、乳幼児から青年期までの患者を対象とした一般歯科治療が主体です。患者には、神経障害、血液凝固障害、がん、唇顎口蓋裂、各種症候群、臓器移植など、多様な有病児も含まれます。その他、精神鎮静法は年間約150例、全身麻酔法は年間400例以上実施しています。救急部門では外傷歯の治療、週に1日は矯正治療も行います。

小児歯科学部門では、学生・レジデントともに多職種間の医療連携についても学びます。レジデントの場合、麻酔科、救急部、小児科、血液腫瘍科およびCraniofacial teamにそれぞれ1か月間ローテーションします。そこで、多職種間で緊密に医療連携を取りながら診療する基礎訓練を受けます。また、Craniofacial teamは、心理学、聴覚学、耳鼻咽喉学、形成外科学、口腔外科学、矯正歯科学、小児歯科学などの専門医で構成されており、部分的無歯症、エナメル質形成不全症などの歯の発生異常を有する患児に対する複合的な治療を学ぶことができます。歯科診療部門には、10名のデンタルアシスタントが勤務しているため、部門内のデンタルアシスタントとの連携を学ぶ機会にもなります。その他、3年目のレジデントはティーチングアシスタントとして学生の臨床教育にも参加します。

また、3年目のレジデントには、地域の歯科クリニックで勤務する機会も与えられます。ここでは、個人クリニックの医院経営や医療技術について学ぶことができます。また、米国におけるさまざまな医療保険制度を理解する機会にもなります。米国では、こどもの約50%が何らかの公的医療保険制度に加入しています。Medicaidは、アメリカ最大の公的医療保険制度で、州と連邦政府が共同出資しています。その他、アメリカには公的社会保障制度であるSocial Securityがあり、障がい者は通常、MedicaidかSocial Securityのいずれかに加入しています。これらの公的医療保険制度の他、数多くの私的医療保険制度もあり、それぞれに特徴があります。これらの保健制度を学ぶことはレジデントにとって貴重な経験です。

学部教育では、2年目に学生一人に数名の小児患者を配当します。各学生は、卒業するまで配当された小児患者の口腔管理を担当します。治療が必要な場合は、指導教官とともに治療計画を立案します。ここでは、生活習慣、成長発育、予防なども考慮した包括的な治療計画を立案する能力を獲得するよう教育されます。その他、エックス線写真の撮影と読影、シーラント、レジン修復などの技能習得も必修です。手術室、スペシャルニーズ歯科診療室、地域の保健所、乳児の口腔衛生教育プログラムなどにも参加し、そこでも口腔管理に関する基礎知識と技能を習得します。

このように、ノース・カロライナ大学の小児歯科学教育プログラムは、包括的で多様な内容で構成されています。学生は、小児患者の歯科口腔衛生管理全般に関する専門教育を受け、レジデントは、小児歯科専門医を目指しより複雑で多様な疾患にも対応できるよう訓練を受けます。