



# Dental Public Health Activity Descriptive Report

**Practice Number:** 35012  
**Submitted By:** Bureau of Dental Health, New York State Dept. of Health  
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| <b>SECTION I: PRACTICE OVERVIEW</b>  |
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| <p><b>Name of the Dental Public Health Activity:</b><br/> <span style="color: blue; font-weight: bold;">New York State Public Health Residency Program</span></p>  |
| <p><b>Public Health Functions:</b><br/>           Assessment -Acquiring Data<br/>           Assessment – Use of Data<br/>           Policy Development – Collaboration and Partnership for Planning and Integration<br/>           Policy Development – Oral Health Program Policies<br/>           Policy Development – Use of State Oral Health Plan<br/>           Policy Development – Oral Health Program Organizational Structure and Resources<br/>           Assurance – Population-based Interventions<br/>           Assurance – Oral Health Communications<br/>           Assurance – Building Linkages and Partnerships for Interventions<br/>           Assurance – Building State and Community Capacity for Interventions<br/>           Assurance – Program Evaluation for Outcomes and Quality Management</p>   |
| <p><b>Healthy People 2020 Objectives:</b></p> <p>OH-9 Increase the proportion of school-based health centers with an oral health component<br/>           OH-10 Increase the proportion of local health departments and Federally Qualified Health Centers (FQHCs) that have an oral health component<br/>           OH-11 Increase the proportion of patients who receive oral health services at Federally Qualified Health Centers each year<br/>           OH-12 Increase the proportion of children and adolescents who have received dental sealants on their molar teeth<br/>           OH-13 Increase the proportion of the U.S. population served by community water systems with optimally fluoridated water<br/>           OH-16 Increase the number of States and the District of Columbia that have an oral and craniofacial health surveillance system<br/>           OH-17 Increase health agencies that have a dental public health program directed by a dental professional with public health training</p>  |
| <p><b>Other Healthy People 2020 Objectives:</b></p> <p>AHS-6 Reduce the proportion of persons who are unable to obtain or delay in obtaining necessary dental care<br/>           ECBP-1 (Developmental) Increase the proportion of preschool Early Head Start and Head Start programs that provide health education to prevent health problems in the following areas: dental health<br/>           ECBP-4 Increase the proportion of elementary, middle, and senior high schools that provide school health education to promote personal health and wellness in the following areas: oral health<br/>           ECBP-11(Developmental) Increase the proportion of local health departments that have established culturally appropriate and linguistically competent community health promotion and disease prevention programs<br/>           ECBP-18 Increase the inclusion of core clinical prevention and population health content in Doctor of Dental Surgery and/or Doctor of Dental Medicine granting colleges and schools of Dentistry<br/>           HC/HIT (Developmental) Increase social marketing in health promotion and disease prevention<br/>           13<br/>           PHI-2 (Developmental) Increase the proportion of Tribal, State, and local public health personnel</p> |

who receive continuing education consistent with the Core Competencies for Public Health Professionals

PHI-13 Increase the proportion of Tribal, State, and local public health agencies that provide or assure comprehensive epidemiology services to support essential public health services

PHI-14 Increase the proportion of State and local public health jurisdictions that conduct a public health system assessment using national performance standards

PHI-15 (Developmental) Increase the proportion of Tribal, State, and local public health agencies that have implemented a health improvement plan and increase the proportion of local health jurisdictions that have implemented a health improvement plan linked with their State plan

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| <b>State:</b><br>New York | <b>Federal Region:</b> | <b>Key Words for Searches:</b><br>core competencies in public health, dental public health residency program, building oral health infrastructure |
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**Abstract:**

The New York State Dental Public Health Residency Program (NYSDPHRP) trains dentists to assume critical roles in the practice of dental public health. The program is a collaboration between University at Albany (SUNY-A) School of Public Health and the New York State Department of Health (NYSDOH) and has formal affiliations with the Jacobi Medical Center, Bronx, and the University of Rochester's Eastman Institute for Oral Health. The program has full accreditation from the Council on Dental Accreditation, American Dental Association. It embodies the model of public health education advocated by the U.S. Public Health Service and integrates academic training with extensive exposure to the practice of public health. The educational setting for the NYSDPHRP is one of the largest and most comprehensive state health departments in the country that is closely allied with a school of public health. The NYSDOH has a comprehensive array of cutting edge public health programs that address virtually every major aspect of public health and provides ideal training opportunities for residents. Faculty at the school of public health and other affiliated institutions and a large number of practicing public health professionals from the NYSDOH and other agencies serve as teachers, advisors, mentors, and role models.

The Bureau of Dental Health (BDH) provides a unique opportunity for dentists interested in pursuing careers in dental public health to receive advanced training and field experience, with primary functions being assessment, policy development and assurance. The NYSDPHRP draws on resources from throughout the department, particularly from public health programs within the Center for Community Health, with residents having access to the nation's best data banks to conduct their research projects at either the BDH or at one of the two affiliated sites. Residents participate in activities related to the CDC Cooperative Agreement, HRSA State Oral Health Workforce Grant, HRSA School-Based Comprehensive Oral Health Services and HRSA Perinatal Oral Health Quality Improvement Project.

The School of Public Health offers a comprehensive array of graduate and professional training programs in core public health disciplines, with Preventive Medicine and Dental Public Health Residency Programs available to physicians and dentists preparing for leadership roles in public health. Recognizing that most leadership positions in public health require solid grounding in both epidemiological principles and health policy and management, dental public health residents may enroll in advanced course work in both residency programs and have flexibility in course selection appropriate to their background in the biological and social-behavioral aspects of health and disease.

Jacobi Medical Center is a teaching hospital with advanced training programs in medical and dental specialties. The dental department provides post-graduate and general practice residency programs and opportunities for residents to be involved in clinical and health services research, program planning, and program implementation, including the administration of school-based programs, community-based dental programs and special services for high risk groups. The Eastman Institute for Oral Health has internationally recognized dental residency programs, vibrant oral biology research that is in the top tier of NIH rankings, and robust clinical services in all dental specialties with a strong community orientation.

Residents are trained to become competent in planning, implementing and managing oral health programs for populations; selecting interventions and strategies for the prevention and control of oral diseases and promotion of oral health; developing resources; evaluating and monitoring dental

care delivery systems; designing and understanding the use of surveillance system to monitor oral health; designing and conducting population-based studies to answer oral and public health questions; and advocating for, implementing and evaluating public health policy, legislation, and regulations to protect and promote the public's oral health.

A steering committee consisting of members of the Health Department and School of Public Health provides overall direction for the program, reviews the program on an annual basis to determine program needs, adequacy of funding and resources, and provides guidance. A faculty committee trains and mentors residents; sponsors a Journal Club and seminars for both the Preventive Medicine and Dental Public Health Residency Programs; assists in the selection of candidates, development of training plans, and supervision and evaluation of residents' training; and participates in field assignments and annual program reviews. The NYSDPHRP is offered free of charge, with stipends available to support up to two FTE residents a year.

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**SECTION II: PRACTICE DESCRIPTION**

**History of the Practice:**

The NYSDPHRP was established in 1972 and has maintained accreditation status for over 25 years. Affiliation agreements have been place for 15 years for placement of residents at Jacobi Medical Center in the Bronx and at the University of Rochester's Eastman Institute for Oral Health. Collaboration of the three sites (Albany, Bronx, and Rochester) increases access to staff and resources for the NYSDPHRP, with Program residents having access to additional mentors at all three sites. The partnership with Jacobi and Eastman has enhanced the quality of the program:

- increased number of students and faculty, resulting in enhanced interactions
- faculty with diverse expertise
- ability to match the interests of the candidates with opportunities available at the different sites
- increased applicant pool and quality of applicants

**Justification of the Practice:**

Public health dentists play key roles in improving the health of populations. Unfortunately, there are not enough trained public health dentists to assume leadership positions at state and local levels. Many professionals who lead dental public health efforts at the community level lack expertise in the complex social, political, economic, and epidemiological aspects of public health. Without a comprehensive understanding of the factors that impact on a population's health and well-being, knowledge of strategies to address these factors, and administrative skill to marshal needed resources, these professionals cannot effectively execute the mission of a state or local public health agency or community organization.

The NYSDPHRP is designed to graduate well-trained, experienced leaders who have formal training in the practice of public health and to increase the number of public health dentists and board certified diplomates actively engaged in the practice of dental public health.

**Inputs, Activities, Outputs and Outcomes of the Practice:**

The NYSDPHRP is designed to develop a diverse and culturally competent dental health professional workforce. Residents are engaged in the program on a full or part-time basis, with two Board Certified

Public Health Dentists affiliated with the Program and providing training and mentoring opportunities. A number of practicing public health dentists in NYS and elsewhere are eligible for the NYSDPHRP, but are unable to leave their jobs to enroll in the Program. To address the needs of practicing public health dentists, the NYSDPHRP has created opportunities to accomplish the dental public health competencies off-site on a part time basis through the work environment and to use information technology to further advance distance learning efforts and thereby, improve our recruitment of practicing public health dentists.

The educational objectives and activities of the NYSDPHRP are designed to meet and exceed the Commission on Dental Accreditation's Standards for Advanced Specialty Education Programs. Additionally, competency objectives developed by a committee established by the American Board of Dental Public Health are used as a guide for developing training plans for residents. Each student has a written curriculum plan to augment previous education and experience. The plan describes the competencies to be developed during the program, the activities necessary to develop the stated competencies, and the methods to be used to evaluate the competencies.

Residents are trained to become competent in planning, implementing and managing oral health programs for populations; selecting interventions and strategies for the prevention and control of oral diseases and promotion of oral health; developing resources; evaluating and monitoring dental care delivery systems; designing and understanding the use of surveillance system to monitor oral health; designing and conducting population-based studies to answer oral and public health questions; and advocating for, implementing and evaluating public health policy, legislation, and regulations to protect and promote the public's oral health.

#### **Budget Estimates and Formulas of the Practice:**

In the past, the Health Resources Services Administration (HRSA) provided grant funding for the NYSDPHRP, with \$86,000 per year available for the period July 2006- August 2013. During the past two years, funds for the NYSDPHRP were provided from the Maternal and Child Health Services Block Grant (\$120,000 per year for the period October 2010-September 2015) and from institutional support from the Jacobi Medical Center and the University of Rochester, with the Program able to offer training to seven residents without charging tuition. The Program provides approximately \$42,000 in stipend support to residents.

#### **Lessons Learned and/or Plans for Improvement:**

- The NYSDOH has continuously supported the Program because we have been able to document the contribution of the NYSDPHRP to assessment, policy development and assurance functions as evidenced by their publications.
- Residents have assisted the Bureau in addressing real questions and programmatic issues, whether it is related to benefits and risks of fluoridation or school-based programs, disease burden or laws and regulations.
- To create opportunities for dental school faculty members, we have created a part-time residency program. However, the success of this approach depends upon the availability of a mentor at the local level to provide assignments and guidance.
- The availability of funds to provide stipends is critical to attracting qualified residents. The unavailability of funds to support the MPH program has made it difficult to create a much broader pool of candidates.
- The lack of the HRSA DPH Residency Training grant has hindered our ability to provide support for the mentors.

#### **Available Information Resources:**

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| <b>SECTION III: PRACTICE EVALUATION INFORMATION</b> |
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## Impact/Effectiveness

*How has the practice demonstrated impact, applicability, and benefits to the oral health care and well-being of certain populations or communities (i.e., reference scientific evidence, outcomes of the practice and/or evaluation results)?*

At present, there are only 6 board certified diplomates in NYS who are actively engaged in the practice of dental public health to serve a population of more than 19 million. Of the 6 diplomates, 5 are graduates of the NYSDPHRP and serve as leaders in state and local public health agencies and in academic institutions.

Since its inception in 1972, the NYSDPHRP has trained over 50 dentists in the practice of dental public health, many of whom have gone on to assume leadership positions at state, national and local levels. In NYS, the State Board of Dentistry, State health department, 3 university community dentistry programs and one major hospital residency program are headed by a NYS trained specialist. Former residents are leading the efforts in three other state programs - Delaware, Mississippi and Rhode Island. At least 10 graduates are working in a dental school setting.

Residents have contributed to surveillance activities; development of state oral health plans and state health improvement plans; guidelines, laws and regulations; and training and evaluation studies. Their contributions to fluoridation, school-based programs, perinatal oral health, Early Childhood Caries prevention, oral cancer, tobacco cessation, diabetes and other topics can be seen various publications.

In the past 15 years, over 19 research and evaluation studies with significant contributions by residents (name in bold) have been published in professional peer reviewed journals, including:

- Kumar JV, Swango PA, **Opima P**, Green E. An assessment of reliability of dental fluorosis examinations. J Public Health Dent 2000; 60(1):57-59.
- Kumar JV, Green EL, Colluccio C, **Davenport R**. Oral health status of 2nd grade children in Upstate New York. New York State Dent Journal. NYS Dent Journal 2001;67(2):26-31
- Kumar J, **Wadhawan S**. Targeting dental sealants in school-based programs: Evaluation of an approach. Community Dent and Oral Epidemiol 2002; 30:210-5.
- **Wadhawan S**, Kumar JV, Badner VM, Green EL. Early childhood caries-related visits to hospitals for ambulatory surgery in New York State. J Public Health Dent. 2003 Winter; 63(1):47-51.
- **Chattopadhyay A**, Kumar J, Green E. The New York State Minority Health Survey: Oral Health Findings. J Public Health Dent. 2003 Summer; 63(2):47-51.
- **Gajendra S**, Kumar J. Oral health and pregnancy: A review. NYS Dent J 2004; 70(1):40-44.
- Cruz GD, Osraff JS, Kumar JV, **Gajendra S**. Preventing and detecting oral cancer. Oral health providers' readiness to provide health behavior counseling and oral cancer examinations. JADA 2005 (May);136:594-601
- **Gajendra S**, Cruz GD, Kumar JV. Oral cancer prevention and early detection: knowledge, practices, and opinions of oral health care providers in New York State. J Cancer Educ. 2006 Fall; 21(3):157-62.
- **Oh J**, Kumar J, Cruz GD. Racial and Ethnic Disparity in Oral Cancer Awareness and Examination: 2003 New York State BRFSS. J Public Health Dent 2008; 68 (1): 30-38.
- Kumar JV, **Moss ME**. Fluorides in dental public health programs. Dental Clinics of North America 2008 (April); 52(2):387-401.
- **Iida H**, Kumar JV, Kopycka-Kedzierawski D, Billings RJ, Effect of Tobacco Smoke on Oral Health Among U.S. Women of Childbearing Age, Journal of Public Health Dentistry, 2008
- **Iida H**, Kumar J, The Association Between Enamel Fluorosis and Dental Caries in U.S. Schoolchildren. Journal of the American Dental Association, 2009.
- **Iida H**, Kumar J, Oral Health During the Perinatal Period in New York State: Evaluation of 2005 Pregnancy Risk Monitoring System Data, NYS Dental Journal, 2009.
- Kumar J, **Adekugbe O**, Melnik T, Geographic Variation In Medicaid Claims for Dental Procedures in New York State: Role of Fluoridation Under Contemporary Conditions, Public Health Reports, 2010.
- **Iida H**, Kumar J, Oral Health During the Perinatal Period in New York State: Evaluation of 2005 Pregnancy Risk Monitoring System Data, NYS Dental Journal, 2009.

- Kumar J, **Adekugbe O**, Melnik T, Geographic Variation In Medicaid Claims for Dental Procedures in New York State: Role of Fluoridation Under Contemporary Conditions, Public Health Reports, 2010.
- **Nagarkar S**, Kumar JV, Moss ME. Early Childhood Caries related Visits to Ambulatory Surgery and Emergency Departments and associated Charges in New York State. JADA 2012; 143(1):59-65.
- **Patel M**, Kumar JV, Moss ME. Diabetes and Tooth Loss. An analysis of data from the National Health and Nutrition Examination Survey, 2003-2004. Association between Diabetes and Tooth Loss in US adults. JADA 2013:144(5); 478-485.
- **Tavares VN**, Kumar JV. Community water fluoridation reduced dental caries in Australian adults born before its widespread implementation at least as much as after its widespread adoption. J Evid Based Dent Pract. 2013 Sep; 13(3):111-3.
- **Jolaoso IA**, Kumar J, Moss ME. Does fluoride in drinking water delay tooth eruption? J Public Health Dent. 2014; 74 (3): 241-247.
- Kumar J, **Tavares V**, **Kandhari P**, Moss M, **Ismail JA**. Changes in caries experience, untreated caries, sealant prevalence and preventive behavior among 3rd grade children in New York State, 2002-2004 and 2009-2012. Public Health reports 2015 (in press).

Residents have also received national recognition for their work as evidenced by being recipients of NOHC awards.

### **Efficiency**

*How has the practice demonstrated cost and resource efficiency where expenses are appropriate to benefits? How has the practice demonstrated realistic and reasonable staffing and time requirements? Provide unit cost analysis or cost-benefit analysis if appropriate.*

The residency program is structured like the hospital based clinical residency program where the value of the services provided cannot be easily counted. The residents are involved in daily operation which includes surveillance and evaluation activities, disease burden and oral health plan development, grant writing, revision of work plans, reports and manuscript writing, performance management and quality improvement projects and such other activities.

### **Demonstrated Sustainability**

*How has the practice showed sustainable benefits and/or how has the practice been sustainable within populations/communities and between states/territories? What mechanisms have been built into the practice to assure sustainability?*

Funds for the NYSDPHRP are obtained from the Maternal and Child Health Services Block Grant (\$120,000 per year for the period October 2010-September 2015) and from institutional support from the Jacobi Medical Center and the University of Rochester. Previously, funding was available from the Health Resources Services Administration (\$86,000 per year) for the period July 2006- August 2013.

Sustainability of the NYSDPHRP is dependent on the availability of an ongoing source of funding to attract qualified candidates and to financially support them during their training. The program provides approximately \$42,000 in stipend and there is no tuition charge.

### **Collaboration/Integration**

*How has the practice built effective partnerships/collaborations among various organizations and integrated oral health with other health projects and issues? What are the traditional, non-traditional, public and private partnerships/collaborations established by the practice for integration, effectiveness, efficiency and sustainability?*

Partnerships with the School of Public Health, Jacobi Medical Center and Eastman Institute for Oral Health have enhanced the quality of the NYSDPHRP, with numerous positive outcomes resulting from these partnerships:

- increase in the number of students and faculty, and therefore, enhanced interactions
- a faculty with diverse expertise, which has allowed the program to match the interest of candidates with the opportunities available at different sites
- increase in the overall applicant pool and therefore the quality of the applicants
- interaction with Preventive Medicine residents

## **Objectives/Rationale**

*How has the practice addressed HP 2020 objectives, met the National Call to Action to Promote Oral Health, and/or built basic infrastructure and capacity for state/territorial/community oral health programs?*

The Dental Public Health Residency program develops a diverse and culturally competent dental public health professional workforce and has, since its inception, graduated over 50 dentists skilled in the practice of dental public health, many of whom have gone on to assume leadership positions at state, national and local levels.

The NYSDPHRP addresses numerous HP 2020 objectives with respect to creating a well-trained public health workforce that is skilled at being able to develop, implement and evaluate a wide range of evidence-based oral health programs to address the needs of various population groups, oral diseases, access to care, and oral health disparities and that have the potential to:

- reduce the proportion of persons who are unable to obtain or delay in obtaining necessary dental care
- increase the proportion of preschool Early Head Start and Head Start programs that provide oral health education to prevent dental health problems
- increase the proportion of elementary, middle, and senior high schools that provide school oral health education to promote personal health and wellness
- increase the proportion of school-based health centers with an oral health component
- increase the proportion of local health departments and federally qualified health centers (FQHCs) that have an oral health component
- increase the proportion of patients who receive oral health services at federally qualified health centers each year
- increase the proportion of children and adolescents who have received dental sealants on their molar teeth
- increase the proportion of the U.S. population served by community water systems with optimally fluoridated water
- increase social marketing in oral health promotion and disease prevention

By virtue of their training and expertise, graduates of the NYSDPHRP have the potential to impact on:

- the number of States and the District of Columbia that have an oral and craniofacial health surveillance system
- the number of health agencies that have a dental public health program directed by a dental professional with public health training
- the proportion of local health departments that have established culturally appropriate and linguistically competent community health promotion and oral disease prevention programs
- the inclusion of core clinical prevention and population health content in Doctor of Dental Surgery and/or Doctor of Dental Medicine granting colleges and schools of Dentistry
- the proportion of Tribal, State, and local public health personnel who receive continuing education consistent with the Core Competencies for Public Health Professionals
- the proportion of Tribal, State, and local public health agencies that provide or assure comprehensive epidemiology services to support essential public health services
- the proportion of State and local public health jurisdictions that conduct a public health system assessment using national performance standards
- the proportion of Tribal, State, and local public health agencies that have implemented a health improvement plan and increase the proportion of local health jurisdictions that have implemented a health improvement plan linked with their State plan

