

# Native Hawaiian and Pacific Islanders Lag Behind Total Underrepresented in Medicine Growth in Orthopaedic Surgery Residency Programs

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**INTRODUCTION:** Native Hawaiian and Pacific Islanders (NHPIs) experienced a significant decrease in representation in Orthopaedic Surgery Residency Programs from the 2006-2007 to 2020-2021 academic year despite a significant increase in overall Underrepresented in Medicine (URM) in Orthopaedic Surgery Residency Programs, and it was hypothesized NHPIs did not follow the similar trend of growth seen by total URM representation in Orthopaedic Surgery Residency Programs over the previous 15 years.

**METHODS:**

Resident race and ethnicity data from educational years 2006-2007 through 2020-2021 were retrieved from the Graduate Medical Education (GME) census published annually in the *Journal of the American Medical Association*. URM was defined by the Association of American Medical Colleges' (AAMC) definition of racial and ethnic populations "underrepresented in the medical profession relative to their numbers in the general population," of which this group includes Native Hawaiian/Pacific Islander, Native American/Native Alaskan, Black, and Hispanic. Representation for each group, Total URMs, NHPIs, and Non-NHPI URMs (URM group excluding NHPI subgroup), were determined as percentages of total Orthopaedic Surgery Residents for each academic year. For each group, initial year and final year of the study percentage representation was utilized to determine percentage change in relative representation among total Orthopaedic Surgery Residents. Growth rates were then compared by Chi-squared analysis to determine significance.

**RESULTS:** A total of 54,375 Orthopaedic Surgery Residents were identified over the 15 year study period, of which 5291 identified as an URM racial/ethnic subgroup and a total of 70 identified as NHPI. The number of Orthopaedic Surgery Residents grew from 3187 to 4335 over the study period, representing a 36% increase. Similarly, URM representation grew from 8.03% (256 of 3187) of total Orthopaedic Surgery Residents, to 11.05% (479 of 4335) representing a 37.6% increase in relative representation of URM Residents. Inversely, NHPI Orthopaedic Surgery Residents saw a decrease in representation from 0.38% (12 of 3187) to 0.12% (5 of 4335) resulting in a -69.37% (p=0.015) change in NHPI representation among Orthopaedic Surgery Residents. Non-NHPI URM representation increased from 7.66% (244 of 3187) to 10.93% (474 of 4335) which was not statistically different from total URM growth in Orthopaedic Surgery Residency Programs (p=0.409).

**DISCUSSION AND CONCLUSION:** The findings demonstrate that over the previous 15 years NHPIs have experienced a trend of significant loss in representation in Orthopaedic Surgery Residency Programs despite an increasing trend in total URM representation, and failed to match the similar growth rate of total URM representation in Orthopaedic Surgery Residency Programs.

