

From: B. D. Fulton et al., “Market Concentration Variation of Health Care Providers and Health Insurers in the United States,” *To the Point* (blog), Commonwealth Fund, July 30, 2018.

Appendix

This appendix discusses the data and methods used in the blog post “Market Concentration Variation of Health Care Providers and Health Insurers in the United States”. The data sources and the geographic and product definitions for hospitals, specialist physicians, primary care physicians, and insurers are based on “Health Care Market Concentration Trends in the United States: Evidence and Policy Responses,” published in *Health Affairs*.¹

To estimate market concentration, we used the Herfindahl-Hirschman Index (HHI) because it is often used by the Antitrust Division of the U.S. Department of Justice and Federal Trade Commission.² The HHI is calculated by squaring the market shares of each firm competing in a market and summing those values across all firms, resulting in a range from 0 to 10,000. To classify markets into different concentration categories, we began with the HHI thresholds defined in the agencies’ *Horizontal Merger Guidelines*: unconcentrated (HHI < 1,500), moderately concentrated (1,500 ≤ HHI ≤ 2,500), and highly concentrated (HHI > 2,500).² However, because many provider and insurer MSAs were highly concentrated (HHI > 2,500), we created a new category called “super concentrated”, resulting in the following classifications: unconcentrated (HHI < 1,500), moderately concentrated (1,500 ≤ HHI < 2,500), highly concentrated (2,500 ≤ HHI < 5,000), and super concentrated (HHI ≥ 5,000).

The hospital, specialist physician, and primary care physician HHIs were combined into one provider HHI using a weighted mean HHI based on each provider type's relative share of U.S. health care expenditures, which is a measure of economic activity and is the weighted mean HHI facing insurers and consumers. To estimate the provider weights, we started with 2016 U.S. health spending estimates from the Office of the Actuary at the Centers for Medicare and Medicaid Services (CMS), which breaks out expenditures for hospitals (\$1,082.5 billion) and physician and clinical services (\$664.9 billion), but does not distinguish between primary and specialty care.^{3,4} A recent study by Bailit and colleagues estimated primary care's share of total medical spending among commercially-insured, non-elderly enrollees.⁵ When all services and payment types were included, primary care accounted for 7.7 percent and 8.6 percent of total medical spending for PPO and HMO patients, respectively, so for our analysis we assumed 8 percent. To arrive at a primary care spending estimate, we presumed hospital care, professional services (except dental), home health care, prescription drugs, and durable medical equipment were covered by commercial health insurance in the Bailit study.⁵ These categories accounted for \$2,311.4 billion in U.S. expenditures,³ of which, we estimated that \$184.9 billion (or 8%) was for primary care. We assumed specialist physician organizations accounted for \$480.0 billion, or the remainder of the physician and clinical services total. Therefore, we used the following percentage weights for the \$1,747.4 billion in expenditures accounted for by hospitals (61.9%), specialist physicians (27.5%), and primary care physicians (10.6%).

Only MSAs with less than 3 million population in 2016 were included, because MSAs greater than that size are likely to include more than one market.⁶ This reduced the number of MSAs from 382 to 364. The final sample included 363 MSAs because of missing data for one MSA.

Notes

- ¹ Fulton, Brent D. 2017. “Health Care Market Concentration Trends in the United States: Evidence and Policy Responses.” *Health Affairs* 36 (9):1530-1538.
- ² U.S. Department of Justice and Federal Trade Commission. 2010. *Horizontal Merger Guidelines*. Washington, DC.
- ³ Hartman, Micah, Anne B Martin, Nathan Espinosa, Aaron Catlin, and National Health Expenditure Accounts Team. 2017. “National Health Care Spending in 2016: Spending and Enrollment Growth Slow After Initial Coverage Expansions.” *Health Affairs* 37 (1):150-160.
- ⁴ Centers for Medicare and Medicaid Services. 2017. *National Health Expenditure Accounts: Methodology Paper, 2016: Definitions, Sources, and Methods*. Baltimore, MD: Centers for Medicare and Medicaid Services.
- ⁵ Bailit, Michael H, Mark W Friedberg, and Margaret L Houy. 2017. *Standardizing the Measurement of Commercial Health Plan Primary Care Spending*. New York, NY: Milbank Memorial Fund.
- ⁶ Gaynor, Martin, Kate Ho, and Robert J. Town. 2015. “The Industrial Organization of Health-Care Markets.” *Journal of Economic Literature* 53 (2):235-284.