

RELATION OF COMMON LABORATORY SERVICE PRICES TO SETTING OF CARE

ALICIA DURAN, MHA; LAURA NASUTI, MPH, PhD; DAVID AUERBACH, PhD



INTRODUCTION

Growing prices for health care services are the biggest driver of commercial health care spending.¹ Unlike in most other countries (and in Medicare and Medicaid programs), prices paid to providers in the U.S. private coverage market are determined via negotiations between individual insurers and health care providers. As a result, commercial prices reflect relative negotiating leverage of a given insurer versus a given provider and not necessarily the underlying costs of care, resulting in higher prices in the U.S. For example, the median price of an MRI scan is \$1,432 in the U.S. but \$452 in the U.K.²

Prices for common laboratory services represent a salient example of these different approaches. They are a commodity, often without discernible differences in quality, and can be delivered at low cost. Yet when provided in hospitals, their prices are subject to the same insurer-provider negotiations wherein dominant hospitals can extract high prices due to their “must have” status in most commercial networks. Medicare pays the same amount for laboratory services regardless of provider or provider type. Thus, variation in prices relative to Medicare tells us about relative and variable market leverage by providers and is informative for policy discussions whereby commercial prices might be limited.

OBJECTIVES

To understand price levels of commodity-like services in Massachusetts, the Massachusetts Health Policy Commission (HPC) developed a market-basket price index to evaluate commercial laboratory price levels across providers in hospital outpatient departments (HOPDs), provider offices, and independent laborato-

ries, and relative to Medicare pricing. Because many of the factors that influence the price of health care services are interrelated, the HPC also used multiple regression analysis to establish the relationship between commercial prices and setting of care and determine the relative contributions of each factor.

STUDY DESIGN

Using the Massachusetts All-Payer Claims Database, the HPC constructed an analytic file at the procedure code-encounter level. The total cost (“price”) for an encounter was the sum of claim lines (professional and facility) for the same person, on the same day, and for the same laboratory procedure. If an encounter had more than two claim lines it was excluded from the study (e.g., a glucose tolerance test with multiple readings on one day). Encounters were restricted to all laboratory services occurring at the settings of interest and excluded emergency department visits, observation stays, and inpatient stays. The study included Massachusetts residents with commercial insurance who received a laboratory service in 2020. Service providers were not restricted to Massachusetts.

The HPC adapted a 50-item Laspeyres price index defined as the aggregate sum of the average price of each service times a quantity (derived from the state

utilization rate in 2018). Values were imputed using the statewide mean price for providers with fewer than 20 service encounters for any individual procedure code and were not included if more than 20 procedure codes would need to be imputed. The services included had the highest aggregate spending in Massachusetts in 2018 and occurred with at least 15% of service volume in each setting of care. Individual provider organizations were the primary unit of analysis, and the analysis reported on Medicare pricing and consumer cost-sharing.

The regression model estimated the relationship between the price of a laboratory service encounter and setting of care, controlling for hospital cohort, procedure code (the same 50 laboratory services included in the price index), and patient age, sex, and Adjusted Clinical Groups (ACG) risk score.

RESULTS

Exhibit 1. Total cost of a fixed laboratory services market basket, including cost-sharing, among Massachusetts providers in 2020

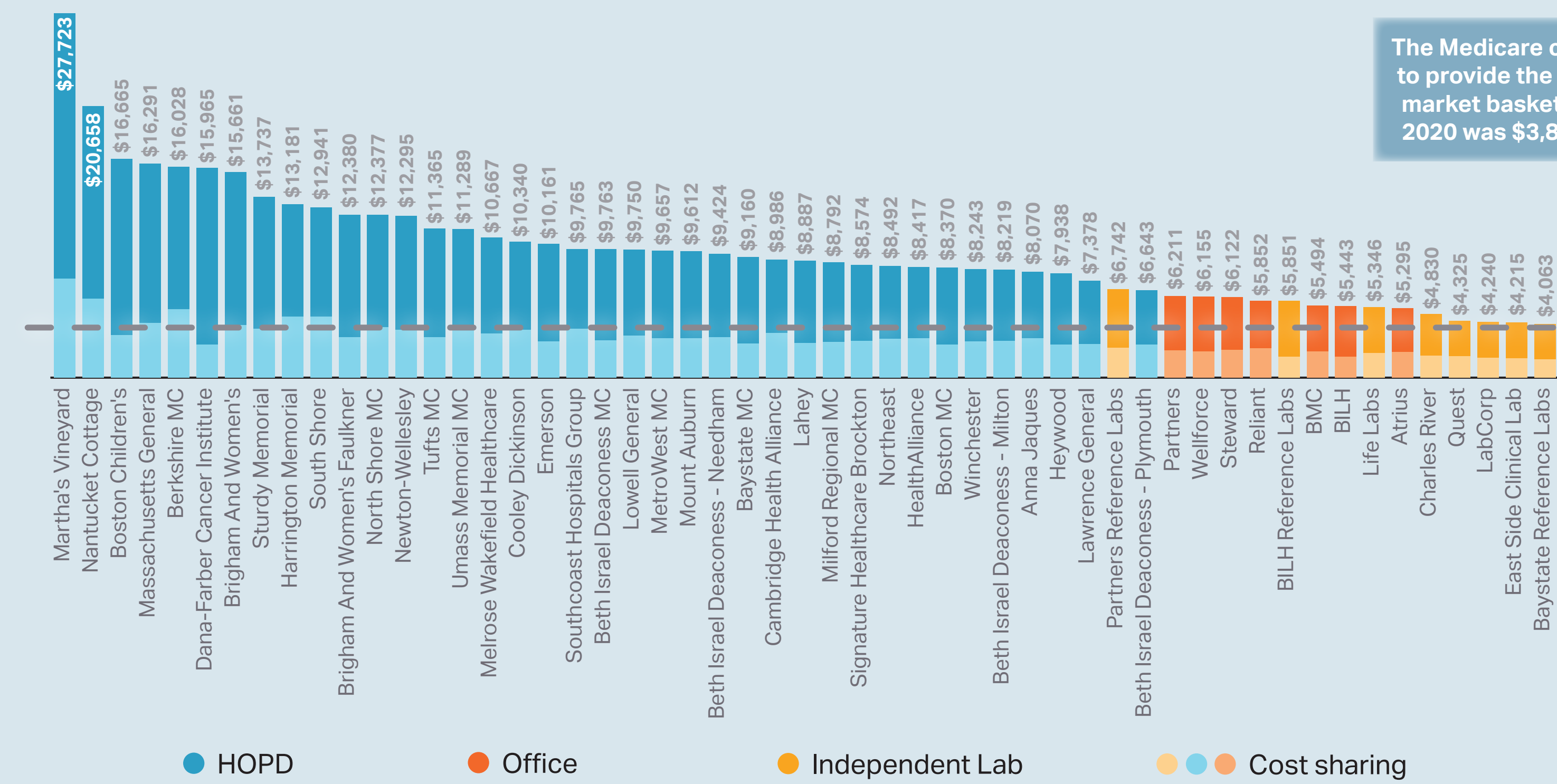


Exhibit 2. Dollar amount difference in the cost of a laboratory service encounter relative to the omitted group, 2020

SETTING (relative to provider offices)	Independent Lab	HOPD		
Independent Lab				
HOPD	-\$4.59	\$19.78		
COHORT (relative to community hospitals)	Teaching	Community-HPP		
Teaching	-\$6.52			
Community-HPP	-\$2.39			
Specialty		\$20.44		
RELATIVE TO MALE	Female			
Female	-\$0.08			
RISK SCORE (relative to ≤1)	>1 & ≤2	>2 & ≤5	>5	
>1 & ≤2	\$0.54	\$0.68	\$0.41	
>2 & ≤5				
>5				
AGE (relative to 0-17)	18-34	35-54	55-64	65+
18-34	-\$2.27	-\$1.99	-\$1.81	-\$1.93
35-54				
55-64				
65+				

The price index accounted for 32.2% of statewide laboratory spending and 44.8% of laboratory volume in 2020. The statewide cost of the basket in 2020 was \$8,120 (i.e., the total amount paid for the 50 services to an average provider for 100 average residents), while the Medicare cost was \$3,810. The HPC observed a 6.9-fold variation in the index across providers, with the highest prices in HOPDs (\$11,512 on average) and the lowest in independent laboratories (\$4,849 on average) (Exhibit 1). Higher total prices also translated to higher consumer cost-sharing.

The average price of a laboratory service encounter in the sample was \$29.53. The regression model confirmed that HOPDs charge higher prices than provider offices and independent laboratories, charging on average \$19.78 more than provider offices, all else being equal (Exhibit 2). Among HOPDs, the type of hospital had a large effect on price: specialty hospitals charged an additional \$20.44 and academic medical centers (AMC) charged an additional \$8.04 for a laboratory service encounter compared to community hospitals (Exhibit 2). Lastly, it was observed that patient age, sex, and risk score had a small effect on price, confirming the assumption that laboratory services are commodity-like.

CONCLUSIONS

The analyses revealed wide variation in prices for commodity-like services across settings of care and between HOPDs and Medicare pricing. The price index revealed that HOPDs charge higher prices for the same 50 lab services than provider offices and independent laboratories. This relationship was confirmed by the regression model. Likewise, the regression model showed that among HOPDs the type of hospital where care is received affects the price of a laboratory service encounter greatly, reflecting negotiating leverage among specialty hospitals and academic medical centers.

POLICY IMPLICATIONS

High and variable prices drive additional problems in the health care system, including unaffordable health care premiums and out-of-pocket costs, under-provision of relatively low-priced services, and adverse effects on health equity. Price regulation can help realign prices with the cost of providing care and incentivize investment in lower-priced services such as primary care. Measuring price levels is an essential first step to identifying excessive prices and defining a price benchmark for limiting high prices.

CONTACT

Alicia Duran, MHA, Research Analyst
Research and Cost Trends, Health Policy Commission
alicia.duran@mass.gov

Laura Nasuti, MPH, PhD, Director
Research and Analytics, Health Policy Commission
laura.j.nasuti@mass.gov

David Auerbach, PhD, Senior Director
Research and Cost Trends, Health Policy Commission
david.auerbach@mass.gov

www.mass.gov/HPC



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