In Response

Aspirin Prophylaxis in Diabetes Mellitus

To the Editor:

We read with great interest the recent article by Nguyen et al. The prescription for an aspirin a day to patients with diabetes mellitus is an important preventive intervention and is recommended by the American Diabetes Association. It is also a benchmark for quality of care for people with diabetes. As such, assessment of the provision of aspirin as primary prevention in patients with diabetes mellitus (DM) is a worthwhile endeavor, especially when attempting to study this on a national level.

The article reports on data from the National Ambulatory Medical Care Survey (NAMCS) that the proportion of patients with diabetes and cardiovascular risk factors “given ASA [aspirin] for primary prevention” was between 2% and 5%. These numbers are startlingly low, definitely suggest room for improvement, and most importantly are dramatically lower than numbers reported by other studies that used patient reports of aspirin use. Unfortunately, we have concerns about the accuracy and utility of the numbers reported by Nguyen et al., particularly in light of several methodologic issues inherent in their design.

Our first concern is that use of the NAMCS may not be the best method for assessing the use of over-the-counter medicines among patients with chronic disease. The NAMCS is visit based, not population based or patient based. For evaluations of chronic disease management, it is useful to examine utilization or treatment throughout a year rather than focusing on what may happen in the context of one visit. Therefore the authors’ main conclusion, “We found that only 3.5% of all patients with DM, ages 30 years or more, with at least one CV risk factor received ASA primary prevention therapy in the United States from 1997–2000,” doesn’t reflect the sampling design. The results suggest that aspirin was prescribed or recommended for primary prevention in 3.5% of all visits for patients with diabetes, a number that may not represent use by all patients with diabetes. Further, because the use of aspirin as primary prevention does not require a prescription, this service would fall more in the realm of health habit counseling and may not be well captured in the medications section of the NAMCS survey form. The NAMCS likely underestimates health habit counseling, especially for extracted data.

A second concern is that the data appear to have been inappropriately analyzed. The NAMCS, as the authors note, utilizes a multistage probability design that involves probability samples of primary sampling units (PSUs), physician practices within PSUs, and patient visits within practices. Because the NAMCS is not a simple random sample, to produce estimates and rates, a generalized variance curve or special software such as SUDAAN must be used. The authors used SAS software, and while they used a “patient visit weight,” this is unlikely to have yielded a correct estimate without the use of the appropriate statistical software.

We commend Nguyen et al. for focusing on the important question of quality of care for patients with diabetes. However, we feel that the current findings may unjustifiably represent extremely poor quality of care. Improving care is a goal for us all, but having an accurate baseline for improvement is a critical ingredient in moving forward.

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**References**


**Authors’ Response:**

We appreciate the opportunity to respond to the letter of Mainous et al. The purpose of our research was NOT to provide exact or precise point estimates or variances. The purpose of our research was to describe associations, odds ratios, and trends. The National Hospital Ambulatory Medical Care Survey (NHAMCS) database uses a complex sample design. However, not accounting for the impact of the complex sample design can lead to an underestimate of the sampling variance associated with an estimate. So while standard software packages such as SAS (SAS Institute, Inc) can generally produce an unbiased weighted survey estimate, it is quite possible to have an underestimate of the precision of such an estimate when using one of these packages to analyze survey data. Again, since we were looking at associations, and our sample size is 3 million visits, the variability in any precision is neither clinically nor statistically relevant.

The NAMCS record contains a single weight, which is called Patient Visit Weight. The same is true for Emergency Department records, such as we used for our study. The weight is used for both visits and drug mentions. The National Center for Health Statistics (NCHS) has provided curve coefficients from generalized variance curves, such as we used, which researchers use to calculate standard errors. Only recently have masked design variables been available for public use. This was because of confidentiality issues with the data. According to the Centers for Disease Control, “A method for calculating variances for NAMCS and NHAMCS estimates, which does not require using SUDAAN or similar software, is to use a generalized variance curve as described in the public-use file documentation.”

Again, we are not stating prevalence rates or precise estimates, only associations and trends between variables. Empirical evaluations (using national survey data such as the Current Population Survey and the National Health Interview Survey) have shown little difference in the estimates of the variance using the different approaches.

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**Reference**


**Another Use of Papaya as a Teaching Model**

**To the Editor:**

How timely that Family Medicine published the article “Papaya: A Simulation Model for Training in Uterine Aspiration” in the same month that the New Yorker carried Jerome Groopman’s piece “Can You Simulate a Medical Education?” As teachers of manual vacuum aspiration (MVA) for completion of missed abortion and for elective terminations, we too have discovered distinct advantages to using papaya models as simulators to introduce residents to MVA training. While we have looked at expensive pelvic models on exhibit at medical meetings, we have found the papayas to be a more affordable alternative for our urban residencies on a limited budget.

MVA simulation allows trainees to become familiar with the name, order, and handling of the instruments, as well as the sterile “no touch” technique, before performing a procedure on a woman. Using the papaya models allows us to instruct first-time trainees aloud and allows the trainee to ask questions during the procedure, without the constraints of patients’ ears or the pressures of patient discomfort and/or the need to complete the procedure quickly.

Papayas realistically simulate much of the anatomy and manual feel of the uterine aspiration procedure. We have our trainees work through the constraints of a speculum that is held around the soft papaya neck, which represents the cervical os. They are able to dilate through the neck of the papaya into the central seed cavity, which has a resistance and give similar to the uterus. After inserting the cannula and applying the aspirator, they are then able to see seeds being evacuated under suction. In adding the training on the papaya prior to actual MVAs, we have noticed that trainees are more comfortable, skilled, and quicker with transitions during the procedure, allowing them to begin the important (but challenging) step of interacting with the patient at the same time.

MVA simulation training with papayas as models has become a valuable component of our reproductive health procedure training of family medicine residents in New York City. In addition, it offers an excellent hands-on way to introduce the MVA technique during family medicine interest group sessions or at Medical Students for Choice meetings. We agree that simulated training for procedures improves