

Lost in Translation: Healthcare Utilization by Low-Income Workers Receiving Employer-Sponsored Health Insurance

Bruce W. Sherman, MD; Wendy D. Lynch, PhD; and Carol Addy, MD, MMSc

The rising cost of health insurance is well documented and familiar to business owners. Over the past 10 years, health insurance premiums for employer-sponsored health insurance have increased almost 70%. For family coverage, the average annual premium is now almost \$17,000, of which the typical employee will pay more than \$4800. Additionally, deductible amounts have increased such that a majority of workers in small firms have deductibles over \$1000, and often much higher.¹

The shared responsibility provision of the Affordable Care Act (ACA) allows employers to charge individual employees a health insurance premium of up to 9.5% of wages, without penalty for single coverage, along with a 2016 deductible maximum of \$6850. For families, the amounts are substantially higher, with employers permitted to charge dependents the full premium costs with a deductible maximum of \$13,700. With these amounts deemed “affordable” in accordance with the healthcare law, employees who opt out of compliant employer-provided coverage are ineligible for insurance subsidies in the public health insurance exchanges.²

As a result, and in the face of the individual mandate, low-income earners working for employers with compliant ACA benefits offerings likely derive the greatest potential value from employer-provided plans, in contrast to public exchange options.³ With the Social Security Administration’s announcement that the 2014 median wage was \$28,851, and that 51.4% of wage earners had a net compensation less than \$30,000,⁴ this low-earning subpopulation deserves closer scrutiny. The intent of this article is to review available data regarding the healthcare utilization behaviors of low-income workers receiving employer-provided health insurance, and to discuss implications and potential solutions.

Measures of Socioeconomic Status in Employed Populations

Disparities in healthcare access and utilization have long been a focus for health policy researchers seeking to identify and address demographic or environment-related factors contributing to poor health status.^{5,6} The relative merits and limitations of specific indicators of socioeconomic status (SES), including income, wealth, education, occupation, and residence zip code, have been previously reviewed.^{7,8} What has emerged is a common understanding that health literacy and care compliance gaps exist across all income groups, but appear most pronounced among individuals with low SES.^{5,6,9,10} Commendably, such efforts have yielded a substantial knowledge base regarding SES, as well as the role of race and ethnicity in healthcare utilization. In many cases, these findings have informed the successful implementation of community health improvement initiatives.

To our knowledge, detailed evaluation of healthcare disparities among low-income earners in commercially insured populations has not been reported. However, in broad-based epidemiologic studies including uninsured, and government- and privately insured individuals, those with low SES exhibit substantial disparities in care.^{5,6} In the absence of explicit data regarding similar studies among commercially insured populations, findings from these and other healthcare disparities research efforts directly addressing low-income individuals¹⁰⁻¹² can help to inform hypotheses for further investigation among individuals with employer-provided health insurance.

In our experience, few employers or health plans have examined utilization patterns based on SES, and population-level claims experience is typically reported. As a readily available measure of SES, despite its limitations,⁷ employee wage information is a readily available and relevant data field that can be considered for inclusion in

most third-party data warehouses as part of claims-based employer reporting. Accordingly, whether wage, income, or other proxy measures for SES are utilized, most employers have an opportunity to better understand the potential impact of SES to inform workforce health management strategy development.

Population Health Profile of Low-Income Workers and Healthcare Utilization

There are likely many reasons for variability in healthcare utilization among low-income earners. At a foundational level, recent increases in cost-sharing associated with high-deductible plan options have substantially increased out-of-pocket healthcare expenditures for employees and their family members. Low-income earners are perhaps at greatest risk, with concerns associated with medically related financial stress or bankruptcy,¹³ as well as underinsurance due to prioritization of wages to address basic needs.¹⁴ Care avoidance, as a result of cost concerns, appears most pronounced in this subpopulation (as shown in **Figure 1**¹⁵).

Sufficient concern regarding differences in healthcare utilization exhibited by individuals with low SES has prompted the National Quality Forum to reevaluate their risk-adjustment approach to quality metrics.¹⁶ In support, and based on national survey data, low-income earners are more likely to use the emergency department as a substitute for primary care (as shown in **Figure 2**¹⁰). Further, low-income individuals are also more likely to experience potentially preventable hospitalizations,^{5,17} perhaps as a result of their increased potential for delayed or forgone care due to cost.^{15,18,19} This is further compounded by the preponderance of existing evidence indicating that low-income earners may have greater need for care given a higher prevalence of unhealthy behaviors^{5,20} and chronic conditions, particularly obesity, type 2 diabetes, and hypertension.^{5,21}

Low-income workers may also have inflexible work schedules, limiting access to physicians during scheduled work time. Additionally, they may be constrained in their access to healthcare due to employer pay policies, which may not compensate for time away from work. As a result, workers may feel financially motivated to remain at work, seeking care in off-hours when primary care offices are closed.

Business Case for Optimizing Health Benefits Options for Low-Income Workers

For many employers, low-income earners are part of a high-turnover workforce segment that is a low priority

Take-Away Points

Available evidence indicates that low-income workers use healthcare services in a more reactive manner relative to their higher-paid counterparts. As a result, these individuals may manifest lower overall health status, as well as comparatively greater medically related financial stress, along with accompanying reductions in workplace productivity. This paper provides a brief summary of the evidence and offers some considerations for employer actions, including:

- Analysis of healthcare utilization patterns and costs by employee wage band.
- Wage-based premium or deductible amounts.
- Health literacy and consumerism support targeted to this sub-population to facilitate more proactive use of healthcare resources.

during benefits planning.²² Perceptions of low cost-of-hire, readily available replacement workers, negligible training expenses, and low ongoing costs of employment—along with the seeming inevitability of turnover—have prompted some employers to understandably implement a cost-minimization strategy during benefits planning. In some industries, economic and other business concerns may justify this approach. However, employers in other industries may appreciate that richer employee benefits may enhance employee satisfaction, ultimately leading to greater retention²² and improved customer satisfaction as a result of more engaged employees.²³

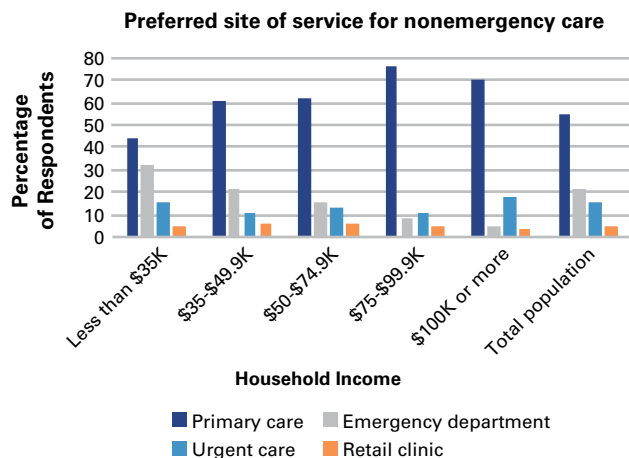
Additionally, individuals with chronic conditions may experience disease-specific productivity loss (absence and presenteeism) due to their illnesses.²⁴ Reduced medication adherence and use of healthcare services have also been shown to lower workforce performance and increase absenteeism²⁵; furthermore, stress due to personal financial concerns may contribute to reduced worker productivity.²⁶ When combined, these considerations may substantially increase the employer impact beyond healthcare costs alone, and serve to highlight the need to optimize the design of health benefits plans.

Low-Income Workers, Benefit Design Selection, and Consumer Engagement

Although the majority of employers have incorporated healthcare consumerism tools and resources, including decision support,²⁷ as part of an overall benefits strategy, knowledge of value-based benefits is more limited among low-income earners.²⁸ This subgroup spends less time in the benefits selection process, which may adversely impact informed benefits enrollment.¹³ As such, low-income earners generally gravitate toward lower-premium benefit options, likely as a means to preserve income for daily living expenses.¹⁴

We are unaware of any published studies assessing either the use or effectiveness of these offerings for low-income workers. Given the health literacy and consumer engage-

Figure 1. Insured Adults With Delayed or Avoided Care Due to Out-of-Pocket Cost¹⁵



Source: Collins SR, Rasmussen PW, Doty MM, Beutel S. Too high a price: out-of-pocket health care costs in the United States. Findings from the Commonwealth Fund Health Care Affordability Tracking Survey, September-October, 2014. *Issue Brief (Commonw Fund)*. 2014;29:1-11. Content used with permission from The Commonwealth Fund.

ment²⁹ gaps in this subpopulation, evaluation of the use of these services among low-income workers is warranted.

Problem-Solving: Employer Health Benefits Approaches to Low-Income Workers

Some employers have implemented an earnings-based premium structure as a tactic to mitigate the cost of these payments for low-income earners. Other proposed approaches to providing financial support to this subpopulation include scaled payments based on wage band, premiums as a percentage of annual wages, deductible amounts and/or out-of-pocket payments based on earnings or tenure-based contributions,^{30,31} and wage-based health account funding and timely employer deposits into those accounts.³² Yet, according to the Kaiser/Health Research & Educational Trust Employer Health Benefits 2014 Annual Survey, just 10% of employer respondents with 200 or more employees have implemented wage-based premiums and overall, only 1% of all US employers have adopted this tactic.³³

Despite the availability of wage-based financial subsidies for low-earning workers, information regarding the impact on healthcare utilization and cost is disappointingly lacking. A greater understanding of the magnitude and means by which financial subsidies are provided can provide a broader understanding of the optimal approach to most favorably influence individual health-

care utilization patterns across the breadth of employee wage band subgroups.

Nevertheless, financial support is not the only consideration influencing healthcare utilization behaviors of low-income workers. Health literacy, access to care, and consumer decision support resources also matter. As such, other considerations almost certainly influence the observed impact of subsidies for low-income workers, including demographic factors (family size, chronic condition prevalence, and local cost of living), baseline wages, and financial literacy. Notably, employer factors include the means by which subsidy information is communicated, particularly in relation to cultural and literacy differences in this low-income group.

Other options, including capitated or nominal cost worksite or near-site clinics,³⁴ have been shown to favorably impact healthcare utilization patterns among low-income workers. Additionally, telemedicine access to ambulatory care and prescription refills may also improve access to healthcare services for low-income workers, enabling them to remain at work and minimize potential wage loss incurred during transient work absence for community physician visits.

Policy Implications and Practical Considerations

Based on available information, healthcare utilization patterns of low-income workers appear significantly different than those of their higher-paid counterparts. Employers, especially those in industries with higher proportions of low-income employees, may want to better understand the impact of low-income workers on organizational healthcare and productivity costs, and incorporate relevant findings in their benefits strategy.

Although employers may have other available markers for SES, their ready access to wage data makes inclusion of this information in claims data analysis a reasonable first step in facilitating a greater understanding of previously unappreciated disparities in health benefits utilization and costs. Wage data may be a poor indication of household income for dual-career families or for individuals with multiple jobs, but inclusion of these data into employer claims can help to inform benefits strategy.

As such, earnings data should be included in employer benefits enrollee files for integration with medical and pharmacy claims data, either by the health plan or third-party data warehouse. Analysis should include population health profiles of the respective subpopulations, including condition prevalence, as well as healthcare utilization and costs, and compliance with evidence-based treatment as part of the mix. The resulting data can be used to incorporate refinements in employer benefits strategy.

Strategy development should take into consideration the value of improving health literacy and healthcare consumerism engagement relative to that provided by incremental changes in wage-based benefit contributions. Wage-based premiums or deductibles may be a reasonable tactical consideration, but, as noted, critical evaluation of the impact of this approach on low-income employee behaviors is lacking. Furthermore, this approach may be cost-prohibitive for employers—particularly those in retail or service industries—having a substantial population of low-income employees. To this end, to inform strategy development, employers should consider evaluating employee choice of benefit design options, healthcare utilization patterns, and overall healthcare costs for low-income earners in comparison to their higher-earning counterparts.

Lastly, employers may want to capitalize on existing employee benefits survey data to better understand the health benefits preferences of low wage earners in comparison to their more highly paid counterparts.

Conclusions

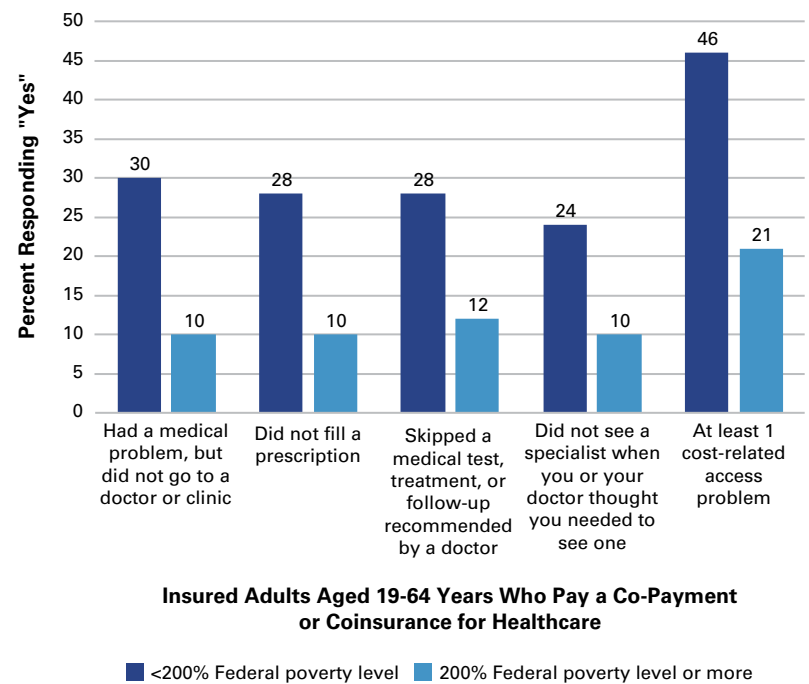
Until more data are available, it is admittedly difficult to determine an optimal approach; further research is clearly warranted. Recognizing and addressing, in the broadest sense, the health needs of this sub-population may ultimately generate greater employee engagement and productivity—a benefit to employers, employees, and the customers they serve.

Author Affiliations: Department of Medicine, Case Western Reserve University School of Medicine (BWS), Cleveland, OH; Buck Consultants, A Xerox Company (BWS), Cleveland, OH; Employers Health Coalition, Inc (BWS), Canton, OH; Lynch Consulting, Ltd (WDL), Steamboat Springs, CO; HMR Weight Management Services Corp (CA), Boston, MA.

Source of Funding: None.

Author Disclosures: Dr Sherman is consultant for Takeda, Sanofi, and AstraZeneca; and is the medical director, population health management for Buck Consultants RightOpt private health insurance exchange. He has previously received lecture fees for speaking at the invitation of a commercial sponsor (Merck and Abbvie), though non-product-related, and has attended conferences by the Integrated Benefits Institute, HERO, NBCH, and NBGH. Dr Lynch is a board member of MGC Diagnostics, and a consultant for meQuilibrium and UPMC; she has received honoraria from UPMC and lecture fees paid by meQuilibrium for IBI and NBGH; she also received payment for involvement in the writing and literature review for this manuscript. Dr Addy reports no relationship or financial interest with any entity that would pose a conflict of interest with the subject matter of this article.

Figure 2. Adult Preference for Healthcare Services Use for Non-emergency Conditions by Household Income¹⁰



Source: Understanding consumer health insurance preferences: consumer survey—spring 2015. FairHealth website. <http://www2.fairhealth.org/FHSurveySpring2015>. Published 2015. Accessed July 27, 2015. Content used with permission from FairHealth.

Authorship Information: Concept and design (BWS, WDL, CA); analysis and interpretation of data (BWS); drafting of the manuscript (BWS, WDL, CA); critical revision of the manuscript for important intellectual content (BWS, WDL, CA); administrative, technical, or logistic support (BWS).

Address correspondence to: Bruce Sherman, MD, 3175 Belvoir Blvd, Shaker Heights, OH 44122. E-mail: bruce.sherman@case.edu.

REFERENCES

- 2015 Employer Health Benefits Survey. Kaiser Family Foundation website. <http://kff.org/health-costs/report/2015-employer-health-benefits-survey>. Published September 22, 2015. Accessed December 19, 2015.
- Goodman JC. The employer mandate is having no effect on the percent with health insurance at work. *Forbes* website. <http://www.forbes.com/sites/johngoodman/2015/10/22/the-employer-mandate-is-having-no-effect-on-the-percent-with-health-insurance-at-work/#430b15913b23>. Published October 22, 2015. Accessed December 19, 2015.
- Planning for health care reform: how income impacts employee health benefits participation. ADP Research Institute website. <http://www.adp.com/tools-and-resources/adp-research-institute/research-and-trends/research-item-detail.aspx?id=%7BAAAF343EB-A-0FE-4EF7-A24F-0416B0FDB6B6%7D>. Published March 5, 2013. Accessed December 19, 2015.
- Wage statistics for 2014. Social Security Administration website. <https://www.ssa.gov/cgi-bin/netcomp.cgi?year=2014>. <https://www.ssa.gov/cgi-bin/netcomp.cgi?year=2014>. Accessed December 21, 2015.
- Centers for Disease Control and Prevention. CDC health disparities and inequalities report—United States, 2013. *MMWR Morbidity and Mortality Weekly Report*. 2013;62(suppl 3):1-187.
- National Center for Health Statistics. Health, United States, 2001. CDC website. <http://www.cdc.gov/nchs/data/hus/11.pdf>. Accessed December 20, 2015.

7. Shavers VL. Measurement of socioeconomic status in health disparities research. *J Natl Med Assoc.* 2007;99(9):1013-1023.
8. Berkowitz SA, Traore CY, Singer DE, Atlas SJ. Evaluating area-based socioeconomic status indicators for monitoring disparities within health care systems: results from a primary care network. *Health Serv Res.* 2015;50(2):398-417. doi: 10.1111/1475-6773.12229.
9. Breisacher BA, Gurwitz JH, Soumerai SB. Patients at-risk for cost-related medication nonadherence: a review of the literature. *J Gen Intern Med.* 2007;22(6):864-871.
10. Understanding consumer health insurance preferences: consumer survey—spring 2015. FairHealth website. <http://www2.fairhealth.org/FHSurveySpring2015>. Published 2015. Accessed July 27, 2015.
11. Cohen RA, Villarroel MA. Strategies used by adults to reduce their prescription drug costs: United States, 2013 [NCHS data brief No. 184]. CDC website. <http://www.cdc.gov/nchs/data/databriefs/db184.htm>. Published January 2015. Accessed July 27, 2015.
12. Schoen C, Radley D, Riley P, et al. Health care in the two Americas: findings from the scorecard on state health system performance for low-income populations, 2013. The Commonwealth Fund website. <http://www.commonwealthfund.org/publications/fund-reports/2013/sep/low-income-scorecard>. Accessed July 27, 2015.
13. Executive summary: 2015 Aflac workforces report. Aflac Incorporated website. https://www.aflac.com/docs/awr/pdf/2015-overview/2015_executive_summary.pdf. Published June 3, 2015. Accessed July 27, 2015.
14. Collins SR, Rasmussen PW, Beutel S, Doty MM. The problem of underinsurance and how rising deductibles will make it worse. findings from the Commonwealth Fund Biennial Health Insurance Survey, 2014. *Issue Brief (Commonw Fund).* 2015;13:1-20.
15. Collins SR, Rasmussen PW, Doty MM, Beutel S. Too high a price: out-of-pocket health care costs in the United States. findings from the Commonwealth Fund Health Care Affordability Tracking Survey, September-October, 2014. *Issue Brief (Commonw Fund).* 2014;29:1-11.
16. Socioeconomic status (SES) trial period. National Quality Forum website. <http://www.qualityforum.org/ProjectDescription.aspx?projectId=80124>. Accessed August 12, 2015.
17. Fitzpatrick T, Rosella LC, Calzavara A, et al. Looking beyond income and education: socioeconomic status gradients among future high-cost users of health care. *Am J Prev Med.* 2015;49(2):161-171. doi: 10.1016/j.amepre.2015.02.018.
18. Galbraith AA, Soumerai SB, Ross-Degnan D, Rosenthal MB, Gay C, Lieu TA. Delayed and forgone care for families with chronic conditions in high-deductible health plans. *J Gen Intern Med.* 2012;27(9):1105-1111. doi: 10.1007/s11606-011-1970-8.
19. Wharam JF, Zhang F, Landon BE, Soumerai SB, Ross-Degnan D. Low-socioeconomic-status enrollees in high-deductible plans reduced high-severity emergency care. *Health Aff (Millwood).* 2013;32(8):1398-1406. doi: 10.1377/hlthaff.2012.1426.
20. Strickland JR, Pizzorno G, Kinghorn AM, Evanoff BA. Worksite influences on obesogenic behaviors in low wage workers in St. Louis, Missouri, 2013-2014. *Prev Chronic Dis.* 2015;12:E66. doi: 10.5888/pcd12.140406.
21. Ham DC, Przybeck T, Strickland JR, Luke DA, Bierut LJ, Evanoff BA. Occupation and workplace policies predict smoking behaviors: analysis of national data from the current population survey. *J Occup Environ Med.* 2011;53(11):1337-1345. doi: 10.1097/JOM.0b013e3182337778.
22. Cascio WF. The high cost of low wages. *Harvard Business Review* website. <https://hbr.org/2006/12/the-high-cost-of-low-wages>. Published December 2006. Accessed December 19, 2015.
23. Bevan S. The business case for employees' health and wellbeing. The Work Foundation website. www.theworkfoundation.com/Reports/245/The-Business-Case-for-Employees39-Health-and-Wellbeing. Published February 28, 2010. Accessed December 19, 2015.
24. Goetzel RZ, Long SR, Ozminkowski J R, Hawkins K, Wang S, Lynch W. Health, absence, disability, and presenteeism cost estimates of certain physical and mental health conditions affecting U.S. employers. *J Occup Environ Med.* 2004;46(4):398-412.
25. Loeppke R, Haufle V, Jinnett K, et al. Medication adherence, comorbidities, and health risk impacts on workforce absence and job performance. *J Occup Environ Med.* 2011;53(6):595-604. doi: 10.1097/JOM.0b013e318223470b.
26. Kim J, Garman ET. Financial stress, pay satisfaction and workplace performance. *Comp & Benefits Rev.* 2004;36(1):69-76. doi: 10.1177/0886368703261215.
27. The Business value of a healthy workforce 2013/2014 Staying@Work Survey report [available only to NBGH members]. Washington, DC: National Business Group on Health and Towers Watson; 2014.
28. Henrikson NB, Anderson ML, Hubbard RA, Fishman P, Grossman DC. Employee knowledge of value-based insurance design benefits. *Am J Prev Med.* 2014;47(2):115-122. doi: 10.1016/j.amepre.2014.03.005.
29. Greenspun H, Thomas S, Scott G, Betts D. Health care consumer engagement: no "one-size-fits-all" approach. Deloitte website. <http://www2.deloitte.com/content/dam/Deloitte/us/Documents/life-sciences-health-care/us-dchs-consumer-engagement-healthcare.pdf>. Published October 2015. Accessed December 19, 2015.
30. Dan D. Benefits contribution strategies [available only to NBGH members]. Washington, DC: National Business Group on Health; 2010.
31. Dan D, Finch R, Harrison D, Kendall D. An employer's guide to reducing racial & ethnic health disparities in the workplace [available only to NBGH members]. Washington, DC: National Business Group on Health; 2011.
32. Goff V, Fournier M, Shebel B. Supporting low wage employees in a consumerism world [available only to NBGH members]. Washington, DC: National Business Group on Health; 2014.
33. 2014 Employer Health Benefits Survey. Kaiser Family Foundation website. www.kff.org/health-costs/report/2014-employer-health-benefits-survey. Published September 10, 2014. Accessed August 17, 2015.
34. Tao XG, Fagan PJ, LeNoach E, Hawkins M, Ross-Gavin M, Bernacki EJ. The relationship between a worksite wellness clinic and hospital emergency department visits. *J Occup Environ Med.* 2014;56(12):1313-1318. doi: 10.1097/JOM.0000000000000259. ■