

## Correspondence

### Response: Re: Estimating the Cardiovascular Disease Risk Reduction of a Quality Improvement Initiative in Primary Care: Findings from EvidenceNOW

*To the Editor:* In a comment regarding our recent publication,<sup>1</sup> Young states that the phrase “[cardiovascular disease] risk reduction would (...) avoid \$150 million in 90-day direct costs” was misleading because our calculations did not include intervention costs.<sup>2</sup>

We would like to respond to his comment:

1. We disagree that the statement was misleading because we did not refer to total costs savings of the initiative. We reported this cost reduction as the implied reduction in direct medical costs only due to the estimated atherosclerotic cardiovascular disease (ASCVD) events. Specifically, we wrote: “A recent study estimated that the average direct 90-day medical cost of a major cardiovascular event was \$47,433. Thus, the prevention of 3,169 ASCVD events would save approximately \$150 million in direct medical costs.” (p. 5) These sentences make it clear that we simply multiplied the number of events (3,169) with associated costs (\$47,443) to obtain an estimate of medical costs avoided. By removing the context of these calculations in his response to our article, Young creates the impression that our statement was misleading in the first place when instead it was rather precise.
2. Our study was not a cost-effectiveness study. Right at the beginning of the abstract, we describe the objective of this study as to estimate “reductions in 10-year atherosclerotic cardiovascular disease (ASCVD) risk associated with EvidenceNOW (...) that sought to improve cardiovascular preventive care” (p. 1). Similarly, in the introduction we describe the objective of this study to “estimate overall reductions in atherosclerotic cardiovascular disease (ASCVD) risk (defined as nonfatal myocardial infarction, coronary heart disease death, or fatal or non-fatal stroke) that might be expected from improvements in the ABCS brought about by the external support of EvidenceNOW cooperatives” (p. 2). ABCS of cardiovascular preventive services are Aspirin prescribing for high-risk patients, Blood pressure control for people with hypertension, Cholesterol management, and Smoking screening and cessation counseling. We did not mention the term “cost-effectiveness” in our study because that was not its objective.
3. A cost-effectiveness study would need to assess the full costs and benefits of the initiative. We agree with Young that a proper cost-effectiveness study would need to assess the full costs of the intervention. However, it is also important to consider the full effects of an initiative. The Second Panel on Cost-Effectiveness in Health and Medicine defines effects as “health outcomes, such as cases of disease prevented, years of life gained, or quality-adjusted life-years.”<sup>3</sup> Arguably, the benefits of the preventive care interventions studied in our report extend beyond ASCVD events avoided. For instance, there is a large societal cost of strokes and heart attacks that we did not consider in our estimate. Conducting a proper cost-effectiveness analysis is difficult and complicated, and we refer interested readers to the cost-effectiveness literature on preventive care for cardiovascular diseases.<sup>4-7</sup>
4. It is well documented that routine preventive care is not a driver of high healthcare costs in the United States. Young also asserts that “Americans must accept the realities of costs and outcomes that every healthcare system in every other developed country understand. Most often, an ounce of prevention costs a ton of money.” We find this statement peculiar because there is no evidence that an overabundance of routine preventive care, such as the ABCS, are a driver of high healthcare costs in the U.S. According to a recent JAMA publication that compared potential factors of spending in the United States to those of 10 other high-income countries, the U.S. spent 3 percent of total national health expenditures on preventive care, comparable to Germany, Sweden, Denmark and Japan, and less in terms of share of total national health expenditures than the United Kingdom and Canada.<sup>8</sup> Instead, the study found that “prices of labor and goods (...) appeared to be the major drivers of the difference in overall costs between the United States and other high-income countries,” consistent with a previous influential study on that topic.<sup>9</sup> Even in the scenario that preventive care can be expensive, there is no doubt that it also results in significant healthcare savings related to long-term complications and adverse sequelae. To make claims about preventive care being responsible for high healthcare costs is simply inaccurate.

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9. Anderson GF, Reinhardt UE, Hussey PS, Petrosyan V. It's the prices, stupid: why the United States is so different from other countries. *Health Affairs* 2003 May;22: 89–105.

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## References

1. Lindner SR, Balasubramanian B, Marino M, et al. Estimating the cardiovascular disease risk reduction of a quality improvement initiative in primary care: findings from EvidenceNOW. *J Am Board Fam Med* 2023;36:462–76.
2. Young RA. Re: Estimating the cardiovascular disease risk reduction of a quality improvement initiative in primary care: findings from EvidenceNOW [letter to the editor]. *J Am Board FamMed* 2023;36:xxx.
3. Sanders GD, Neumann PJ, Basu A, et al. Recommendations for conduct, methodological practices, and reporting of cost-effectiveness analyses: second panel on cost-effectiveness in health and medicine. *JAMA* 2016;316:1093–103.
4. Franco OH, Der Kinderen AJ, De Laet C, Peeters A, Bonneux L. Primary prevention of cardiovascular disease: cost-effectiveness comparison. *Int J Technol Assess Health Care* 2007;23:71–9.
5. Mitchell AP, Simpson RJ. Statin cost effectiveness in primary prevention: a systematic review of the recent cost-effectiveness literature in the United States. *BMC Res Notes* 2012;5:1–6.
6. Moran AE, Odden MC, Thanataveerat A, et al. Cost-effectiveness of hypertension therapy according to 2014 guidelines. *N Engl J Med* 2015;372:447–455.
7. Gaspoz JM, Coxson PG, Goldman PA, et al. Cost effectiveness of aspirin, clopidogrel, or both for secondary prevention of coronary heart disease. *N Engl J Med* 2002; 346:1800–1806.
8. Papanicolaos I, Woskie LR, Jha AK. Health care spending in the United States and other high-income countries. *JAMA* 2018;319:1024–1039.