

with prosthetic valve endocarditis (PVE), they found a significant reduction in mortality, both during hospital stay and at 1-year follow-up, in patients undergoing surgical treatment compared with those not surgically treated. However, their data analysis adjusted the results for propensity score and survivor bias,<sup>4</sup> contrary to the results of other mostly observational studies.

The data obtained in our study are complementary to these earlier studies of Lalani et al.<sup>3,4</sup> When we analyzed different types of endocarditis, the reduction in mortality with surgical treatment was very significant in native valves (23.3% vs 41.2%;  $P=.003$ ) but not significant for prosthetic valves (35.7% vs 43.6%;  $P=.47$ ), especially in early PVE. We believe that these results reflect the complexity and frequent complications of PVE as compared with native valve endocarditis, even when surgical treatment is performed. Certainly, the experience of the surgical team strongly influences the prognosis and differences in outcomes observed among centers. Therefore, the different centers and transferred patients were included as covariates in our analysis to build the propensity model of surgical treatment with the intention to balance these potential differences, which could behave as confounders.

Regarding the performance of transesophageal echocardiography in all patients, although that is desirable, it does not correspond to clinical reality because it is usually performed to rule out suspected perivalvular complications in patients with PVE in whom transthoracic study results are inconclusive.<sup>5</sup> In our series, transesophageal echocardiography was performed in 63.3% of the surgically treated patients and in 47.8% of the medically treated patients in the overall cohort ( $P<.001$ ). These differences were balanced in the propensity score—matched and survivor bias cohorts (47.8% vs 54.4%;  $P=.82$ ). The

size of the vegetation did not influence in-hospital mortality in our cohort as shown in the multivariate predictive model for mortality (Supplemental Table 1 in our article).<sup>1</sup>

The answer to what is the optimal time for surgical treatment of infective endocarditis could only be answered if we had proper clinical trials applicable to other populations that include patients with native and prosthetic endocarditis with heart failure and perivalvular complications, but such a study would be difficult to organize and complete. Meanwhile, we will have to decide on best patient management on a case-by-case fashion, with treatment plans supported by the best available evidence and clinical experience and executed by a multidisciplinary team of experts.<sup>6</sup>

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## Electronic Cigarettes Are Efficacious

**To the Editor:** Regarding the pair of smoking cessation articles published in the October 2014 issue of *Mayo Clinic Proceedings*, neither the original article<sup>1</sup> nor the accompanying editorial<sup>2</sup> addressed the utility of electronic cigarettes, thereby invalidating all conclusions therein...except for emphasizing the generic importance of translational research.

Specifically, the methodology employed in the article and the analysis thereof in the editorial eschewed any citation of “vapes,” which have quickly justified having earned a solid position in the antitobacco armamentarium; consider one conservatively phrased commentary:

E-cigarettes, with or without nicotine, were modestly effective at helping smokers to quit, with similar achievement of abstinence as with nicotine patches, and few adverse events. Uncertainty exists about the place of e-cigarettes in tobacco control, and more research is urgently needed to clearly establish their overall benefits and harms at both individual and population levels.<sup>3</sup>

Indubitably, use of electronic cigarettes reduces the risk of serious illness caused by inhalation of tobacco smoke, as documented in hundreds of articles compiled by one of the authors of this letter (W. T. G., Executive Director of Smokefree Pennsylvania).<sup>4</sup> Indeed, the only quasi-justifiable—albeit unproven—concern is whether they could become gateways for adolescents and others to become smokers. Thus, a reasonable area of study would be whether—just as pharmacological and counseling

initiatives can yield multiplicatively beneficial effects—the combination of using electronic cigarettes with other approaches could yield outcomes superior to all other reported interventions.

Another component of this challenge is reflected in the fact that only 4.8% of patients received the most effective therapy in the study by Kotz et al<sup>1</sup>; noting the capacity of “markets” to allow consumers to choose what is most desired (in England, regardless of whether the government sponsors specialized clinics), analysis of further interventions could easily conclude that patients could successfully “kick the habit” by choosing to follow a self-motivated pursuit of electronic cigarettes, a novel modality that—absent governmental interference—could continue to burgeon in popularity.

Regardless of what intervention is chosen, Hays properly advocated that it be conducted under the aegis of a support system (physician, physician extender, and/or clinic); this is how plans can be effectively reformulated. For example, improper use often leads to ineffectiveness of nicotine gum; when smokers keep chewing after the addiction urge has passed, they may experience nausea and/or headaches from nicotine overdose (as this neurotransmitter continues to be released from the resin following mastication). Similarly, the efficacy of nicotine patches may be dose related.

Some may perceive the electronic cigarette omission merely as a benign procedural oversight; yet, electronic cigarette advocates often encounter ill-advised, real-world political implications of such unjustified glitches. For example, despite our well-documented and unrefuted testimonies,<sup>5</sup> Philadelphia passed 2 ordinances that essentially equated using vapes with tobacco smoking.

Consider the stridency of a conclusion drawn from another smoking cessation study: “Unsubstantiated overt

and implied claims that alternative tobacco products [such as electronic cigarettes] aid smoking cessation should be prohibited.”<sup>6</sup> Such crass attempts to suppress colloquy are antithetical to the tenets of the scientific discourse; condemnation thereof corroborates the recommendation—shared with the authors of both of these *Mayo Clinic Proceedings* articles—that further, intelligent, “efficacious” research be aggressively pursued...wherever it may lead.

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## In reply—Electronic Cigarettes Are Efficacious

We appreciate the interest Dr Sklaroff and Mr Godshall take regarding our article<sup>1</sup> on the effectiveness of smoking cessation treatments used in the “real world.” However, their letter does not appear to be a critical response to our article but rather a general statement

in favor of more research on the use of electronic cigarettes.

The aim of our study was to assess the real-world effectiveness of aids to smoking cessation that are commonly prescribed or recommended by clinical guidelines.<sup>2,3</sup> These aids include prescription medication (nicotine replacement therapy, bupropion, or varenicline) and behavioral support but not electronic cigarettes. Thus, electronic cigarettes were simply outside the scope of our study. Furthermore, we used data from respondents to an English household survey in the years 2006 to 2012, and the proportion of smokers reporting current electronic cigarette use was still very low (less than 5%) at that time.<sup>4</sup>

We agree, however, that electronic cigarettes have gained popularity and that more research is needed on their safety and effectiveness. We therefore assessed, in a different study, the effectiveness of electronic cigarettes when used to aid smoking cessation in the English population and found that the use of electronic cigarettes was associated with higher abstinence than use of nicotine replacement therapy bought over the counter or no aid to cessation.<sup>5</sup>

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