afford to pay more (or pay anything) for their angiography or bypass surgery? How well are they served by the system? In Canada, we consider everyone with the clinical indications for coronary angiography or bypass surgery worthy of having the procedure, regardless of income.

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References

Reply
Aday et al. (1) have defined access as those dimensions that describe the potential and actual, or realized, entry of a given population into the health care delivery system. Access to health care depends on many factors, such as race, culture, geographic location, financial and insurance status. For numerous reasons, equal access for all citizens to health care services in the United States has not yet been achieved. Kafka appropriately points out some of the differences between the Canadian and the U.S. health care systems and the fact that Canadians have "chosen" to emphasize access to primary care for all its citizens, apparently at the expense of "prolonged" waiting times for highly technical procedures. Certainly these issues must be addressed (as emphasized by Ryan [2]). How long a wait is too long? Are there negative consequences of too long a wait? Should the procedure in question be performed in the first place? However, I think that the fundamental issue is more a reflection of societal priorities. Do we as a society value health care services for all our citizens? Do we provide the financial resources so that all members of society, regardless of financial or insurance status, have access to primary and tertiary care in a timely manner? Canada has certainly taken a more committed role in universal access than has the United States. When the issue of what constitutes excessive waiting times are determined, it will be interesting to see whether or not Canadians will be willing to provide the financial support needed to develop and maintain a rapid-access primary and tertiary care system. For now, until we in the United States decide whether or not health care is a priority, the debate on how best to reform our health care system will continue with more unanswered questions than productive change.

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References

Reuse of Balloon Catheters for Coronary Angioplasty

We congratulate Plante et al. (1) for their study in which they compared the outcome of balloon angioplasty in two institutions, with and without the strategy of reusing balloon catheters. We believe that some differences in the results are related to differences in the strategy of balloon dilation. It is evident from the report that in the reuse center, a small balloon (smaller than the size of the artery) was used to predilate the artery initially. This technique explains the difference in the number of balloon catheters used to dilate a single lesion: 2.4 in the reuse center and only 1.2 in the single-use center. The performance of a reused balloon is not as good as that of a new balloon. However, this fact does not explain the observed difference between centers and the number of balloons per lesion. In 90% of patients at the reuse center the lesion was crossed with the first attempted balloon catheter, yet 2.3 balloons were used on average per lesion in these patients. Whether small-sized reused balloons were used initially to ensure crossing of severe narrowings or whether predilation was the preferred strategy regardless of reuse is not clear.

At our institution 5,676 angioplasty procedures were performed over the past 10 years. During this period we were routinely using reused balloons, guiding catheters and accessory kits. Our reuse protocol is very similar to that described in the current report. We recently reported our results in a consecutive series of 2,069 angioplasty procedures (2). A mean of 1.54 lesions were dilated per patient. We used an average of 1.95 balloons/patient (1.27 balloons/lesion); the number of balloons used per lesion is very similar to that reported from the single-use center. Each balloon was used an average of two times; thus, for each patient approximately one new and one reused balloon were used. Operators at our institution are free to choose a new balloon whenever they believe that crossing the lesion might be difficult or whenever high risk angioplasty is performed.

On the basis of our experience, we believe that angioplasty can be safely performed with selective use of a reused balloon. Insofar as cost calculations are concerned, the cost of a single balloon is not as important as the cost of the total number of balloons used per dilated lesion. For example, balloon cost per lesion dilation will be greater in centers that use 2.4 balloons/lesion with an average of three reuse cycles compared with those that use 1.2 balloons/lesion with an average of one reuse cycle. The difference is the cost of two reuse cycles.

A randomized study is needed to examine the safety and cost-effectiveness of reusing balloons. Three groups should be compared: 1) no reuse; 2) wide use of reused balloons with predilation of severe lesions with small balloons; and 3) selective use of reused balloons.

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References
Reply

In response to Rozenman and Gotsman regarding our recent report (1) on the reuse of angioplasty balloon catheters, I would like to add these comments. In the reuse center, the average number of catheters used per lesion was two times higher, even if 90% of the lesions were successfully crossed with the first-attempted balloon catheter. As stated in our report, this difference may be attributable to the poorer performance of reused catheters as well as to the dilation strategy used when balloon costs are reduced. Some operators at the reuse center used progressive balloon size dilatation because they believed that it was a safer technique. In many instances, others preferred to approach severe stenoses with small-sized reused balloons because they knew from experience that the chances of crossing those lesions with balloon catheters matching the vessel diameter were decreased.

Rozenman et al. (2) recently reported the results of 2,069 angioplasty procedures performed with reused material, with a mean of 1.54 lesions dilated per patient and 1.95 angioplasty balloon catheters used per patient, which represents 1.27 angioplasty balloon catheters/lesion, a number very similar to that for the single-use center in our report. However, in their practice, each catheter was reused only once, which means that 50% of the catheters were new. In our report, however, new catheters were used as a first balloon in only 24 lesions, and the average number of reuse cycles was 5.2. Furthermore, the average number of dilated lesions per patient was higher in the Rozenman et al. report than in ours (1.54 vs. 1.25). This fact partly explains why their average number of catheters per lesion was reduced because one catheter (reused or not) can often be used in the same patient to dilate coronary segments of similar diameter.

I agree with Rozenman and Gotsman that a randomized trial is needed to assess the safety and the cost-effectiveness of the reuse practice. However, I do not believe that reusing angioplasty material offers any direct advantages to patients. Therefore, in the setting of a randomized trial, would patients agree to be randomized?

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