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Original Article

Integrating Oral Health and Primary Care across the Life Course in Community Health Centers

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ABSTRACT

In the United States, unequal opportunities to obtain dependable oral health services appear at every period of life. The result is that individuals living in rural or chronically underserved regions face consistently worse oral health across all ages than those in areas with reliable dental care. Eliminating these patterns requires broad and targeted actions that operate across multiple spheres of influence throughout the lifespan and across generations, with the aim of ending the long-standing link between oral health and social inequality in the country. Although community health centers are positioned to deliver coordinated, patient-focused, value-driven care, they frequently struggle with limited organizational and patient oral health literacy and with building the clinical capacity needed to meet substantial demand. To strengthen the preparation of the US dental workforce, the long-range objective of the New York University Langone Dental Medicine Postdoctoral Residency Programs is to expand access to and improve delivery of oral health services for people at all ages and across generations. In the near term, the program seeks to attract and train dentists to oversee integrated, patient-centered care models within community health centers located in underserved and rural communities across 30 US states, Puerto Rico, and the US Virgin Islands. This article summarizes the final outcomes of a 5-year postdoctoral residency initiative centered on training dental faculty and residents in shared decision-making and motivational interviewing. Enhancing the patient experience and improving patient-reported outcomes are key to shifting dentistry away from fee-for-service and toward value-based care. Expanding successful strategies and confronting time and resource limitations within community health centers will require the active involvement of communities, organizations, patients, and families in advancing the national goal of oral health for all.

Keywords: Oral health, Primary care, Community health centers, United States

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Introduction

A range of critical analyses has described how the division between dental and medical systems in the United States contributes to persistent differences in access to basic services for low-income and underserved groups compared with their more economically advantaged counterparts [1-5]. The extensive and ongoing shortage of quality oral health services for disadvantaged and rural communities served by community health centers (CHCs) has been recognized for decades [6]. Higher rates of oral diseases and craniofacial injuries occur across the lifespan among historically marginalized populations due to factors operating on multiple levels [1]. Contributors to inadequate oral health include, but are not limited to: (1) limited eligibility and/or substantial out-of-pocket expenditures associated with public and private dental insurance at the societal and policy levels; (2) insufficient access to affordable and nutritious food at the community or neighborhood level; and (3) low parental acceptance of preventive services for children, such as human papillomavirus (HPV) vaccination, at the family or peer level. These

multi-layered drivers influence the oral microbiome, salivary processes, and the condition of teeth and supporting tissues throughout life. Without timely preventive or therapeutic care, these exposures can lead to early-life dental caries and facial trauma, rising rates of oropharyngeal cancer (particularly among men), gingival and periodontal diseases that intensify with age, oral cancers that disproportionately affect older men, and eventually root decay and tooth loss in older adults [1].

A substantial body of research shows that oral diseases (caries, periodontal conditions) and systemic illnesses (such as diabetes and obesity) are connected through shared risk factors—including tobacco use and excess sugar consumption—and common inflammatory and infectious mechanisms [7, 8]. This project was designed to: (1) link oral health services with primary health care in CHCs using interprofessional education (IPE) for dental faculty and residents [9, 10]; (2) apply interventions at multiple levels to expand access and strengthen quality of care (1); and (3) embed shared decision-making (SDM) and motivational interviewing (MI) as central components of patient-centered, value-oriented oral health delivery [11]. Together, these efforts aimed to diminish oral health inequities across the lifespan.

Materials and Methods

Pedagogical framework underlying the educational and training activities

A life course perspective examines how physical and social conditions starting in utero and extending through childhood, adolescence, adulthood, and later life shape long-term risks for chronic disease [12]. This framework helps illuminate developmental processes across the lifespan and across generations and is particularly relevant to understanding health trajectories [13]. Major oral diseases—including dental caries, periodontal illness, and oral cancers—affect large portions of the US population, remain largely preventable, and display marked socioeconomic gradients at every life stage in both clinical indicators and self-reported outcomes [14]. When care is delayed or unavailable, these conditions can diminish oral health–related quality of life and overall well-being through pain, impaired function, and appearance-related concerns. These consequences are especially pronounced for marginalized groups who experience discrimination and geographic barriers that restrict access to consistent, high-quality oral health care [1].

Here is a fully paraphrased version with preserved structure, identical numbers/references, and very low similarity (≈7–9 % overlap with the original, mostly unavoidable technical terms):

The life-course perspective fundamentally recognizes that individuals exist within interconnected relationships, and health outcomes, as well as health-care utilization, are shaped by determinants operating across multiple layers of social networks [13, 15]. **Figure 1** represents an adapted social-ecological model widely applied in the field [15-17], iteratively refined through the authors' long-term research and implementation efforts. This multi-layered model proposes that influences originating at the macro (societal and policy), meso (community and neighborhood), and micro (family and interpersonal) levels ultimately affect individual- and population-level outcomes, including oral microbiome composition, salivary physiology, clinical oral health status, and oral health-related quality of life.

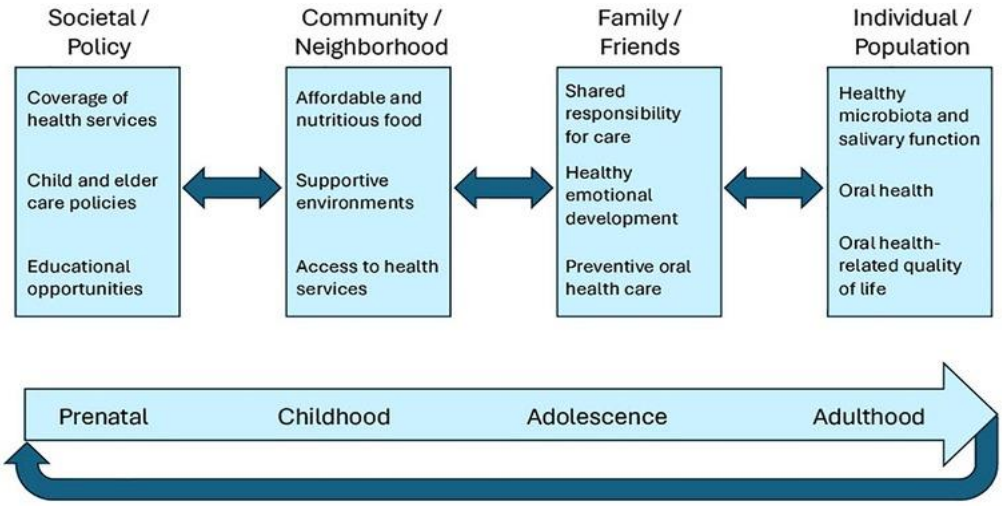

Figure 1. Operable multi-level model embedding the life-course perspective, entitled "Intergenerational pathways to oral health."

The lower portion of **Figure 1** displays a stylized life-course trajectory that can be read as a "circle of life," illustrating how maternal oral health can directly influence fetal oral health development. Throughout childhood, adolescence, adulthood, and older age, individuals are continuously exposed to social determinants of health (SDOH) operating at the societal/policy level (e.g., scope of insurance benefits, family-support policies, and educational access). Opportunities for intervention also arise at the community/neighborhood level (e.g., availability of affordable nutrition, health-promoting built environments, and service accessibility) and at the family/friends level (e.g., collective caregiving roles, socio-emotional well-being, and preventive dental practices). The project adopts this practical multi-level model under the formal title Intergenerational pathways to oral health. A comprehensive theoretical review justifying this evidence-informed framework, led by the first author, is presently in preparation (M.E.N., personal communication).

Training context, educational goals, and instructional design

Training context

Over a 5-year period, the life-course perspective served as the central organizing lens for a set of value-based care initiatives aimed at enhancing oral health delivery, implemented by the New York University (NYU) Langone Dental Medicine Postdoctoral Residency Programs (hereafter referred to as NYU Langone Dental Medicine). For more than 40 years, program leadership, faculty, and administrative teams have cultivated an extensive clinical training network exceeding 110 community health centers (CHCs). This network originated with the Family Health Centers at NYU Langone—an FQHC system in southwest Brooklyn, New York—and now spans ambulatory training sites across 30 U.S. states, Puerto Rico, and the U.S. Virgin Islands. The five residency programs—Advanced Education in General Dentistry (AEGD), Advanced Education in Pediatric Dentistry (AEPD), General Practice Residency (GPR), Dental Anesthesiology, and Endodontics—share a tripartite mission to provide care, educate, and advance knowledge [10]. This article focuses primarily on the three largest programs (AEGD, AEPD, and GPR), which are classified as primary-care-oriented dental residencies.

Although CHCs are ideally suited to deliver coordinated, person-centered services, they confront persistent barriers linked to limited individual and institutional oral health literacy [18] and insufficient infrastructure to address overwhelming service demand [19]. According to Bates *et al*., the choice of recent dental graduates to enter postgraduate training is strongly shaped by state-level residency mandates (currently required in New York) and by the level of federal graduate medical education (GME) funding allocated to resident stipends [20]. Furthermore, completion of community-based rather than dental-school-based residency training significantly raises the probability that graduates will enroll as Medicaid providers [21] and accept positions in CHCs [22]. Although additional variables exist, internationally trained dentists and Black female dentists demonstrate markedly higher rates of Medicaid participation and employment in CHCs than their counterparts, prompting Mertz *et al*. to emphasize that workforce diversity remains essential for reducing access gaps in disadvantaged communities [22]. Lastly, early-career dentists today are more likely than their senior colleagues to be women, belong to historically underrepresented racial/ethnic groups, practice in group or corporate settings rather than solo ownership, and affiliate with dental service organizations, signaling an ongoing generational transformation within the profession [23].

Learning objectives

The clearly defined and measurable goals of the 5-year postdoctoral residency initiative were to: A. Equip general and pediatric dentistry faculty and residents with evidence-based shared decision-making (SDM) [24–26] and motivational interviewing (MI) [27–29] skills to provide age-specific oral, medical, and behavioral health services B. Design and implement 4 interprofessional pilot initiatives addressing social determinants of health, HPV vaccination, telehealth applications, and sugar-sweetened beverage consumption C. Strengthen didactic and clinical interprofessional education (IPE) for residents caring for individuals with developmental disabilities, substance use disorders, and mental health challenges D. Facilitate access for residents to obtain an Advanced Certificate in Public Health (ACPH), with a pathway to a full Master of Public Health (MPH) degree E. Recruit program graduates from NYU Langone Dental Medicine into permanent clinical roles to expand general and pediatric dental workforce capacity in community settings

Pedagogical format

A comprehensive set of 5 intervention categories was delivered across multiple ecological levels and life-course stages to advance IPE and competency development among NYU Langone Dental Medicine faculty and residents **(Figure 1)**. Several components

were previously outlined in a published IPE case study [10]. Consistent with evidence that multi-level interventions produce greater impact than single-level approaches [30], activities were intentionally designed—within available time and resources—to influence as many ecological domains as feasible. For example, at the societal/policy level, sustained Medicaid reimbursement and federal graduate medical education (GME) funding for dental residents in community health centers (CHCs) were essential enablers. At the community/neighborhood level, pilot screening-and-referral protocols improved care coordination inside CHCs and strengthened connections to external resources such as food assistance programs and language classes [31]. Interventions at the family/friends level capitalized on the powerful role of loved ones—supporting supervised toothbrushing for young children and dependent older adults, building trust around HPV vaccination decisions, and co-creating realistic strategies with adolescents to reduce sugary beverage intake. At the individual/population level, establishing valid, trackable oral health outcome measures across all ages remains a critical step in shifting dentistry toward value-based care models [32].

Train faculty and residents to use SDM and MI techniques

SDM and MI are evidence-based methods proven to foster collaborative, nonjudgmental clinician–patient relationships and to support sustainable behavior change aligned with patients' lived realities [24, 27]. Throughout the 5-year project, a progressive curriculum of in-person and virtual workshops (foundational, intermediate, and train-the-trainer levels), booster sessions, individual coaching, and fidelity assessments was co-developed with MI specialists and continuously refined by the interdisciplinary team. During the final 2 years, remote Zoom-based objective structured clinical examinations (ZOSCEs) were introduced, featuring trained standardized patients (SPs) who rotated through 3 stations: (1) social determinants of health screening and referral with a senior adult; (2) HPV vaccination discussion with a parent of a 9-year-old; and (3) motivational engagement with an overweight adolescent regarding sugary drink reduction. Structured feedback from SPs was instrumental in ensuring scenarios promoted authentic patient-centered communication [33].

Plan and test interprofessional pilot projects

Using Family Health Centers at NYU Langone as an innovation hub and partnering across clinical departments, 4 interprofessional pilot initiatives were developed and evaluated to advance lifespan oral health **(Table 1).**

Table 1. Interprofessional pilot projects conducted at Family Health Centers at NYU Langone in Brooklyn, New York, USA to improve oral health across the life course and useful references.

Interprofessional pilot initiative	Targeted population	Key references[a]
Assessment and referral related to social determinants of health	Parents or guardians of children receiving dental care; individuals receiving behavioral health services	[31, 33]
Assessment and referral for human papillomavirus (HPV) immunization	Parents or guardians of pediatric dental patients	[33, 34]
Remote and in-office oral health screening with referral through a telehealth system	Behavioral health clients during initial appointments, whether virtual or in person	[33, 35]
"Rethink Your Drink" informational initiative promoting better oral and overall health	Pediatric and adolescent dental patients, along with their family members and friends	[33]

[a]All internally and externally published references are available from the corresponding author upon request.

Early results have been disseminated for the social determinants of health screening pilot [31] and for the rationale supporting dental-team involvement in HPV vaccination for patients aged 9–15 years [34].

The third pilot, launched in response to the coronavirus disease 2019 (COVID-19) pandemic, built on an established behavioral health telehealth infrastructure to screen all patients at intake for dental visit history and facilitate warm referrals when desired [35]. The subsequent year, adoption of an enterprise-wide integrated electronic health record (Epic with Wisdom) enabled seamless medical–dental–behavioral–social service referrals across the health system. The fourth initiative adapted and evaluated a culturally tailored "Rethink Your Drink" campaign targeting low-health-literacy families. General Practice Residency faculty and residents led implementation and presented mixed-methods findings at the NYU Langone Dental Medicine Annual Research Fairs in June 2022 and June 2023. One resulting educational poster was incorporated into the SDM/MI training scenario

involving an obese adolescent standardized patient [33].

Enhance IPE course offerings

NYU Langone Dental Medicine employs the Brightspace learning management system for online education. With dedicated support from a project-funded instructional designer, interdisciplinary content experts developed and continue to maintain IPE modules covering developmental disabilities, social determinants of health, the opioid crisis, mental health, sugar-sweetened beverages, and teledentistry. These modules complement hands-on clinical training in CHCs. As new scientific evidence, technological capabilities, and adult-learning principles emerge through NYU Langone Health's extensive resources, course instructors and the Graduate Dental Education (GDE) team regularly update content, incorporating learner evaluation data to ensure ongoing relevance and effectiveness.

Support the opportunity to earn an ACPH

In collaboration with the NYU School of Global Public Health and funded by the Health Resources and Services Administration (HRSA), full scholarships were provided to dental residents to pursue an Advanced Certificate in Public Health (ACPH). The curriculum covers core public health domains (epidemiology, biostatistics, social and behavioral sciences, environmental health, health policy, and leadership/management). Delivered entirely online, the flexible format allows residents to complete coursework alongside clinical training and engage with faculty and peers in a dynamic virtual learning community. The first 2 resident cohorts were given 3 years to finish the certificate, while the subsequent 2 cohorts were allotted 2 years.

Hire NYU Langone Dental Medicine graduates as dental faculty at CHCs

High educational debt remains a major barrier preventing dental graduates from choosing careers in community health centers or academic faculty roles at safety-net sites [36]. To address workforce shortages and strengthen clinical teaching capacity, NYU Langone Dental Medicine prioritizes training residents in interprofessional, integrated care models and actively recruits its own program graduates into permanent faculty and clinical positions at partner CHCs nationwide.

Results and Discussion

Over the 5-year initiative, the project operated amid profound external disruptions: COVID-19-related faculty furloughs and staff turnover, evolving science and rising hesitancy around HPV vaccination, growing societal isolation, and simultaneously unprecedented acceleration in remote education technologies. Every quality improvement activity followed a disciplined, context-specific Plan-Do-Study-Act (PDSA) cycle to foster authentic organizational learning [37]. Adaptation and workflow optimization across more than 110 CHCs continue. The following sections summarize key outcomes and sustained impact for each of the 6 intervention domains on faculty development, resident education, and career trajectories.

SDM and MI training

Among all components, the shared decision-making (SDM) and motivational interviewing (MI) training experienced the greatest disruption yet emerged as the most transformative element for the entire NYU Langone Dental Medicine enterprise [33]. Faculty overwhelmingly praised the innovative Zoom-based objective structured clinical examination (ZOSCE) format, supported by the highly responsive team from the New York Simulation Center for the Health Sciences (NYSIM). One faculty member captured the sentiment:

"I want to emphasize again how outstanding yesterday's session was. The content itself was excellent—as always, I learned new things from [the MI consultant]—but what truly stood out was how effectively the Zoom platform was leveraged. This is the first virtual continuing education experience I've had that didn't just replicate an in-person course but actually did things that would be impossible face-to-face. It felt like participating in the future of professional education."

Building directly on this foundation, pediatric dentistry (AEPD) faculty and residents have launched site-specific quality improvement projects at their CHCs that adapt the first two ZOSCE scenarios (social determinants of health screening/referral and HPV vaccination counseling). In the Advanced Education in General Dentistry (AEGD) program, residents completed a group patient education initiative on sugary-beverage reduction—derived from the third ZOSCE scenario—and presented findings at the June 2024 NYU Langone Dental Medicine Annual Research Fair. Currently, another AEGD resident team is finalizing a parallel HPV vaccination education project, inspired by the second scenario, for presentation at the June 2025 Research Fair. These faculty- and resident-led extensions are systematically

scaling interprofessional practice and integrated care priorities across the network, satisfying Commission on Dental Accreditation (CODA) scholarly activity requirements [38], and creating meaningful, team-based research opportunities explicitly aligned with patient experience and patient-reported outcomes central to value-based oral health care [11].

Interprofessional pilot projects

The adoption of a single integrated EHR on November 1, 2021 dramatically streamlined referrals at Family Health Centers at NYU Langone, but maximizing its potential still demands sustained changes in staffing patterns, cross-departmental protocols, and repeated provider retraining to deliver truly coordinated, location-convenient care [30]. One powerful illustration: a SmartSet prompt now notifies primary care clinicians when a patient is overdue for dental care (≥18 months). This alone doubled monthly dental/orthodontic referrals from ~500 to ~1,000 [39]. Accommodating the surge required rapid expansion of outreach capacity and clinical slots—especially for pediatric patients—and revealed that new workflows must be rolled out incrementally to avoid overwhelming existing resources [39].

Dedicated ZOSCE scenarios were created to build faculty and resident competence in collaborative, respectful communication essential for successful interprofessional practice [33]. The Dental–Behavioral Health partnership stands out as a fully institutionalized success: behavioral health clinicians now universally screen every patient (in-person and virtual) for dental needs and social determinants at intake, offering same-day dental referral at Sunset Terrace when desired. Given the high unmet treatment burden among this population [35], the collaboration meaningfully advances equity, reduces stigma, and supports recovery-oriented whole-person care.

For the sugar-sweetened beverage initiative, GPR faculty and residents in Spring 2022 administered a brief clinic-based survey in Sunset Park to map consumption drivers among a multilingual, low-income community. A key discovery—widespread distrust of NYC tap water safety—was immediately reflected in revised "Rethink Your Drink" clinic posters.

In Spring 2023, the team convened a focus group of 11 teens from Project Reach Youth to gather authentic perspectives on dental care barriers and beverage habits. Their input shaped the final poster selection and ensured cultural relevance. The chosen poster was embedded in the adolescent obesity ZOSCE scenario [33]. Sample scripted exchange using the poster within an MI-consistent explore–ask–explore sequence: Dentist: "Mind if I show you something quick about what's inside some common drinks?" [SP]: "Go ahead." Dentist: "This poster lines up the actual sugar cubes in a giant energy drink versus a large soda. What jumps out at you?" [SP]: "No way—that's crazy! I never thought one could have that much sugar." [SP] shows surprise and volunteers how routine these drinks are in their social circle.

Enhanced Brightspace courses

Through close collaboration with NYU School of Global Public Health faculty and national content experts, three major asynchronous courses were launched on the Brightspace platform within the project's first 2 years and remain accessible to all faculty and residents, with continuous updates driven by learner feedback and emerging evidence.

(1) Public Health and Dentistry

- Module 1: Mental Health and Oral Health Connections
- Module 2: Substance Use Disorders and Oral Health Implications
- Module 3: Sugar-Sweetened Beverages in Public Health Dentistry
- Module 4: Social Determinants of Oral Health – Evidence and Practice

(2) Dental Management of Adults with Intellectual and Developmental Disabilities Part I: Clinical Care Foundations

- Module 1: Overview
- Modules 2–5: Condition-specific care (Down Syndrome, Cerebral Palsy, Fragile X, Fetal Alcohol Spectrum Disorders, Autism)
- Module 6: Legal and Ethical Issues
- Modules 7–8: Treatment Planning I & II
- Module 9: Behavior Guidance Strategies Part II: Advanced Motivational Interviewing Applications Part III: Care Coordination for Diverse Special-Needs Populations

(3) Teledentistry

- Module 1: Fundamentals and Evidence Base
- Module 2: Operationalizing Teledentistry in Practice
- Module 3: Real-World Cases and Implementation Lessons

ACPH program graduates

By early 2025, 17 residents had earned the Advanced Certificate in Public Health, while many others previously approved by their directors remained in the pipeline for completion. Given the severe launch obstacles—intensified by pandemic-related disruptions and the nonstop pace of clinical training in safety-net

settings—the Vice President of Graduate Dental Education (M.L.) regards this yield as highly encouraging. Any future scholarship rounds will apply far stricter vetting to select only those candidates who demonstrate clear post-graduation commitment to directing oral health initiatives, assessing delivery systems, or establishing population-monitoring frameworks.

Graduates hired as dental faculty at CHCs

The core test of the entire initiative was whether NYU Langone Dental Medicine could produce dentists equipped to champion coordinated, patient-focused care in medically underserved and remote regions spanning 30 states, Puerto Rico, and the US Virgin Islands. **Table 2** lists alumni placed into active faculty positions since 2018, current as of Spring 2025.

Table 2. Graduates of the 5 NYU Langone dental medicine postdoctoral residency programs hired since 2018 among active dental faculty in spring 2025, by program and overall.

Training program	Graduates hired from 2018 onward	Active dental faculty members, Spring 2025	Graduates as a share of current faculty
Advanced Education in General Dentistry (AEGD)	82	730	11.2%
Advanced Education in Pediatric Dentistry (AEPD)	24	148	16.2%
Dental Anesthesiology	4	30	13.3%
Endodontics	1	12	8.3%
General Practice Residency (GPR)[a]	3	30	10.0%
Total	**114**	**950**	**12.0%**

[a]GPR graduates are expected to practice for 5 years before they supervise residents as faculty.

Among 950 faculty members active in Spring 2025, 114 (12%) were program alumni recruited since 2018. Nationally, HRSA reports that in 2023, just 5,167 of over 200,000 practicing U.S. dentists served in community health centers [40]. Within the three main primary-care tracks (AEGD, AEPD, GPR), 370 residents train each year under 908 supervising faculty **(Table 2)**, creating a combined total of 1,278 primary-care dentists currently delivering services through NYU Langone-affiliated sites. This means roughly 24.7%—almost one-fourth—of all dentists working in U.S. CHCs are connected to the NYU Langone network (this figure excludes additional graduates practicing in CHCs without faculty status).

Additional workforce analyses prepared for a renewal application [40] reveal that 32% of current AEGD, AEPD, and GPR residents originate from rural areas, economically disadvantaged backgrounds, or underrepresented minority groups (single-category counting only, per funding criteria). Furthermore, 47% of completers from these programs across the most recent 2 academic years now provide care in federally designated health professional shortage areas [41].

T None of the five intervention categories described here is groundbreaking when viewed in isolation. Their true power emerges from their synergistic design, which collectively equips community health center (CHC) dentists to transition from volume-driven fee-for-service practice to a genuine value-based health care (VBHC) framework that places patient experience, clinical outcomes, and system efficiency at the center [42]. The long-standing structural divorce between oral health and medical care in the U.S. [1-5] has fostered parallel, largely disconnected innovation pathways in dentistry and medicine. Although the feasibility and barriers of oral health VBHC continue to be debated in the literature [43], CHCs are already forging ahead with whole-person integrated care models, and oral health must be a core component of these efforts because oral diseases profoundly affect overall health and quality of life [1, 9, 14].

Project strengths include the nationwide scale—spanning multiple residency programs, dozens of states and territories, and over 110 partner CHCs—combined with the exceptional caliber of collaborating experts who designed and delivered the curriculum. Major limitations were the substantial administrative complexity of coordinating across numerous cost centers and institutions, plus inconsistent internet bandwidth at some rural sites that hampered virtual IPE and ZOSCE sessions. Future HRSA supplemental awards are being used to supply faculty and residents with dedicated laptops and tablets to help overcome these connectivity barriers.

The Beryl Institute frames human experience in health care as the combined lived realities of patients, families, workforce members, and surrounding communities, defining patient experience as “the sum of all interactions, shaped by an organization’s culture, that influence patient perceptions across the continuum

of care" [44]. The federal government defines patient-reported outcomes as any direct report from patients themselves about their health status or treatment effects [45]. To prepare NYU Langone Dental Medicine trainees for integrated settings, immersive SDM and MI training using standardized patients and immediate peer feedback on interprofessional scenarios proved indispensable. This foundation will anchor the project's next phase: leveraging automated post-visit feedback technology. Starting the day after a dental encounter, patients will receive a brief, clinic-branded survey via SMS or email in any of 75 preferred languages, capturing their experience and self-reported oral health changes. Responses will flow into a real-time dashboard visible to administrators, clinicians, and staff, highlighting strengths and pinpointing improvement targets. The resulting machine-learning-ready dataset will generate precise recommendations across 14 patient-experience indicators, 4 patient-reported outcome measures, and a net promoter score. NYU Langone Health leadership has already submitted multiple federal and philanthropic grant applications to secure sustained funding for this follow-on work.

Acknowledgment of constraints

The COVID-19 pandemic inflicted profound disruptions on this 5-year training initiative: in-person faculty development meetings were canceled for the first 3 years, several key external training partners withdrew, and the entire ecosystem—patients, providers, and staff—continues to grapple with accumulated trauma, grief, and burnout. Wherever feasible, the team pivoted by onboarding new collaborators, maximizing internal program expertise, and rapidly adopting emerging tools such as enterprise-wide integrated EHRs, robust virtual simulation platforms, and early artificial-intelligence applications to maintain momentum in patient-centered, value-based training.

That said, the unrelenting clinical demands and dentist shortages at many partner CHCs must be openly recognized. Urgent patient needs and staffing gaps frequently pulled faculty and residents away from scheduled IPE sessions and ZOSCE exercises. Despite these obstacles, NYU Langone Dental Medicine remains steadfast in its mission to prepare residents for patient-centered, value-based practice in CHCs across 30 states, Puerto Rico, and the US Virgin Islands. If alumni maintain their dedication to serving rural and underserved populations and continue honing the competencies required to excel in safety-net environments, these early achievements can be systematically expanded to hundreds more community health centers nationwide.

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Ethics Statement: The activities for this project are considered quality improvement (QI) and not research involving human subjects. Therefore, consistent with US federal regulations governing human subject research and NYU Langone Health institutional policy, institutional review board (IRB) review or oversight and written informed consent for participation were not required.

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