

Research Paper

Health spending among working-age immigrants with disabilities compared to those born in the US

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Abstract

Background: Immigrants have disparate access to health care. Disabilities can amplify their health care burdens.

Objective/hypothesis: Examine how US- and foreign-born working-age adults with disabilities differ in their health care spending patterns.

Methods: Medical Expenditures Panel Survey yearly-consolidated files (2000–2010) on working-age adults (18–64 years) with disabilities. We used three operational definitions of disability: physical, cognitive, and sensory. We examined annual total, outpatient/office-based, prescription medication, inpatient, and emergency department (ED) health expenditures. We tested bivariate logistic and linear regression models to, respectively, assess unadjusted group differences in the propensity to spend and average expenditures. Second, we used multivariable two-part models to estimate and test per-capita expenditures adjusted for predisposing, enabling, health need and behavior indicators.

Results: Adjusted for age and sex differences, US-born respondents with physical, cognitive, sensory spent on average \$2977, \$3312, and \$2355 more in total compared to their foreign-born counterparts ($P < 0.01$). US-born spending was also higher across the four types of health care expenditures considered. Adjusting for the behavioral model factors, especially predisposing and enabling indicators, substantially reduced nativity differences in overall, outpatient/office-based and medication spending but not in inpatient and ED expenditures.

Conclusions: Working-age immigrants with disabilities have lower levels of health care use and expenditures compared to their US-born counterparts. Affordable Care Act provisions aimed at increasing access to insurance and primary care can potentially align the consumption patterns of US- and foreign-born disabled working-age adults. More work is needed to understand the pathways leading to differences in hospital and prescription medication care. © 2016 Elsevier Inc. All rights reserved.

Keywords: Immigrants; Health care expenditures; Disparities

Federal and state policy initiatives established the elimination of disparities among individuals with disabilities as a strategic national health goal, making this group a US public health priority population.^{1,2} In 2010 close to

17% of US working-age adults had a disability,³ and rates of disability are expected to increase in the next few decades.^{4–8} Despite relative health advantages among immigrants, recent statistics indicate that one-in-ten immigrant adults have a disability,⁹ and an estimated 2.3 million working-age (18–64 years) immigrant adults are classified as such.¹⁰ These immigrants are, arguably, a doubly vulnerable population. Evidence on health care use and differences among subgroups within the disability population is emerging.¹¹ Yet, to date, there has been no empirical examination of the health care spending patterns of working-age immigrants with disabilities in the US. This work expands the research on outcomes associated with disability in the US and extends the evidence base in relation to health care services use among immigrants; an arguably health care underserved population.

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Living with a disability places a significant burden on health, wellness, and standard of living, thus impacting the public support system.^{8,12–16} Recent research indicates that adults with disabilities have health care spending rates averaging close to 5 times the per-capita spending of the general population.¹⁷ Furthermore, the federal government spends close to a third of a trillion dollars yearly on programs for working-age people with disabilities.¹⁸ Health care costs represent 55% of all dollars spent by federal and state governments on this population, a 30% increase from levels recorded in 2002.¹⁸ One plausible explanation for higher spending among individuals with disabilities is that they are more likely to develop preventable secondary conditions, undergo severe medical complications, require more medication, and experience hospitalizations.^{19–21}

The substantial growth of the foreign-born population in the US²² poses several challenges to providing equitable and cost efficient access to medical care for immigrants^{23–25} in a health care system that is already facing entrenched difficulties in delivering high quality and cost controlled care.^{26–30} Available empirical work establishes nativity as a risk factor for disparate access to health care.^{23,24} If nativity amplifies health care disparities among individuals with disabilities, a comprehensive understanding of this amplifying phenomenon and its consequences on health care services use and cost is warranted. Empirical findings may suggest effective ways to restructure the health care system to meet the essential needs of a highly disadvantaged and vulnerable population and reduce the use of expensive health services.

Previous research provides evidence on nativity-based differences in health expenditures in the adult population that suggests disparities in health care.^{23,31} This work focuses on health spending among persons with disabilities; a population with known high health care needs. As such, findings from this study can more pointedly identify nativity-based inequities in health care. The purpose of this paper is to examine how US- and foreign-born working-age adults with comprehensively defined and measured physical, cognitive, and sensory disabilities differ in their health care spending patterns. The three specific aims of this study are to determine: (1) whether known health care expenditure differences between US- and foreign-born adults in the general population extend to the high medical need population with disabilities; (2) whether differences between US- and foreign-born groups in spending vary depending on the type of health care services received; and (3) whether and to what extent predisposing, enabling, health need, and health behavior factors explain differences in spending patterns.

Methods

Data

We used data from the Medical Expenditures Panel Survey (MEPS) Household Component (HC)

yearly-consolidated files,³² covering the entire first decade of the 21st century (2000–2010). Given that the MEPS data does not consistently include nativity information on respondents, we combined MEPS and National Health Interview Survey (NHIS) data. The MEPS-HC sample is selected from the sample of households that participated in a previous NHIS year and is representative of the US civilian non-institutionalized population. A detailed discussion of the MEPS-HC sample design is available from the Agency for Healthcare Research and Quality (AHRQ).³³ Data files available from AHRQ permit users to link MEPS respondent records to their NHIS data from the previous year. Our data mergers followed specific procedures specified by AHRQ and used linkage codes created and provided by AHRQ staff. Details of these linkage files are provided elsewhere.³⁴ The NHIS data was only used for the purpose of extracting respondents' nativity information when not available in the MEPS yearly files. All other variables used in this study were based on the MEPS yearly household component files. The MEPS data includes detailed health care use and expenditures information, as well as extensive indicators of respondent demographic and socioeconomic conditions, health status, and health behavior. Wayne State University's institutional review board approved the study protocol.

Disability

To define disability we adopted the principles laid out by World Health Organization's International Classification of Functioning Disability and Health (ICF), as recommended by the Institute of Medicine.^{4,35} The ICF borrows from both medical and social approaches, defining disability by considering the latter to be not just an "attribute of the individual" but rather a state resulting from the interaction between person and environment.^{36,37} Given the definitional latitude of the concept of disability and the dependence between different disability classifications and health care needs, we consider three indicators that encompass multiple dimensions and severities in the relationship between person and environment. Our choice of indicators is consistent with a growing number of quantitative studies focusing on disability in minority populations.^{38–41} All indicators were measured dichotomously (i.e. 0 = No, 1 = Yes). First, we examined physical limitations, as gauged by respondents reporting difficulties in "walking, climbing stairs, grasping objects, reaching overhead, lifting, bending or stooping, or standing for long periods of time."^{42(p38)} Second, we examined cognitive limitations measured as endorsement of any of the following: "(1) experience confusion or memory loss, (2) have problems making decisions, or (3) require supervision for their own safety."^{42(p40)} Third, we examine sensory limitations measured as either vision impairment based on self-reported "difficulty seeing (with glasses or contacts, if used)" or hearing impairment based on self-reports of aural "difficulty (with hearing aid, if used)."^{42(p41,42)} The disability measures we used were not mutually exclusive.

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