

## Medical Education Research

### *'Postdoctoral Research, Instruction, and Mentoring Experience (PRIME)\*:*

#### *'A Pipeline Program to Promote Health Equity via Educational Workforce Development'*

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**Rationale:** The paucity of NIH-designated underrepresented (Black and Latinx) medical professionals and scientists is a major factor contributing to health disparities in the US. The postdoctoral period is when skills in grant-writing<sup>1</sup>, publication, and teaching are consolidated, and is a particularly critical time for aspiring URM and women<sup>2</sup> faculty. Therefore, changes in workforce development are needed to increase the number of biomedical researchers and health professionals from vulnerable URM populations.

**Methods:** The PRIME (Postdoctoral Research, Instruction and Mentoring Experience) program is a partnership between Wake Forest School of Medicine (WFSM) and minority-serving Winston-Salem State University (WSSU), to train biomedical researchers to teach in medical and health professions schools. PRIME integrated traditional mentored postdoctoral research training at WFSM with teaching instruction and mentoring, and teaching experiences at WSSU over a three-year training period. The biomedical research training developed skills in research design and execution, oral communication of results, publication and grant writing, and responsible conduct of research. Scholars also participated in workshops identifying pedagogical principles and educational best practices. They gained teaching experience in undergraduate STEM and graduate health professions courses. Scholars developed mentoring skills by directing undergraduate student research, and they engaged in K-12 outreach activities.

**Outcomes:** Fifteen scholars were recruited over a five-year period, 80% of whom were from populations under-represented in biomedical sciences. These scholars produced 34 peer-reviewed publications, submitted four grant proposals (two were funded), taught in 13 courses, and supervised

the research of 20 undergraduates. All scholars successfully transitioned into academic (12), government research (2), or industry science-related (1) positions. Six scholars attained faculty positions at medical, dental or health sciences schools, and four at R1/R2 institutions.

**Impacts:** The PRIME program 1) doubled the population of URM postdocs at WFSM; 2) developed URM researchers to teach and mentor the next generation of biomedical scientists and health professionals; 3) nurtured career aspirations of URM students at both the undergraduate and K-12 levels; and 4) expanded and strengthened research and teaching collaborations between neighboring academic institutions. PRIME is a potential model for expanding opportunities for URM faculty at institutions seeking to improve opportunities for diversifying their faculty.

<sup>1</sup>PMC3412416; <sup>2</sup>[Ysseldyk et al., Front.Psych 2019](#)