

The Certificate of Added Qualifications in Microsurgery: Consideration for Subspecialty Certification in Microvascular Surgery in the United States

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In 1973, the bylaws of the American Board of Medical Specialties were amended to offer special certification. “Certification of Special Competence is conferred by a Primary Board in a specified area of the field to which the Board certifies. It indicates the possession of knowledge, skill, and training in that special field over and above that required for a general certification.”^{1,2} This later evolved into a Certificate of Added Qualifications, reflecting additional training of at least 1 year and satisfactory completion of an examination in a special field.¹

In 1982, the American boards of orthopedic surgery, plastic surgery, and surgery were asked by the American Society for Surgery of the Hand to consider awarding a Certificate of Added Qualifications in hand surgery.¹ In 1985, all three boards approved the proposal, and in 1986, the American Board of Medical Specialties granted the primary

boards the ability to offer a Certificate of Added Qualifications in Surgery of the Hand.¹ Approval for certification of hand surgeons across all three specialties was subject to the following conditions: (1) the “grandfathering time” (the period during which experience alone may qualify a candidate for admission to the examination) should extend for 5 years after the first examination, (2) the time-limited certification is 10 years for each of the three primary boards authorized to issue the Certificate of Added Qualifications in hand surgery, and (3) the candidate’s supervised experience should be in an approved training program and not in the form of a preceptorship.^{1,3} To date, the only Certificate of Added Qualifications awarded by the American Board of Plastic Surgery is for hand surgery.

The authors consider the possibility of similar subspecialty certification in microvascular surgery. The aim of such a certificate would be to acknowledge those surgeons who have demonstrated qualifications in microvascular surgery beyond those expected of other plastic surgeons by virtue of additional training or a practice characterized by a majority of cases in microvascular surgery.

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A short, anonymous, Web-based survey was administered to two different groups of surgeons. These included plastic surgery microvascular fellowship directors ($n = 19$) and plastic surgery residency program directors ($n = 71$). Respondents were asked whether they had completed a formal 12-month microvascular surgery fellowship and whether they believed a Certificate of Added Qualifications in microvascular surgery should be required.

Respondents favoring Certificate of Added Qualifications certification were asked about eligibility; specifically, whether eligibility for a Certificate of Added Qualifications in microvascular surgery should include the following: (1) only plastic surgeons who have completed a 12-month microsurgery fellowship; (2) plastic surgeons who have completed a 12-month fellowship or those without a formal fellowship but who have independently performed a certain number of microsurgical cases; or (3) those who have completed a fellowship or, until a selected date, plastic surgeons without fellowship training who have independently performed a certain number of microsurgical cases (the grandfather exemption) (Table 1).

The Fisher's exact, two-tailed binomial, and chi-square goodness-of-fit tests were used to determine significance. Significance was considered for values of $p < 0.05$.

The majority of microsurgery fellowship and plastic surgery program directors responded (73 percent). The response rate among plastic surgery program directors was 65 percent (46 of 71). The response rate among microvascular surgery fellowship directors was 95 percent (18 of 19). Twenty percent (nine of 46) of residency program directors completed a formal 12-month microvascular surgery fellowship, whereas 70 percent (10 of 18) of microvascular surgery fellowship directors completed a formal fellowship.

Only 17 percent (eight of 46) of plastic surgery residency program directors supported a

Certificate of Added Qualifications in microsurgery. There was significantly more opposition to a microsurgery Certificate of Added Qualifications among residency program directors (83 percent; two-tailed binomial test, $p < 0.001$). Among microvascular surgery fellowship directors, 44 percent (eight of 18) supported a Certificate of Added Qualifications. This was not significantly different compared to those that opposed a Certificate of Added Qualifications (56 percent; two-tailed binomial test, $p = 0.81$). Overall, 25 percent (16 of 64) of all plastic surgeon respondents supported a Certificate of Added Qualifications, which was significantly less than those not in favor of a Certificate of Added Qualifications (75 percent; two-tailed binomial test, $p < 0.001$). The difference in support between residency program directors (17 percent) and fellowship directors (44 percent) approached statistical significance (Fisher's exact test, $p = 0.051$) (Fig. 1).

The effect of completing a formal 12-month fellowship training program on support for a microsurgery Certificate of Added Qualifications was evaluated. There was a statistically significant difference in support for a Certificate of Added Qualifications among residency program directors who had themselves completed a fellowship (44 percent), compared with those who had not completed a fellowship (11 percent; Fisher's exact test, $p = 0.036$). Among microsurgery fellowship directors, there was also significantly higher support with the completion of a fellowship (70 percent versus 13 percent; Fisher's exact test, $p = 0.025$). Overall, among all plastic surgeon respondents, 58 percent of surgeons with fellowship training supported a Certificate of Added Qualifications, whereas only 11 percent of those without fellowship training supported a Certificate of Added Qualifications (Fisher's exact test, $p = 0.0002$) (Fig. 2). Thus, completion of a formal microsurgery fellowship was associated with significantly more support for a Certificate of Added Qualifications.

Table 1. Questions Posed to Plastic Surgery Microvascular Fellowship Directors and Plastic Surgery Residency Program Directors Regarding a Certificate of Added Qualifications in Microvascular Surgery*

Have you completed a formal 12-mo microvascular surgery fellowship?
Do you think a subspecialty certificate (CAQ) in microvascular surgery should exist?
Who should be eligible for subspecialty certification (CAQ) in microvascular surgery?
Plastic surgeons who have completed a 12-mo microsurgery fellowship <i>only</i>
Plastic surgeons who have completed a 12-mo microsurgery fellowship <i>or</i> plastic surgeons without formal fellowship training who perform a certain number of microsurgical cases
Plastic surgeons who have completed a 12-month microsurgery fellowship <i>or, until a select date</i> , plastic surgeons without formal fellowship training who perform a certain number of microsurgical cases (grandfather exemption)

CAQ, Certificate of Added Qualifications.

*A free-text box was also provided to elicit additional comments.

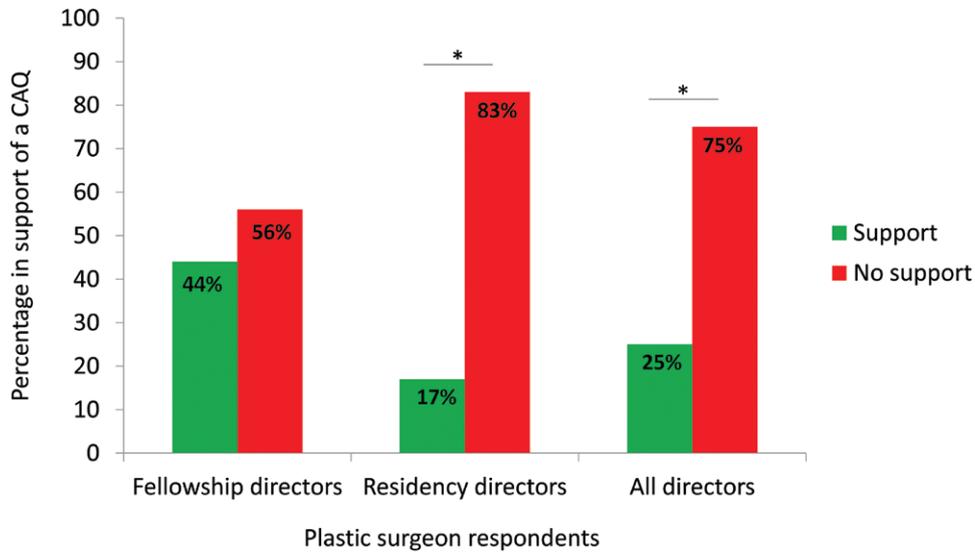


Fig. 1. Support for Certificate of Added Qualifications in microvascular surgery among plastic surgery microvascular fellowship directors and plastic surgery residency program directors.

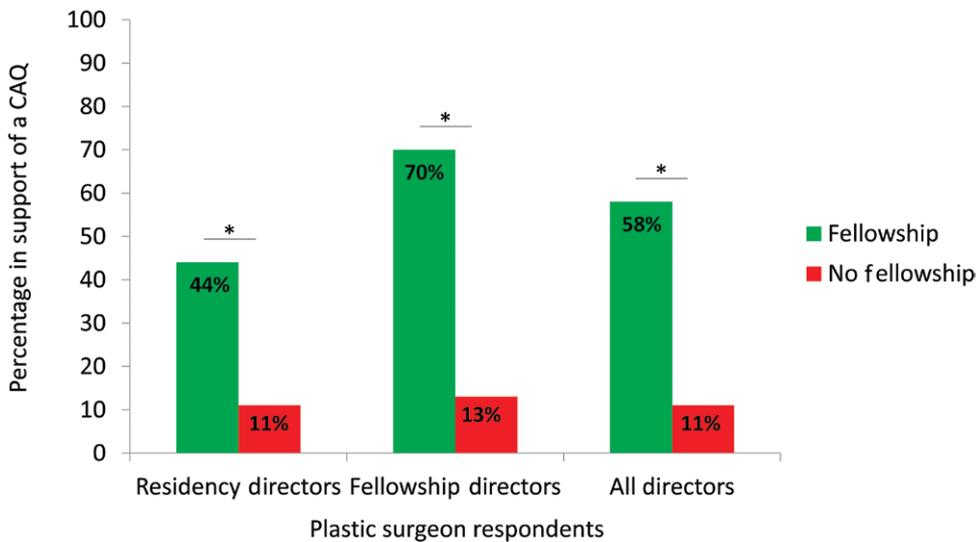


Fig. 2. Certificate of Added Qualifications (CAQ) support among fellowship-trained plastic surgeons. There was a statistically significant difference in support for a Certificate of Added Qualifications among residency program directors and microvascular program directors who had themselves completed a fellowship, compared with those who had not completed a fellowship (Fisher’s exact test, $p < 0.05$).

Of all respondents who favored a Certificate of Added Qualifications in microsurgery, the majority (47 percent) believed that eligibility should be restricted to plastic surgeons who had completed a 12-month microsurgery fellowship or, *until a selected date*, surgeons without fellowship training who had independently performed a certain number of microsurgical cases (the grandfather exemption). Others (37 percent) were in support of eligibility restricted to surgeons completing a fellowship or those without fellowship training who had completed an adequate number of cases.

A minority (16 percent) supported restricting eligibility to only those completing a fellowship. The difference in these three responses was not significant (chi-square goodness-of-fit test, chi-square = 2.95, $df = 2$, $p = 0.23$).

Most comments that supported a microsurgery Certificate of Added Qualifications revolved around the notion that it would lead to an effective way of standardizing training in microvascular surgery. One respondent noted that it was an “excellent way to legitimize and standardize training in the area of reconstructive surgery.”

Opponents of the Certificate of Added Qualifications cited limitations that would hinder a broadly practicing plastic surgeon. One of those who commented stated that there was no need to add further bureaucracy to the field: “[there is] too much fragmentation already in a small specialty, potentially limiting opportunities for plastic surgeons in general,” and “if everything in plastic surgery requires a [Certificate of Added Qualifications]: craniofacial, hand, microsurgery, etc., what is the general plastic surgeon to do?” Others stressed that microvascular surgery is a technique, not a specialty warranting subspecialty qualifications; as one of those who commented specified, “microsurgery is a technique utilized within many specialties. It is not a specialty unto itself.”

This is the first report to consider the subspecialty certification of microvascular surgery. The data demonstrate that only a fraction of plastic surgery residency program directors support such a certificate (17 percent). There was much more support among microsurgery fellowship directors (44 percent, which is a difference that approached statistical significance).

However, there was significantly greater support for a microsurgery Certificate of Added Qualifications among those who have completed a formal microvascular surgery fellowship in both the residency program director and fellowship director subgroups. Among those in favor, most supported eligibility criteria being extended to plastic surgeons who have independently completed a certain number of microsurgery cases. These findings may be important because those who have completed a fellowship might be expected to have greater insight into the demands of the training, the requirements of the subspecialty, and the development of its potential. Alternatively, it may simply indicate a desire for those who have completed additional training to be recognized for it.

Plastic surgeons in support of a microsurgery Certificate of Added Qualifications advocate it for several reasons. Offering subspecialty certification will inevitably lead to strong efforts to standardize and improve the quality of microsurgery fellowship training and education. Some educators believe that this will hold programs to a higher standard and, in turn, lead to stronger microvascular surgeons. Some cite that certification may more easily identify surgeons with expertise or interest in microvascular reconstructive surgery. Finally, specialty recognition in the public eye may positively stimulate research and development in microsurgery, as has occurred in hand surgery.¹

Many reasons for opposition to a microsurgery Certificate of Added Qualifications are apparent. Once a Certificate of Added Qualifications is offered, microvascular surgery may be viewed as an official subspecialty of plastic surgery, as opposed to an integral part. Doing so may limit the practice of plastic surgeons offering the full spectrum of reconstructive surgery. After all, many surgeons were attracted to this specialty precisely because it was defined by principles and techniques and not by particular operations or specific anatomical areas. The Certificate of Added Qualifications may limit microsurgery practice among plastic surgeons as some view the hand surgery Certificate of Added Qualifications has already done.⁴ Regardless of one’s technical expertise, without a Certificate of Added Qualifications, the surgeon may be viewed as surgically subordinate. Furthermore, it is important to realize that if certification were offered, cross-specialty designations would break down as other specialties embark on the qualification. This could blur our specialty’s identity and weaken it. Perhaps the highest standard should remain board certification in plastic surgery.

This study supports the notion that further discussion and consideration of subspecialty certification in microvascular surgery may be warranted. There are multiple concerns surrounding this issue, including the eligibility criteria of plastic surgeons and perhaps other specialties. Proactive consideration of this issue may be beneficial. Similar to the evolution of hand surgery certification, an exploratory committee of executive members of the American Board of Plastic Surgery, the American Society of Plastic Surgeons, the American Society for Reconstructive Microsurgery, and the American Association of Plastic Surgeons may be warranted.

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