

# Needs Assessment

## Recognizing and addressing the oral health needs of Georgia

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### ABSTRACT

**Background:** The intent of this report is to provide an assessment of oral health needs for Georgia and to highlight the efforts underway at the Dental College of Georgia (DCG) at Augusta University to address these needs. In underserved areas of Georgia, the burden of untreated oral disease remains high. Because of in-migration and the inadequate availability of educational programs, the population continues to grow faster than the number of health care providers.

**Methods:** An overview of the oral health needs in Georgia is provided, along with a review of the ongoing outreach by the DCG to address those oral health needs. The data presented are derived from a variety of reports on oral health care workforce issues in Georgia between 2004 and 2014.

**Results:** By partnering with dental clinics across the state of Georgia, the DCG continues to improve the provision of primary oral health care in underserved communities. This effort expands the clinical outreach through year-round student rotations and by fostering collaboration between dental and medical students within these clinics with the integration of primary care and public health prevention strategies. Recruitment to address the shortage and maldistribution of dentists and admissions policies to increase class size and to enhance diversity are also discussed.

**Conclusions:** The DCG will continue to collaborate with Dental Public Health, private dental clinics, and Area Health Education Centers to treat the underserved in a network of statewide clinics. Additionally, they will provide a larger and more diverse cohort of dentists. The goal is to expand overall activities for a greater statewide impact on oral health during these difficult economic times.

**Key words:** Oral health, needs assessment, workforce, dentistry

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### INTRODUCTION

The intent of this report is to provide an assessment of oral health needs for Georgia and to highlight the efforts underway at The Dental College of Georgia (DCG) at Augusta University to address these needs.

#### Analysis of the Oral Health Care Workforce in Georgia

Georgia is primarily a rural state, with few major population centers. According to the census bureau, the current population is 9,687,653 (U.S. Census Bureau, 2015). It is one of the fastest growing states in the country and the largest state in physical size east of the Mississippi River, encompassing 57,906 square miles (U.S. Census Bureau, 2015).

### METHODS

The data presented here are derived from a variety of reports on oral health care workforce issues in Georgia between 2004 and 2014. These sources include the US Department of Health and Human Services; a study of Georgia's Dental Workforce in 2012 from the Georgia Health Policy Center; the 2004 Health Resources and Services Administration (HRSA) State Health Workforce Profiles; a report by state,

census division, and region in the Journal of Dental Education; a workforce committee report of the Georgia Dental Association in 2006; a Georgia Board of Regents workforce task force in 2006 on Health Professions Education; a comprehensive analysis of long-term employment trends, published by the Georgia Department of Labor, Workforce Information and Analysis Division; and a 2014 membership report of the Georgia Dental Association published by the American Dental Association (ADA) Division of Member and Client Services.

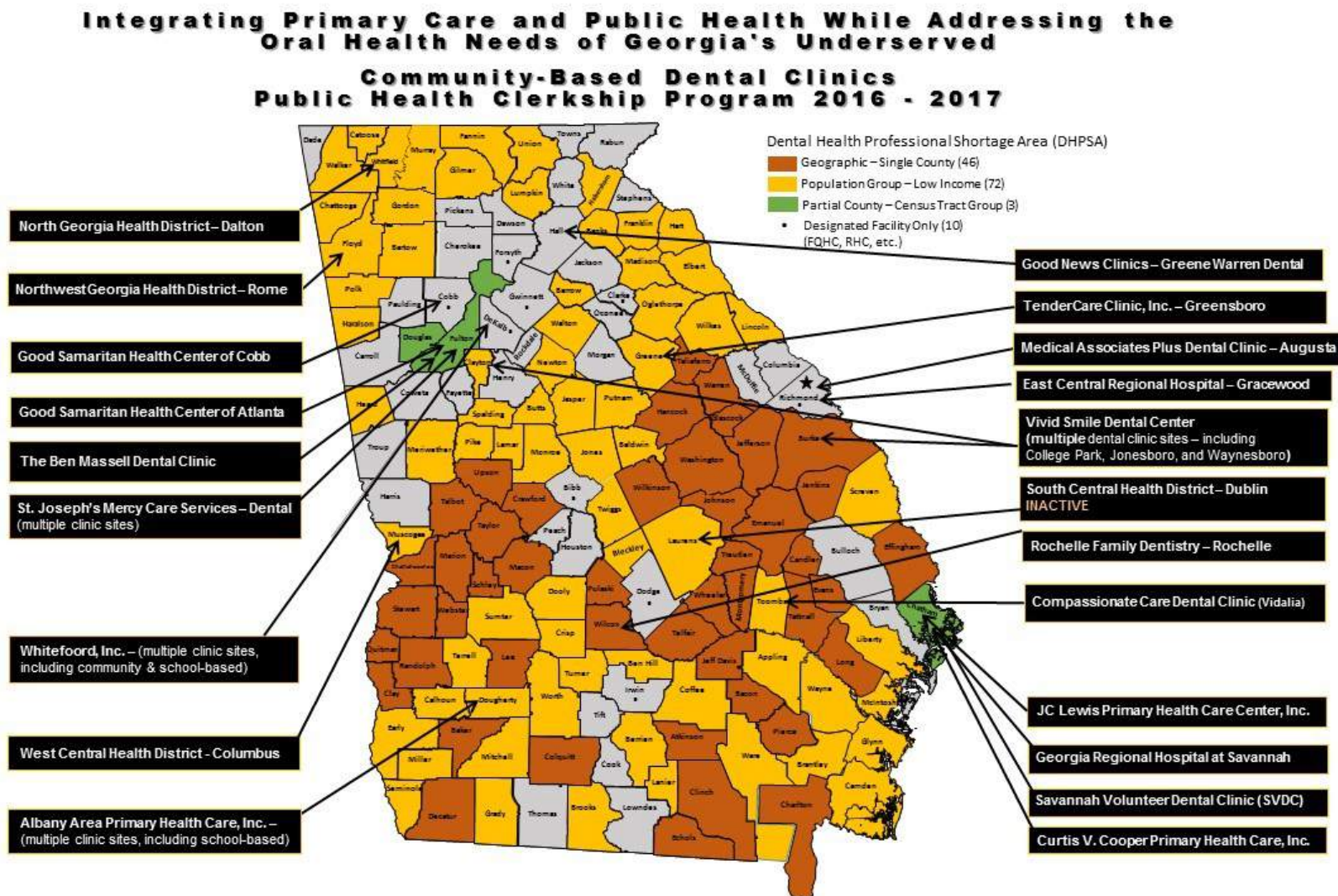
### RESULTS

In Georgia, the number of single-county or low-income Dental Health Professional Shortage Areas (DHPSAs) in all categories has increased to 131, representing an increase of approximately 50 counties relative to five years ago. The current criteria for a geographic dental health professions shortage area are: 1) the geographic area under consideration must be a rational area for delivery of dental services; 2) the population-to-dentist ratio must be less than 5000:1 (or less than 4000:1 if there is an unusually high need for service or insufficient capacity of existing providers); and 3) dental professionals in contiguous areas must be over-utilized, excessively distant, or inaccessible

(Dental HPSA Designation Criteria, 1992). The ratio of dentists to population in Georgia has apparently declined. Based on a survey completed by the Georgia Health Policy Center in 2012, there were approximately 4.2 dentists/10,000 population, compared to 4.4/10,000 reported by the ADA and HRSA in 2006, when Georgia ranked 49<sup>th</sup> of all 50 states in dentist-to-population ratio (A Study of Georgia's Dental Workforce, 2012: Health Resources and Service Administration, 2004). According to a report by the American Dental Education Association on dental student enrollment and graduation, of the states with at least one dental school, Florida and Georgia were notable under-producers of dental graduates relative to their populations (Byck et al., 2006). In Georgia, the number of dentists had decreased in 94 counties, remained the same in 50 counties, and increased in only 15 of the 159 counties. Furthermore, in this same period, only 33 counties showed a slight decrease in population; the remaining counties had population increases (GDA House of Delegates Manual, 2006). As noted previously, Georgia continues to have one of the fastest growing populations in the US. Based on these data, additional dental personnel are needed throughout the state to care for the dental needs of Georgians. Due to economic reasons and lifestyle preferences, there is a mal-

distribution of dentists (and physicians) across the country as well as in Georgia. Since 2002, three task forces have studied the Health Professions Workforce in Georgia. In 2002, the workforce for the state included 3,050 dentists and 4,900 dental hygienists (Board of Regents of the University System of Georgia, 2006). The 2008 report noted that the Atlanta area was home to 21.3% of the population, with a disproportionate number (26.8%) of dentists practicing within its counties. There were also concentrations of dentists in the Augusta (East-Central) and Savannah (Southeast) areas. There were 58 single-county and low-income DHPSAs, located primarily in rural Georgia (GADOLA, 2012). The 2012 Georgia Health Policy Center study included data from the Georgia Board of Dentistry website, which indicated that there were 5,625 dentists and 6,858 dental hygienists licensed in the state (A Study of Georgia's Dental Workforce, 2012). In spite of the increased numbers of dentists and dental hygienists, these increases only maintain Georgia's below-average dentist to population ratio and do not include projected needs resulting from population growth. These numbers were discouraging, and the 2012 DPHSAs, as reported by the state of Georgia, increased from 80 to 130 (Figure 1).

Figure 1



The need is not only for additional dental personnel, but, based on the current population demographics of Georgia, an increase in diversity of the dental personnel is also needed. Based on an ADA quarterly membership report presented by the Georgia Dental Association in September of 2014, the percentage of active dentists who were Black or Hispanic was 14.7%. The percentage of those practicing in Georgia by target market was 21.4%, and the percentage of the state population that is Black or Hispanic is 40.6% (Membership Reports GDA, 2014).

### Oral Health Care Needs in Georgia

According to the State Oral Health Survey, 52% of third-graders in Georgia have treated or untreated dental decay, and 18% have untreated dental decay (Falb et al., 2006). In addition, Georgia has the seventh highest rate of oral cancer in the US; this disease occurs mainly in underserved populations (Centers for Disease Control, 2017). Data collected from the 2009-2011 dental students' extramural rotations at Georgia Regents University (now Augusta University) showed that each student provided an average of 46 dental restorations and extracted an average of 40 teeth, illustrating the burden of oral disease for these Georgia citizens (Figure 2).

Figure 2



The burden of illness is also high for underserved Georgians in regard to medical conditions that are related to oral health status. Diabetes and obesity share risk factors for oral disease and are substantial public health concerns. In the past two years, the frequency of diabetes increased by 9%, and obesity increased by 8% in Georgia (Georgia's Annual State Health Rankings, 2014). In Georgia, adverse pregnancy outcomes, which are associated with poor oral health, are also a public health concern. Georgia Public Health data from 2015 show a 9.5% incidence of low birth-weight births and a 10.8% incidence of pre-term births, ranking the state sixth in percentage of low birth-weight births and seventh in pre-term births (Key Health Data about Georgia, 2017).

Oral health care needs in Georgia have been evaluated in relation to initiatives of Healthy People 2020, which provides the latest 10-year, science-based initiative to <http://www.gapha.org/jgph>

develop national objectives for improving the health of all Americans. Benchmarks have been established, and progress has been monitored over time to 1) encourage collaborations across communities and sectors, 2) empower individuals to make informed health decisions, and 3) measure the impact of prevention activities. The Healthy People 2020 objectives are useful in measuring the progress, or lack thereof, for oral health care in Georgia (Healthy People, Nov. 2011). The percentage of third-grade children in Georgia visiting a dentist (81%) meets the Healthy People 2020 objective for utilization of the oral health system (49%); however, visits alone do not appear to be reducing the incidence of dental caries. This survey showed that Georgia does not meet the Healthy People 2020 objective for caries experience (49%), since 56% of Georgia's third graders experience caries (7% above the 2020 objectives). Georgia also does not meet the objective for untreated dental caries (25.9%), since 27% of the children displayed

dental caries (Falb et al., 2006; Centers for Disease Control 2010). These results indicate that, in Georgia, the preventive and treatment needs among third grade children remain substantial. To enhance the effects of treatment on dental caries, primary oral health care should be supplemented with a public health preventive program that targets the patient/parent and the medical provider.

### **Efforts to Address Oral Health Care Needs in Georgia**

In part, as a result of these oral health needs, the DCG has received grant funding through HRSA to support the objectives of increasing the number and diversity of students providing dental services and expanding provision of dental services for underserved Georgia communities. Although these efforts have been successful in terms of the time spent by students in extramural clinical practice and the number of patients treated and dental procedures performed, the burden of untreated oral disease remains high in underserved areas of Georgia.

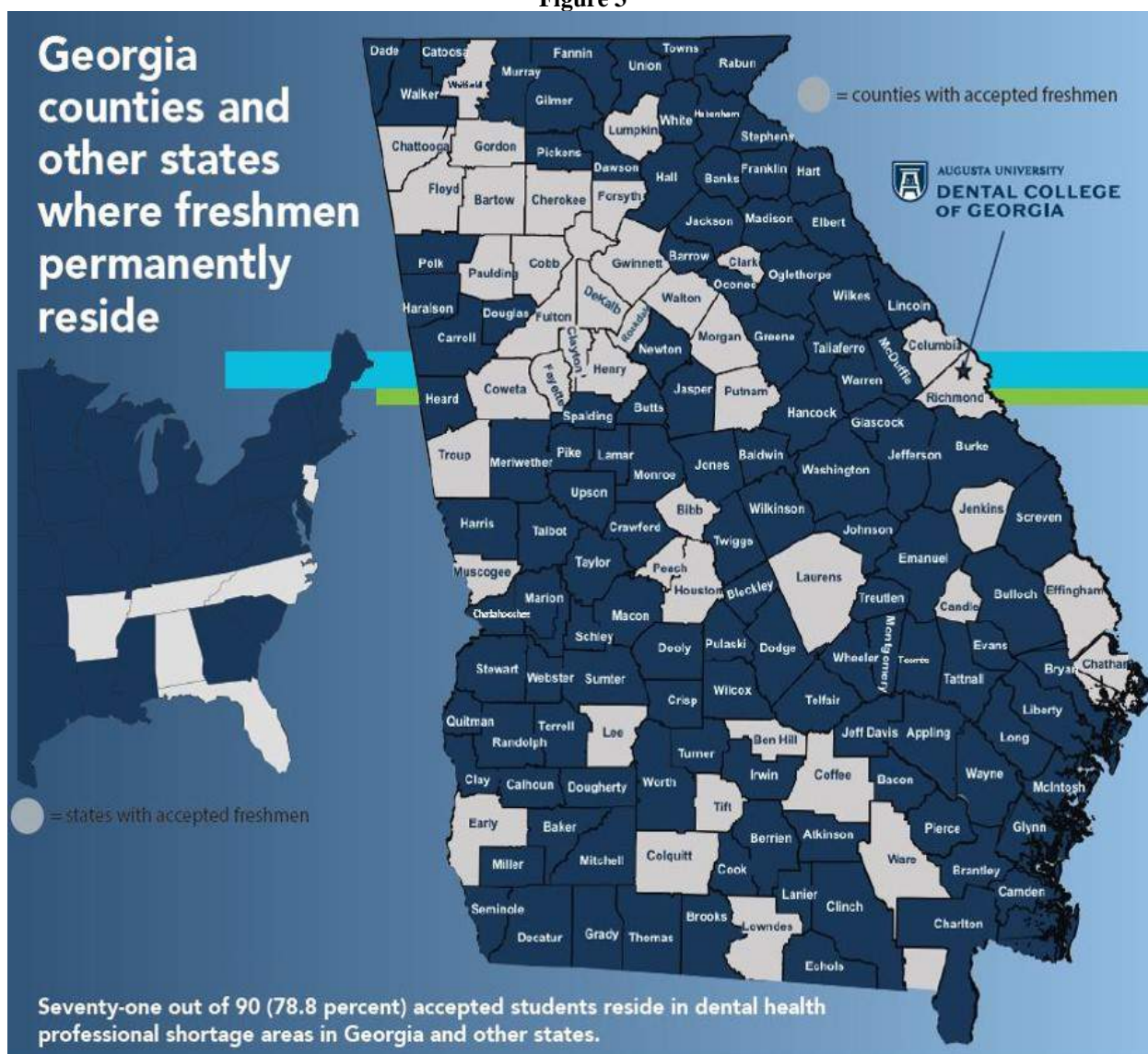
To address the need for more dentists, an objective of the DCG has been to increase class size (Medical College of Georgia, 2000) beyond the 2005 limit of 62 students per class based upon size of the facility and the number of faculty members. Since the opening of a new dental education facility in 2011, the class size has increased to 90 for the entering class of 2016 and will continue to increase incrementally to a maximum of 100 students per class, as is made possible by on-going faculty recruitment. The DCG continues to improve the provision of primary oral health care in underserved communities by partnering with dental clinics across the state of Georgia, an ongoing strategy that began ten years ago. DCG relies heavily on volunteer adjunct faculty housed at the community-based clinic sites to reach the underserved and assist in addressing their oral health needs. This effort expands the clinical outreach

through year-round student rotations as well as by fostering collaboration between dental and medical students within these clinics with the integration of primary care and public health prevention strategies.

The Admissions Committee of the DCG has also improved the diversity of the dental student body by recruitment efforts that include collaborating with the Student National Dental Association to hold an “Impressions” program each year to bring underrepresented minority (URM) students to campus each year for a day of hands-on activities, mock interview sessions, and interaction with current dental students. Another initiative was the 2012-2013 Robert Wood Johnson grant, “So You Want to be a Dentist,” that provided funding for partnership with Area Health Education Centers to create recruitment videos, place materials for preparation for the Dental Admission Test in strategic locations throughout central and south Georgia, and to conduct a summit held for URM students and mentor-dentists from the central and southern portions of the state. There has been some improvement in the number of URM students. In 2005, there were 27/235 (11.5%) URM members of the student body, and, in 2015, there were 56/321 (18.7%). In addition, for the last two years, 13-16% of the DCG’s entering the DMD class have self-reported coming from an economically or environmentally disadvantaged background. The efforts of the DCG in regard to URM recruitment should continue, because the percentages of URM students are not representative of the URM population of Georgia, which is ~40.6% (U. S. Census Bureau, 2015). In response to the issue of maldistribution of dentists, the DCG Admissions Committee also considers the home county of each DMD program applicant. Over the last four years, the percentage of accepted applicants who are from DHPSAs has averaged 62% (Figure 3).



Figure 3



## DISCUSSION AND CONCLUSIONS

The four overarching goals of Healthy People 2020 address the needs of children and adults. These goals are: 1) attain high-quality, longer lives free of preventable disease, disability, injury, and premature death; 2) achieve health equity, eliminate disparities, and improve the health of all groups; 3) create social and physical environments that promote good health for all; and 4) promote quality of life, healthy development, and healthy behaviors across all life stages. In Healthy People 2020, there are 17 specific objectives for improving oral health. Of these, the DCG is addressing 10, and three are related to tobacco use (Centers for Disease Control and Prevention, 2010). The DCG has a variety of programs designed to address the Healthy People 2020 objectives in Augusta and around the state. The goal is to expand overall activities for a greater statewide impact on oral health during these difficult economic times.

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