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In Reference to: “Cost and Utility of Thrombophilia Testing”

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The article by Petrilli et al.¹ points to the important but complicated issue of ordering laboratory testing for thrombophilia despite multiple guidelines that dispute the clinical utility of such testing for many indications. We question the basis of these authors' assertion that Medicare spends \$300–\$672 million for thrombophilia testing annually. They arrived at this figure by multiplying the price of a thrombophilia test panel (between \$1,100 and \$2,400) by the number of annual Medicare claims for thrombophilia analysis which they estimated at 280,000. The price of the panel is derived from two papers: (1) a 2001 review² that lists prices of various thrombophilia-related tests adding up to \$1,782, and (2) a 2006 evaluation by Somma et al.³ of thrombophilia screening at one hospital in New York in 2005. The latter paper refers to various thrombophilia panels from Quest Diagnostics with list prices ranging from \$1,311 to \$2,429. However, the repertoire of available test panels and their prices have changed over the last decade. The cost evaluation of thrombophilia testing should be based on actual current payments for tests, and not on list prices for laboratory offerings from over a decade ago. Several laboratories offer mutational analysis of three genes—*F5*, *F2* and *MTHFR*—as a thrombophilia risk panel. Based on the Current Procedural Terminology (CPT) codes listed by the test suppliers (81240, 81241, and 81291), the average Medicare payment for the combination of these three markers in 2013 was \$172.⁴ A broader panel of several biochemical, immunological and genetic assays had a maximum Medicare payment in 2015 of \$405 (Table 1).⁵

Also, the annual number of Medicare claims for thrombophilia evaluation was not documented by Petrilli et al. In support of the estimate of 280,000 Medicare claims for thrombophilia testing in 2014, the authors cite Somma et al.,³ but that paper referred to 275,000 estimated new venous thromboembolism cases in the United States, not the number of claims for thrombophilia testing for all payers, let alone for Medicare. In 2013, Medicare expenditures for genetic testing of the three markers that could be identified by unique CPT codes (*F2*, *F5* and *MTHFR*) amounted to \$33,235,621.⁴ This accounts only for DNA

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analysis, not the functional testing of various components of blood clotting cascade, which may precede or accompany genetic testing.

In conclusion, the cost evaluation of thrombophilia screening is more challenging than the calculation by Petrilli et al. suggests. Even if Medicare paid as much as \$400 per individual tested, and assuming up to 200,000 individuals underwent thrombophilia testing per year, the aggregate Medicare expenditure would have been no more than roughly \$80 million. Thus, the estimated range in the article appears to have overstated actual Medicare expenditures by an order of magnitude. This does not take away from their overall conclusion that payers are burdened with significant expenditures for laboratory testing that may not present clinical value for many patients.⁶ We need research into the patterns of utilization as well as improvements in documentation of expenditures associated with these tests.

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Table 1

Medicare prices of individual codes used for billing for LabCorp Thrombotic Risk Assessment panel

CPT code	2015 Medicare Price (National limit)
81240	\$67.03
83090	\$22.98
85300	\$16.15
85303	\$18.84
85306	\$20.88
85307	\$20.88
85420	\$8.90
85613	\$13.05
85732	\$8.81
86146(x3)	\$103.98
86147(x3)	\$103.98
Total	\$405.48

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