Title: Are Spanish-Speaking Orthopedic Surgeons Where They Are Needed? A Geographic Analysis of Language Concordance in Chicagoland Tertiary Academic Institutions

Introduction: Language concordance, when patients and providers share a common language, is associated with improved clinical outcomes. In orthopedic surgery, where care relies heavily on shared decision-making, perioperative counseling, and adherence to rehabilitation, limited English proficiency (LEP) may disproportionately affect outcomes. LEP has been linked to longer hospital stays, higher complication rates, and poorer patient experiences. In Chicago, approximately 1.7 million residents speak a non-English language, predominantly Spanish. Yet, the geographic distribution of Spanish-speaking orthopedic surgeons relative to community need remains unclear, especially in tertiary institutions where the most complicated conditions are treated.

Methods: Physician directories from five major Chicagoland academic institutions were systematically reviewed to identify practicing orthopedic surgeons. Data collected included self-reported languages spoken beyond English and ZIP codes of primary outpatient practice locations. Surgeons without outpatient practices were excluded. Practice locations were mapped against ZIP codes with high proportions of Spanish-speaking residents to assess geographic alignment between surgeon language capacity and community need.

Results: Among orthopedic surgeons identified, a minority reported proficiency in languages other than English, with Spanish-speaking surgeons representing a limited subset. Geographic analysis demonstrated a mismatch between surgeon distribution and community linguistic needs. High-density Spanish-speaking neighborhoods, including Pilsen, Little Village, and Cicero, had few or no language-concordant orthopedic surgeons. In contrast, Spanish-speaking providers were more commonly concentrated in tertiary care centers and higher-income areas, creating barriers to accessing language-concordant orthopedic care for LEP populations.

Conclusion: Spanish-speaking orthopedic surgeons remain underrepresented in high-need areas across Chicagoland, highlighting an opportunity to improve equity through targeted workforce and language access strategies. This analysis does not account for patient travel across ZIP codes, which may underestimate access. Despite this, the findings underscore that locating a nearby Spanish-speaking orthopedic provider remains challenging for many patients.