

## EDITORIAL

# Understanding the Impact of Insurance Coverage Across the Cancer Care Continuum: Moving Beyond Fragmented Systems and Cross-Sectional Data to Inform Policy

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Understanding the impact of health insurance coverage on access to and quality of cancer care, as well as the implications for cancer outcomes, is critically important for informing practice and policy within the complex and changing health-care context. In this issue of the Journal, Yabroff et al. (1) conducted a systematic review of 29 studies, published between 1980 and 2019, evaluating health insurance coverage disruptions and cancer care and outcomes in the United States. They found coverage disruptions strikingly common across studies and associated with lower quality of care and poorer outcomes. This thorough synthesis of the literature is an important step toward understanding the role of continuity of health insurance coverage and points to the immense heterogeneity across studies, including variation in cancer sites studied, definitions of insurance disruptions, and periods of interest across the cancer care continuum. Their important review suggests a number of opportunities for improving measurement of continuity of coverage to inform improvements in cancer care delivery and quality.

Understanding the contributions of continuity of coverage and continuity of care to cancer outcomes is critical to informing policy and practice change, particularly those focused on specific transition points throughout the care continuum, including abnormal screening to diagnosis and diagnosis to treatment. For most adults younger than age 65 years, coverage is tied to employment, which may be impacted by a cancer diagnosis or the prescribed course of cancer treatment (2,3). For low-income adults younger than age 65 years and eligible for public coverage, changes in employment or income (own or family) can change eligibility for Medicaid or subsidized private coverage leading to insurance disruptions. In the general population, switching between insurance plans is common and associated with higher rates of new physician visits, as well as increased

emergency department visits for Medicaid patients, suggesting coverage disruptions can impact continuity of care even for those who do not become uninsured (4). Few studies to date have focused on insurance change or instability within the cancer context other than Freund et al. (5), who examined insurance history among women with abnormal cancer screenings pre- and post-Massachusetts Health Insurance Reform and found a nonstatistically significant but suggestive decline in insurance switches from 608 per 1000 women prereform to 479 per 1000 women postreform. Yabroff and colleagues (1) note that measurement of coverage disruptions varied widely across studies, including metrics of coverage gaps, timing, and duration. Consistent measurement of continuity of insurance coverage and disruptions will require linking longitudinal patient-level data across private payers and public programs. In a low-income breast cancer patient, for example, follow-up of abnormal screening and diagnosis claims could come from state-level breast and cervical cancer screening program data, whereas treatment claims could come from private insurance or Medicaid claims as seen in prior studies within individual states (6,7). This complexity due to the fragmented US health insurance system results in frequent coverage gaps and transitions that require a longitudinal examination of insurance status and experiences of care across different stages of the cancer continuum.

Despite substantial improvements in the proportion of adults in the general population who have insurance coverage under the Affordable Care Act (ACA), with overall uninsurance rates as low as 8%-12% in recent years, the majority of studies on the impact of the ACA and cancer focus on screening and stage at diagnosis and almost all rely on repeated cross-sectional data. For example, there is a growing literature providing evidence of increased rates of cancer screening (8-12)

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and a shift to earlier stage at diagnosis (13–16), suggesting positive effects of recent insurance expansions. A few emerging studies have examined the impact of the ACA on cancer treatment and quality, with inconsistent findings about timeliness (17) and receipt of treatment (18). In the systematic review by Yabroff and colleagues (1), only 4 studies looked at treatment-related outcomes, all using state-specific data, and of these, 3 covered a study period ending more than a decade ago, highlighting the lack of recent evidence on insurance coverage and quality of care.

There is a need to build partnerships between state programs and academic researchers (19) and leverage cross-state collaborations to fill a critical research gap and inform evidence-based policy and population-based outcomes for cancer. In particular, strengthening partnerships with state Medicaid programs to improve cancer care quality and outcomes among low-income populations, a segment that is more likely to experience disruptions in health insurance coverage and a disproportionate burden of cancer, is critical. Adapting current models of shared data analyses, such as those using methods for distributed research networks (20,21), to examine Medicaid data across states can also strengthen the evaluation of the impact of Medicaid policies on cancer. Ultimately, increasing capacity to link Medicaid and cancer registry data that extend beyond single states and single time points, similar to the Surveillance, Epidemiology, and End Results–Medicare linked database, is necessary to examine population-level cancer epidemiology and cancer health services research among nonelderly, vulnerable populations.

There is growing attention among researchers, providers, and policy makers to the impact of insurance on cancer care access, quality, and outcomes within the shifting and uncertain health-care financing and delivery landscape. Achieving “improved data infrastructure,” as proposed by Yabroff et al. (1), and conducting translational research to address cancer disparities (22) will require engagement of stakeholders beyond the field of cancer prevention and control. This includes building rapport and transparency within the public sector, including state Medicaid agencies and social service programs, and the private sector, including insurance companies and health-care organizations, to find shared interests for practice improvement and policy change. A learning health systems approach (23) that integrates the perspectives of medical care, public health agencies, and other social and economic sectors is needed to fully understand the longitudinal impact of insurance coverage and disruptions in insurance coverage across the cancer care continuum.

## Notes

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## References

1. Yabroff KR, Reeder-Hayes K, Zhao J, et al. Health Insurance coverage disruptions and cancer care and outcomes: systemic review of published research. *J Natl Cancer Inst*. 2020.
2. Bradley CJ, Bednarek HL, Neumark D. Breast cancer survival, work, and earnings. *J Health Econ*. 2002;21(5):757–779.
3. Bradley CJ, Neumark D, Luo Z, Schenk M. Employment and cancer: findings from a longitudinal study of breast and prostate cancer survivors. *Cancer Invest*. 2007;25(1):47–54.
4. Barnett ML, Song Z, Rose S, Bitton A, Cherner ME, Landon BE. Insurance transitions and changes in physician and emergency department utilization: an observational study. *J Gen Intern Med*. 2017;32(10):1146–1155.
5. Freund KM, Isabelle AP, Hanchate AD, et al. The impact of health insurance reform on insurance instability. *J Health Care Poor Underserved*. 2014;25(1A):95–108.
6. Koroukian SM, Bakaki PM, Htoo PT, et al. The breast and cervical cancer early detection program, Medicaid, and breast cancer outcomes among Ohio’s underserved women. *Cancer*. 2017;123(16):3097–3106.
7. Tsui J, DeLia D, Stroup AM, et al. Association of Medicaid enrollee characteristics and primary care utilization with cancer outcomes for the period spanning Medicaid expansion in New Jersey. *Cancer*. 2019;125(8):1330–1340.
8. Cooper GS, Kou TD, Dor A, Koroukian SM, Schluchter MD. Cancer preventive services, socioeconomic status, and the Affordable Care Act. *Cancer*. 2017;123(9):1585–1589.
9. Hendryx M, Luo J. Increased cancer screening for low-income adults under the Affordable Care Act Medicaid expansion. *Med Care*. 2018;56(11):944–949.
10. Huguet N, Angier H, Rdesinski R, et al. Cervical and colorectal cancer screening prevalence before and after Affordable Care Act Medicaid expansion. *Prev Med*. 2019;124:91–97.
11. Sabik LM, Tarazi WW, Hochhalter S, Dahman B, Bradley CJ. Medicaid expansions and cervical cancer screening for low-income women. *Health Serv Res*. 2018;53(suppl 1):2870–2891.
12. Wright BJ, Conlin AK, Allen HL, Tsui J, Carlson MJ, Li HF. What does Medicaid expansion mean for cancer screening and prevention? Results from a randomized trial on the impacts of acquiring Medicaid coverage. *Cancer*. 2016;122(5):791–797.
13. Han X, Yabroff KR, Ward E, Brawley OW, Jemal A. Comparison of insurance status and diagnosis stage among patients with newly diagnosed cancer before vs after implementation of the patient protection and Affordable Care Act. *JAMA Oncol*. 2018;4(12):1713–1720.
14. Han X, Xiong KZ, Kramer MR, Jemal A. The Affordable Care Act and cancer stage at diagnosis among young adults. *J Natl Cancer Inst*. 2016;108(9):djw058.
15. Lissenden B, Yao NA. Affordable Care Act changes to Medicare led to increased diagnoses of early-stage colorectal cancer among seniors. *Health Aff (Project Hope)*. 2017;36(1):101–107.
16. Soni A, Simon K, Cawley J, Sabik L. Effect of Medicaid expansions of 2014 on overall and early-stage cancer diagnoses. *Am J Public Health*. 2018;108(2):216–218.
17. Takvorian SU, Oganisian A, Mamtani R, et al. Association of Medicaid expansion under the Affordable Care Act with insurance status, cancer stage, and timely treatment among patients with breast, colon, and lung cancer. *JAMA Netw Open*. 2020;3(2):e1921653.
18. Eguia E, Cobb AN, Kothari AN, et al. Impact of the Affordable Care Act (ACA) Medicaid expansion on cancer admissions and surgeries. *Ann Surg*. 2018;268(4):584–590.
19. Heller DJ, Hoffman C, Bindman AB. Supporting the needs of state health policy makers through university partnerships. *J Health Politi Policy Law*. 2014;39(3):667–677.
20. Adams L, Kennedy S, Allen L, et al. Innovative solutions for state Medicaid programs to leverage their data, build their analytic capacity, and create evidence-based policy. EGEMS (Wash DC). 2019;7(1):41.
21. Curtis LH, Brown J, Platt R. Four health data networks illustrate the potential for a shared national multipurpose big-data network. *Health Aff*. 2014;33(7):1178–1186.
22. Martin DN, Lam TK, Brignole K, et al. Recommendations for cancer epidemiologic research in understudied populations and implications for future needs. *Cancer Epidemiol Biomarkers Prev*. 2016;25(4):573–580.
23. Mays GP, Scutchfield FD. Improving population health by learning from systems and services. *Am J Public Health*. 2015;105(S2):S145–S147.