We read with interest the article published in this issue of Anesthesiology by Orkin et al. reporting on factors influencing retirement decisions by American anesthesiologists. The study employed a cross-sectional survey of anesthesiologists aged 50–79 yr, using a survey design to evaluate the decision matrix of retirement. Significant findings included: (1) retirement age has increased; (2) part-time work increased with age; and (3) modifiable factors such as health, professional satisfaction, and on-call responsibilities were drivers of retirement. The issues presented by Orkin et al. provide the framework for a broader discussion relating to the baby-boomer generation of anesthesiologists who are redefining the choice architecture of retirement.

Since the devastating impact of inaccurate estimates on demand for anesthesia services by the Abt survey,‡ which precipitated a shortage of anesthesiologists, our profession has made increasingly more sophisticated estimates of both the labor supply and demand for anesthesia services, as can be seen in the 2010 RAND Corporation's Technical Report: An Analysis of the Labor Markets for Anesthesiology§ cited by Orkin et al. The proclamations based on the Abt survey have been a “lesson learned” about the limitations of any workforce survey and how the assumptions inherent to the model and their functional relationship to empirical reality can quickly lose relevancy. The rationale for the Orkin study was set in the context of a predicted shortage of anesthesiologists by RAND and a brief summary of RAND and how the landscape has changed has merit.

The RAND study modeled a range of growth in demand for anesthesia services (proxied by the demand for surgery) from a baseline of 1.6–3% per year and predicted a nationwide shortage of anesthesiologists unless the rate of physicians entering the workforce exceeded their supply–demand break-even point of 2.76%. Table 1 summarizes selected factors that have changed, or are likely to change, since RAND was performed. It is reasonable to surmise that RAND, based on 2006–2007 data, may lack relevance in 2012 and that the precision of their projections may be suspect. This premise is supported by a number of “soft-signs” indicative of a constriction in the shortage of anesthesiologists (e.g., decreased demand for anesthesiologists by recruiting agencies), which may represent simple variation or are indeed precursors of a fundamental shift in the workforce.

The matrix for retirement decisions is complex and dynamic, as evidenced by the seemingly innumerable theories attempting to model and predict trends in retirement. The evidence from Orkin et al. suggests anesthesiologists are working longer (the retirement age increased from 57 yr, before 1985, to 64 yr for those retiring from 1995 to 1999), and it is plausible that anesthesiologists are now retiring even later.

Classic labor economic theory focuses on the “disutility” of labor and posits that workers will retire when the gains from work no longer outweigh the desire for “leisure.” The decision to retire becomes a dynamic function of the desire for one’s current level of consumption and the financial needs of future consumption. Not inherent in these models is the utility one can derive from a satisfying career where work has intrinsic value to an individual’s...
psychological immune system (mechanisms that protect against negative emotions). Psychological theories on retirement recognize that workers may find personal reward in a career and that self-identification with work may be a driver to postpone retirement. The decision to retire is a complex amalgam of many competing factors, many of which were included in the survey of Orkin et al. and are summarized in figure 1. Some of these factors are modifiable and allow for retention of workers such as anesthesiologists.

In the concluding paragraph, Orkin et al. raise the specter of a troubling issue, “fitness for duty” of the aging workforce. Their assertion encompasses the concern of the well-documented inverse relationship between age and cognitive performance. The Senior Surgeons Study reported that the percentage of surgeons who performed as well as their younger counterparts aged 45–59 on cognitive tests declined from 78% for ages 60–64 yr to 22% for a 75–79-yr cohort. Although professional development and experience should enhance a physician’s performance, regrettably there is corroborating information that purport judgment and the clinical ability of physicians decline over time. Cognitive decline is not unique to physicians, and our profession need not go down the path of the airline industry with mandatory retirement for pilots. A physician’s competence, performance, and wisdom, and not an arbitrary age, should be the standard to determine whether the end-of-career physician should continue to practice. However, some have proposed that age be considered a risk factor for competence and special monitoring be considered for all physicians aged over 65 yr.

The science of human factors is relatively new to organized medicine and encompasses the interactions between humans and the elements of a system, and broadly defined includes cognitive function. Set in the context of established concerns for end-of-career anesthesiologists, Orkin et al. correctly highlight factors that should be addressed by our

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### Table 1. Determinants of Supply and Demand for Anesthesiology Services That Have, or Are Expected to Change, Since the RAND Study

<table>
<thead>
<tr>
<th>Increase demand</th>
<th>Decrease demand</th>
<th>Increase supply</th>
<th>Decrease supply</th>
<th>Unknown</th>
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<tbody>
<tr>
<td>• Aging of baby boomers and associated surge in population disease burden.</td>
<td>• Transient decline in demand due to the economic downturn of 2008.</td>
<td>• Filled entry-level residency positions have increased by 150.</td>
<td>• The Affordable Care Act, which biases graduate medical education toward primary care.</td>
<td>• Evolving generational values regarding work/life balance.</td>
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<tr>
<td>• Increased access to care as a result of the Affordable Care Act.</td>
<td>• Increased prevalence of part-time or intermittent-time work with changing sex demographics.</td>
<td>• The economic downturn and delayed retirement due to financial uncertainty.</td>
<td>• Increasing role of anesthesiologists in perioperative medicine.</td>
<td>• New payment and delivery models as a result of Healthcare Reform.</td>
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<tr>
<td>• Increased role of anesthesiologists in perioperative medicine.</td>
<td>• Unknown</td>
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**Fig. 1.** Retirement decision matrix.
profession to meet the need for anesthesiologists with a workforce of the highest quality. The authors have identified several areas for consideration. First, is workplace wellness, which integrates health-management strategies and incentives that promote health and wellness of the “employee” as part of an organizational structure. Although there is a sound business case for wellness programs, to date such programs have been relatively sparse in medicine. With the emerging trend that physicians are now being hired by hospitals and the prevalence of “mega” group practices, there is an opportunity for growth in workplace-wellness programs in alignment with the business and quality case for such programs.

Second, regards a flexible work schedule as a “bridge to retirement” (e.g., part-time work, no call). Part-time work is becoming an increasingly important component in several segments of the anesthesiology workforce. The ability to retain the end-of-career anesthesiologist may in fact hinge on the capacity of a practice to provide a flexible work option even while the economic impact is complicated given that overhead may not be commensurately scaled to the work contribution. Practices will likely find that retention of workers seeking more flexibility in their work schedules requires an adjustment in the definition of “part-time.” This may mean, for example, adjusting call responsibilities for the end-of-career anesthesiologist. Finally, we would like to offer one other potential solution—information technology. In the future, point-of-care decision analysis could supplement, but not replace, human cognitive abilities such as executive function and memory—regardless of age.

The challenges for the end-of-career anesthesiologist transitioning to retirement are significant, and the encompassing issues are important for our specialty and the public. The Orkin study is timely and raises many important issues for which the solutions are complex. Whether or not a shortage of anesthesiologists is realized, it seems clear that the healthcare landscape is changing and we must be prepared to act to best provide for our patients and our profession. To quote Warren Buffet’s Noah rule, “Predicting rain doesn’t count; building arks does.” Although there will continue to be many unanswered questions, our specialty should take concerted steps to actuate a comprehensive solution regarding the end-of-career anesthesiologist. Two actions that constitute a beginning would be for the American Society of Anesthesiologists to provide education on the business and quality return on investment for local wellness programs, a template for implementation of wellness programs for health systems and large practice groups, and education and options on how best to transition the end-of-career anesthesiologist to retirement. We applaud Orkin et al. for a well-done study that raises the profile of several important, although controversial, issues that are not unique to our specialty.

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References