

A Denial a Day Keeps the Doctor Away:

Estimations Readme

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We provide some of the key state-level estimates produced in Dunn et al. (2024). We provide regression-adjusted indices and unadjusted means of τ . We introduce τ in Dunn et al. (2024) to quantify revenue losses for physicians due to billing hassle, expressing a visit's CIP as a share of the visit's value. Equation (2) in the paper formally defines τ . We also provide regression-adjusted indices and unadjusted means of claim denial rates. Additionally, we provide the number of physician visits underlying the state-level estimations (rounded to the nearest 1,000, respectively the nearest 100 for Alaska). This allows the creation of US-wide averages using the state-level estimates.

The provided indices of τ correspond to the τ indices described in equations (6) and (10). One version includes physician fixed-effects accounting for heterogeneity among physicians. In constructing the other version, we apply a Heckman selection correction to account for selection into treating Medicaid patients. These indices do not include estimations for commercial insurers because we chose commercial insurers as the excluded category which the indices are relative to.

The unadjusted estimates of τ are those presented by Dunn et al. (2024) in Panels (b), (d) and (f) of Figure (5). These estimates illustrate the average share of claim values, which physicians effectively lose during the process of collecting the revenue from an insurer. These unadjusted estimates of τ can also be used to replicate the US-wide averages of τ for each payer presented in the third column of table (5). Calculating a weighted average of unadjusted τ across states with the number of physician visits in each state used as weights will yield these estimates.

We also provide state-level estimations of claim denial rates, describing the share of claims which are denied. The denial rate index is described in equation (7) and includes physician fixed-effects. This index also does not include estimations for commercial insurers because we chose commercial insurers as the excluded category which the index is relative to.

The unadjusted state-averages of denial rates are obtained by calculating the mean denial rates for different insurers across states. Formally, we do this by calculating the mean of d_j , used as the dependent variable in equation (7), for state-insurer pairs including Medicaid, Medicare, and Commercial insurers.

References

Dunn, Abe, Joshua D. Gottlieb, Adam Hale Shapiro, Daniel J. Sonnenstuhl, and Pietro Tebaldi, “A Denial a Day Keeps the Doctor Away,” *Quarterly Journal of Economics*, February 2024, 139 (1), 187–233.