RESEARCH LETTERS

Young Physician Survey: What Are the New Facial Plastic Surgeons Up To?

There is a paucity of information with respect to facial plastic surgeons in practice only a few years. In 2007, the Young Physician Committee of the American Academy of Facial Plastic Surgery (AAFPRS) asked whether we accurately perceived what our peers were doing. In response, we created a survey to help benchmark our own practice in comparison with colleagues (Figure 1).

When we sent this out, there were no known similar data published focusing on facial plastic surgeons who had been in practice only a few years. A review of the literature found several reports that examined some, but not all, points of interest. In 2008, the AAFPRS published a report of a survey looking at trends in facial plastic surgery, which had a 10% response rate. There also are articles that report data about academic plastic surgeons, practice trends of plastic surgeons, practice information for plastic surgeons 50 years or older, facial trauma repair distribution among specialties, and differences in practice with respect to sex, but none focused specifically on young facial plastic surgeons. For this reason, we sought to survey this group to obtain new data on this subset of facial plastic surgeons.

Methods. In late 2007, surveys were sent using SurveyMonkey.com to all physicians who had completed an AAFPRS-sponsored fellowship and who had been in practice for 1 to 6 years. It was a self-administered questionnaire, and we were blinded to the identity of those who completed the survey. The information we sought is outlined in Figure 1. The data gathered were evaluated as a whole and were also sorted into subgroups to gain further insight. Statistical analysis was performed by a statistician using exact tests, which are an extension of the Fisher exact test to larger data tables.

Results. Seventy-three of 227 surveys were completed (a 32% response rate). Over 86% of those who participated in the survey worked in a metropolitan setting vs a rural setting. In terms of practice type, almost half reported working in a primary practice. Physicians in an academic practice or in a private practice with an academic affiliation were nearly equal in number (17 and 20, respectively). Also, over 50% reported that at least 91% of their practice was spent performing facial plastic and reconstructive surgery.

Overall, more than 40% of those surveyed earned at least $400 000 (Figure 2). When we compared the differences in income between those in practice for 1 year or facial plastic surgeons who dedicate over 90% of their practice to facial plastic surgery with the group overall, the differences were not statistically significant ($P = .22$ and $P = .73$, respectively). Half of the facial plastic surgeons in their first year of practice earned $200 000 to $299 000, and one-third (33.3%) earned at least $400 000. Over half of those who responded as having 91% to 100%...
of their practice devoted to facial plastic surgery earned at least $400 000. Over 50% of young facial plastic surgeons in private practice and 40% of those in private practice with an academic affiliation reported earning over $400 000. The salaries of young facial plastic surgeons in academic medicine were lower, with more than 55% earning $200 000 to $299 000. Nevertheless, over 25% of those in an academic practice earned at least $300 000. Comparing income of the surgeons in the subgroups with the group overall, there was a statistical difference, as those in an academic practice earned less than those overall ($P = .03$). There was also a statistically significant difference in income for those in an academic practice compared with the group in private practice ($P < .001$).

Approximately one-fifth (20.8%) of surgeons reported performing 51 to 100 procedures, and approximately one-fifth (19.4%) procedures completed over 300 cases. The rest of the group had a near-equal number performing 0 to 50 (11.1%), 101 to 150 (15.3%), 151 to 200 (12.5%), and 201 to 250 (13.9%) procedures overall in the previous 12 months. There was a smaller subset (6.9%) that performed 251 to 300 procedures in the previous 12 months. We also examined the number of surgical procedures each subgroup reported over the past 12 months and found some interesting results. For instance, of those whose practice was composed of over 90% facial plastic and reconstructive surgery, over 35% had performed more than 300 procedures in the previous 12 months.

Each practice type performed a reasonable number of procedures in the previous 12 months (Figure 3). Among those in private practice, over 22% reported that they had performed either 51 to 100 or more than 300 facial plastic and reconstructive surgical procedures. Twenty percent of those in private practice with an academic affiliation performed either 151 to 200 or 201 to 250 procedures. For those in an academic practice, 25% performed 51 to 100, 101 to 150, or 151 to 200 procedures. There was not a statistically significant difference when we compared the numbers among these groups (academic affiliation vs private practice, $P = .08$; academic affiliation vs private practice with academic affiliation, $P = .12$; private practice vs private practice with an academic affiliation, $P = .37$). More than 47% reported treating 0 to 50 patients with injectable fillers in the previous 12 months. Interestingly, 8% of physicians surveyed treated over 300 patients with a filler in the previous 12 months.

We were also interested in the use of botulinum toxin type A (Botox; Allergan Inc, Irvine, California) and filler injections. Overall, 37% reported treating up to 50 patients with Botox in the previous 12 months, and almost one-quarter treated 51 to 100 patients. There was not a significant difference in the number of patients injected with Botox depending on practice type (academic affiliation vs private practice, $P = .76$; academic affiliation vs private practice with academic affiliation, $P = .13$; private practice vs private practice with an academic affiliation, $P = .37$). More than 47% reported treating 0 to 50 patients with injectable fillers in the previous 12 months. Interestingly, 8% of physicians surveyed treated over 300 patients with a filler in the previous 12 months.

We asked those surveyed how many each of common facial plastic and reconstructive surgical procedures they had performed in the previous 12 months. The procedures included were rhytidectomy, rhinoplasty, brow-lift, blepharoplasty, and skin resurfacing. Most surgeons had performed 0 to 10 of each type of procedure, except for rhinoplasty, of which more than 25% had performed more than 40.

We then asked those surveyed to estimate the number of reconstructive surgical procedures performed in the past 12 months. The categories included were trauma, Mohs reconstruction, locoregional flaps, microvascular free flaps, reconstruction of congenital deformities, and...
facial nerve paralysis reconstruction. Overall, most young facial plastic surgeons had performed 0 to 10 of each listed procedure. Moreover, those with academic affiliations had performed each of these reconstructive procedures more often than their counterparts.

Comment. In summary, we used a self-administered questionnaire, which was sent in December 2007 to facial plastic surgeons who had completed an AAFPRS-approved fellowship and had been in practice for 1 to 6 years. We found that most young facial plastic surgeons were doing well, both in terms of the number and variety of cases as well as income. There were differences seen in the general make-up of their practices, depending on both the length of time in practice and practice type. The reasons behind these differences are not entirely clear. In light of the current economic changes, we may resurvey these surgeons and consider extending a similar, improved survey to all of the members of the AAFPRS.

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Additional Contributions: Curtis Ramsey, MS, of the Indiana University School of Medicine, performed statistical analysis of the data.


2. Zetrenne E, Kosins AM, Wirth GA, Bui A, Evans GR, Wells JH. Academic plastic surgeons and consider extending a similar, improved survey to all of the members of the AAFPRS.

Chondrocyte Viability in Human Nasal Septum After Morselization

Cartilage grafts have numerous uses in rhinopasty; however, the use of intact grafts has several limitations and drawbacks. Intact cartilage grafts often leave contour abnormalities such as sharp edges or step-offs, especially in thin-skinned patients. This faceting of graft edges can become more noticeable over time. In contrast, morselized or crushed cartilage tends to be more pliable and easier to mold at the surgeon's discretion and is thus used to soften transitions, conceal irregularities, and fill defects in circumstances in which structural support is not required.

Some surgeons are hesitant to use crushed cartilage owing to its perceived clinical unpredictability. Considerable debate continues amid contradictory findings on the ultimate fate of grafts after morselization, and on whether the cartilage remains viable, resorbs, or is replaced by scar tissue. Previous studies use cell viability analysis methods that likely underestimate cell death and lack ability to visualize the distribution of nonviable cells. We examined the distribution of live and dead chondrocytes in crushed cartilage and correlate the degree of morselization with viability and mechanical stability.

Methods. In accordance with institutional review board guidelines, we obtained the leftover nasal septal cartilage from 6 healthy patients who had undergone nasal surgery at the University of California, Irvine, Medical Center. Cartilage specimens (approximately 15 × 10 mm), were stripped of perichondrium and placed into normal saline solution at ambient temperature. Each specimen was then cut into 5 identical pieces measuring 3 × 10 mm. Using a cartilage morselizer (Cottle cartilage crusher, model 523900; Karl Storz GmbH & Co, Tuttingen, Germany), each individual piece was crushed to varying degrees based on a system by Cakmak and Buyuklu and Cakmak et al categorized as follows: intact, slightly crushed, moderately crushed, significantly crushed, and severely crushed (Table).

Within 12 hours of explantation, viability analysis was performed using a Live/Dead assay (Molecular Probes Inc, Table. Classification of Cartilage Crushinga

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
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<tr>
<td>Intact</td>
<td>No manipulation of cartilage</td>
</tr>
<tr>
<td>Slightly crushed</td>
<td>1 Moderate-force hit to increase pliability without reducing cartilage structural integrity</td>
</tr>
<tr>
<td>Moderately crushed</td>
<td>2 Moderate-force hits to increase pliability and reduce structural integrity</td>
</tr>
<tr>
<td>Significantly crushed</td>
<td>3-4 Moderate-force hits, enough to cause the graft to bend with gravity</td>
</tr>
<tr>
<td>Severely crushed</td>
<td>5-6 Hits forceful enough to totally destroy the integrity of the cartilage and result in complete malleability of the graft</td>
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a Each individual piece was crushed to varying degrees based on a system devised by Cakmak and Buyuklu and Cakmak et al.