Trends in Enrollment in Employer-Sponsored Health Insurance in the US Before and During the COVID-19 Pandemic, January 2019 to June 2021

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Introduction

Employer-sponsored health insurance (ESI) covers approximately 160 million US individuals. Decreased employment during the COVID-19 pandemic may have led to loss of ESI. We assessed trends in ESI coverage among members of a large group of US health plans.

Methods

This cross-sectional study analyzed data from a group of US commercial health plans operating in 50 states for members from large and small employers who were enrolled between January 1, 2019, and June 30, 2021. We defined enrollment as the number of eligible members enrolled in a plan at any

![Figure. Trends in Commercial Insurance Coverage From January 2019 to June 2021]

The inset has a curtailed y-axis to better show decreases in enrollment during the COVID-19 pandemic period. Increases in January represent new enrollees at the beginning of a calendar year.

<table>
<thead>
<tr>
<th>Table. Adjusted Change in Enrollment Over Time</th>
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<tbody>
<tr>
<td>2019</td>
</tr>
<tr>
<td>January to March</td>
</tr>
<tr>
<td>Enrollmentc</td>
</tr>
<tr>
<td>44,081 (43,939 to 44,223)</td>
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</tbody>
</table>

- a Compares the April to December 2020 period with the prepandemic baseline (January 2019 to March 2020).
- b Compares the January to June 2021 period with the prepandemic baseline (January 2019 to March 2020).
- c Cell values represent enrollment at the hospital referral region-month level.

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point in each month. The unit of analysis was at the hospital referral region (HRR)–month level. The University of Pennsylvania institutional review board declared the study exempt and waived informed consent owing to use of deidentified historical data. We followed the STROBE guideline.

We analyzed COVID-19–associated changes in overall enrollment during 2020 and 2021 vs 2019 using a linear model with month and HRR fixed effects. Covariates included age, self-reported sex, Elixhauser comorbidity index, income, and educational level (latter 2 identified using American Community Survey data [matched by zip code]). We defined January 1, 2019, to March 31, 2020, as the pre-COVID-19 period and April 1 to December 31, 2020, and January 1 to June 30, 2021, as exposure periods. We analyzed enrollment trends in prespecified demographic (sex), location (urban vs rural), employer size (small vs large [<500 vs ≥500 employees]), and geographic (Medicaid expansion vs nonexpansion state) groups. To compare enrollment trends across subgroups, we used separate models indexing absolute enrollment numbers in preexposure and exposure periods as the ratio to enrollment in December 2019 and using subgroup × exposure period interaction terms. We conducted a sensitivity analysis focusing on main subscribers of the plan. Two-sided \( P < .05 \) was significant. Analyses were conducted using Stata MP, version 14.1.

**Results**

The sample included more than 18 million unique individuals (mean [SD] age, 33.6 [19.2] years; 49.8% female; 50.2% male; 3.1% lived in a rural domicile). There were no significant differences in baseline characteristics across periods. Overall enrollment was 13,346,213 in January 2019, 14,083,411 in January 2020, 13,586,944 in December 2020, and 13,359,615 in June 2021, a decrease of 723,796 members (5.1%) from January 2020 to June 2021 (Figure). Mean adjusted monthly enrollment per HRR decreased from 45,852 before COVID-19 to 44,851 during the 2020 COVID-19 period (adjusted change, −1258; 95% CI, –1504 to –1011) and to 44,516 during the 2021 COVID-19 period (adjusted change, −1968; 95% CI, –2204 to –1733). Decreases were disproportionately greater among females and members with small employers. We did not observe meaningful differences in urban vs rural subgroups. Results of the sensitivity analysis were consistent.

**Discussion**

Enrollment in ESI decreased by 723,796 members throughout the COVID-19 pandemic period and did not recover to pre-COVID-19 levels by mid-2021, consistent with previous evidence of decreased insurance coverage early in the pandemic estimated by studying 2021 trends and heterogeneity in enrollment decreases in the commercially insured population. Our findings have 3 implications. First, ESI coverage decreased even as US unemployment decreased from 14.7% in April 2020 to 6.7% in December 2020. Second, coverage losses were higher among individuals working for small employers, reflecting the pandemic’s disproportionate effects on small business employment. Third, female members had greater enrollment decreases, consistent with evidence of decreases in the female labor force during the pandemic. Study limitations include the focus on a continuously enrolled, commercially insured population, which prevented measurement of changes in enrollment trends across other commercial plans, and the inability to attribute disenrollment to job loss vs voluntary withdrawal. By limiting to continuously participating employers, we were unable to measure employers that went out of business during the pandemic. Given that enrollment decreased through 2021, examination of the pace of commercial insurance enrollment in 2022 is critical.
Enrollment in Employer-Sponsored Health Insurance Before and During the COVID-19 Pandemic

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Author Contributions: Dr Parikh and Ms Zhao had full access to all of the data in the study and take responsibility for the integrity of the data and the accuracy of the data analysis.

Concept and design: Parikh, Navathe, Zhao, Emanuel.

Acquisition, analysis, or interpretation of data: Parikh, Zhao, Pagnotti, Emanuel.

Drafting of the manuscript: Parikh, Navathe, Zhao, Pagnotti.

Critical revision of the manuscript for important intellectual content: Parikh, Navathe, Zhao, Emanuel.

Statistical analysis: Parikh, Navathe, Zhao.

Obtained funding: Parikh.

Administrative, technical, or material support: Parikh, Navathe, Emanuel.

Supervision: Navathe, Emanuel.

Conflict of Interest Disclosures: Dr Parikh reported receiving grants from the National Institutes of Health, the Prostate Cancer Foundation, the National Palliative Care Research Center, the NCCN Foundation, the Conquer Cancer Foundation, Humana, the Emerson Collective, and the Veterans Health Administration; receiving personal fees and equity from GNS Healthcare, Inc, Thyme Care, and Onc.AI; receiving personal fees from the Cancer Study Group, Biofourmis, Humana, and NanOlogy; receiving honoraria from Flatiron, Inc, and Medscape; having unpaid board membership at the Coalition to Transform Advanced Care and the American Cancer Society; and serving on an unpaid leadership consortium at the National Quality Forum, all outside the submitted work. Dr Navathe reported receiving grants from the Hawaii Medical Service Association, the Commonwealth Fund, the Robert Wood Johnson Foundation, the Donaghue Foundation, the Pennsylvania Department of Health, the Veterans Health Administration, Ochsner Health System, United Healthcare, Blue Cross and Blue Shield of North Carolina, Blue Shield of California, and Humana; receiving personal fees from Navvis Healthcare, Nava Health Equity, the Yale-New Haven Health Services Corporation’s Center for Outcomes Research and Evaluation, MaineHealth Accountable Care Organization, the Singapore Ministry of Health, Elsevier Press, the Medicare Payment Advisory Commission, Cleveland Clinic, Analysis Group, VBID Health, Advocate Physician Partners, the Federal Trade Commission, and Catholic Health Services Long Island; and having uncompensated board membership at Clarify Health Equity and Integrated Services, Inc, outside the submitted work. Dr Emanuel reported being an uncompensated guest speaker for AIFA Italian Medicines Agency, the Rainbow PUSH Coalition, the Infectious Diseases Society of America, VinFuture, Brown University, the Organization for Economic Co-Operation and Development, the 21st Population Health Colloquium, the American Academy of Arts and Sciences, the University of Sydney, Tel Aviv University, Virta Health, the American Philosophical Society, the Health Action Alliance, the University of California, San Francisco, the Association of Bioethics Program Directors, the Icahn School of Medicine, the University of Minnesota, the International Society for Priorities in Health Conference, and the Faith Health Alliance Project; receiving personal fees from RISE Health, the Galien Foundation, WellSky, Rightway, Signature Healthcare Foundation, Healthcare Leaders of New York, MedImpact, the Massachusetts Association of Health Plans, the Philadelphia Committee on Foreign Relations, Yale University, Hawaii Medical Service Association, and The Queen’s Health System; receiving personal fees and travel fees from Princeton University, the Association of Academic Health Centers in Bethesda, Maryland, and Macalester College; receiving travel fees from the Oak CEO Summit in New York, New York; being an uncompensated moderator for the American Academy of Political & Social Science; being an unpaid board member and serving on an external advisory board for VillageMD; being an unpaid board member of Oncology Analytics; being a founding partner of COVID-19 Recovery Consulting LLC and Embedded Healthcare LLC; being a venture partner of Oak HC/FT; serving on the board of advisors of Cellares and Notable; being an advisory board member of the HIEx Health Innovation Exchange partnership (sponsored by UN Geneva), JSL Health Fund, and the Peterson Foundation; serving on the internal advisory board of the Colton Center for Autoimmunity at Penn; being an expert advisory member of the World Health Organization (WHO) COVID-19 Ethics & Governance Working Group; and being a special advisor to the Director General of the WHO, all outside the submitted work. No other disclosures were reported.

Additional Contributions: We thank the data sponsor for access to the data and technical assistance.
REFERENCES


