

administration, had such assessments been made. The degree of spontaneous recovery at the time of reversal has repeatedly been shown to be a major determinant of successful timely reversal. Studies such as those by Kim *et al.*² and Kirkegaard *et al.*³ clearly demonstrate the critical importance of spontaneous recovery and form the basis for current recommendations to administer reversal only after a TOF count of 4 has been achieved.⁴ These studies, and current recommendations for clinical practice, are based on monitoring of the adductor pollicis. As there were no simultaneous assessments of the TOF response at both sites, this explanation remains speculative in our data.

Dr. Caruso mentions that depending on intensity of the block, reversal may take up to 50 min. Such a delayed reversal is rare if TOF-monitoring is used at the adductor pollicis to guide the appropriate administration of neostigmine. We believe that the administration of neostigmine earlier than approximately 10 min before anticipated extubation is not optimal. This is because peak effect of neostigmine's inhibition of anticholinesterase is achieved by 10 min.⁵ We agree with Dr. Caruso that before extubation, optimal management would include the objective assessment of neuromuscular function, and extubation should be deferred until residual paralysis is not detected. If the TOF-ratio has not reached 0.90, 10 min after neostigmine administration, it is unlikely that this is the result of delayed administration of neostigmine. Rather, the explanation is more likely to be that the sufficient spontaneous recovery was not achieved before administration of neostigmine. When discussing about earlier administration of reversal, at deep levels of block and using qualitative monitoring, Kopman *et al.*⁶ stated that this practice "places the patient at risk and the anesthetist in the dark". Early administration of neostigmine will prolong the postreversal amount of time with a TOF-ratio in the range 0.4–0.9 and a TOF-count of 4 without fade (referred to as the "zone of blind paralysis" by Plaud *et al.*⁴) and will not shorten the time to full reversal.⁷ An additional disadvantage of too early administration of neostigmine is that the patient will not have the benefit of maximal effect (*i.e.*, maximal acetylcholinesterase inhibition) at time of extubation.^{5,8}

Accomplishing full reversal of paralysis is often challenging but more likely to be successful if guided by published data on administration of neostigmine after assessment of TOF-monitoring at the adductor pollicis. We therefore completely agree with Dr. Donati who wrote the editorial accompanying our report: "In practice, reversal and recovery should be guided by adductor pollicis response, and if needed, a switch from facial to ulnar nerve stimulation should be accomplished at the end of the surgical procedure."⁹

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Is 64 the New 57? Probably Not!

To the Editor:

In their interesting and important report of a national survey of older anesthesiologists, Orkin *et al.*¹ note that "Retirement age has been increasing, from a mean age of 57.4 yr among anesthesiologists who retired before 1985 to 63.9 yr among those who retired in the period 1995–1999 ($r = 0.28$; P value less than 0.001)." The title of the accompanying editorial² asks "Is 64 the New 57?"

We believe that the retirement age of only 57 yr, reported for those who retired before 1985, is most likely incorrect. The survey included only physicians who were aged 50–79 yr in the spring of 2006; that is, anyone who would have been older than 58 yr in 1985 was excluded from the sample population. So, no surprise that for those doctors in the surveyed group, who had retired before 1985, the mean age was 57.4 yr. Clearly, a broader sample population, which included anesthesiologists up to 90 yr of age, would be needed to estimate retirement age more accurately for those who retired before 1985.

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- Turner JA, Cole DJ: Baby boom or bust ... Is 64 the new 57? *ANESTHESIOLOGY* 2012; 117:931–3

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In Reply:

Steinbrook and Weinstein pose a legitimate question regarding the precise validity of the finding reported by Orkin *et al.*¹ that the mean age of retirement for anesthesiologists who retired before 1985 was 57. We defer to Orkin *et al.*¹ for clarifying their methodology and the validity of their finding.

Whether the precise mean age for retirees before 1985 was 57 or modestly different, the more important question remains whether or not the American public will face a future shortfall (or surplus) in the workforce of anesthesiologists. After a long decline over the past century, the trend of participation in the workforce by older Americans began increasing in the 1980s.[†] Anesthesiologists are only one group among many for whom this trend appears to hold true. As with workers in other professions, increased longevity as well as economic factors—including less reliable pension plans and the recession of 2008—have compelled an increasing number of older anesthesiologists to re-evaluate their retirement plans. But as we point out in our editorial, the push and pull toward retirement is only part of the larger question regarding workforce supply and demand among anesthesiologists.

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Reference

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In Reply:

We are gratified that Drs. Steinbrook and Weinstein have read our article¹ in such a depth that they question as “most likely incorrect” our estimate for the mean retirement age (57.4 yr) among anesthesiologists retiring before 1985. Although their conclusion appears valid—because no one older than 58 in

Table 1. Characteristics of Retirement Cohorts among Respondents to 2006 Survey of Anesthesiologists Aged 50–79

Retirement Cohort	Number of Retirees	Retirement Age (Mean)
Before 1985	7	57.4
1985–89	53	58.3
1990–94	91	62.3
1995–99	289	63.9
2000–04	198	63.9

Based, in part, on Fig. 49 in Analysis of the Survey of Anesthesiologists Age 50 and Older: A Report to the American Society of Anesthesiologists. June 2010. Available at: <http://www.asahq.org/For-Members/About-ASA/ASA-Committees/Committee-on-Occupational-Health.aspx>. Accessed February 11, 2013.

1985 would have been included in a 2006 survey of anesthesiologists aged 50–79 yr—we believe standby our estimate. Similarly, although it seems intuitive that “a broader sample population... [with] anesthesiologists up to age 90 would be needed to estimate retirement age more accurately for those who retired before 1985,” this suggestion overlooks problematic issues in estimating retirement age.

Our article conveys only a summary of the most salient information garnered from the survey. A more detailed report, which we noted is available at the American Society of Anesthesiologists (ASA) Web site,[†] provides further documentation supporting the suspect estimate’s validity (table 1). Although that estimate reflects only seven retirees in the “before 1985” cohort, the four larger cohorts that followed each contained progressively older persons, establishing the reported mean retirement-age trend for anesthesiologists,

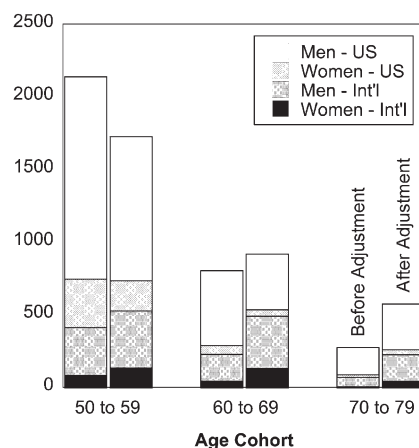


Fig. 1. Composition of 2006 survey population, before and after statistical adjustment to resemble the American Society of Anesthesiologists’ membership by age cohort. Int’l = international medical school graduate; US = United States medical school graduate.

[†] Available at: <http://www.asahq.org/For-Members/About-ASA/ASA-Committees/Committee-on-Occupational-Health.aspx>. Accessed February 11, 2013.