

Executive Summary of Initiative to Enhance Hand and Upper Extremity Education

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Objective

In May of 2009, then president-elect Robert M. Szabo, MD brought a big idea to ASSH Council for consideration: to enhance, improve and expand our training programs with the long term goal of refining the specialty of hand and upper extremity surgery and having an expanded curriculum and body of knowledge that would lead to some form of our own board with control of our training programs, certification, recertification and maintenance of certification processes. He presented this strategic goal with the understanding that the implementation of this idea might take several years to realize.

The phenomenon of surgical specialties breaking away from their parent organizations to form their own board is not new in American surgery: The specialty of vascular surgery has, during the past two decades, separated itself amicably from its general surgery parent to form their own Component Board but still with ties to the American Board of General Surgery. Vascular surgeons have their own training programs and control of their own requirements for accreditation and certification under their own component board. They are recognized not as general surgeons who perform vascular surgery, but as vascular surgeons. President-elect Szabo presented an outline of how the Hand Society could achieve a similar strategic goal over time, and in May of 2009, the ASSH Council voted to take the first enthusiastic steps toward a more comprehensive training curriculum and program which are the prerequisites for developing our own conjoint board independent in function of, but still linked to, the ABOS, ABPS and ABS. We then began the tactical implementation of these 'building-blocks' that must be put in place as a first step in pursuit of this goal which includes a robust curriculum and pilot two year fellowship programs.

Organization

Ideas this big require thoughtful input, effort and commitment from a group of people who form a contingent of key opinion leaders. To this end, four different task forces and work groups have been working over the last year to advance this strategic goal on several fronts. The first group that began the work that led to the new curriculum presented in the attached pages was the Scope of Hand Surgery and Curriculum Development Task Force led by James Chang, MD and Martin Boyer, MD (see link to complete task force membership and group charges and goals).

Working concurrently alongside the curriculum group was the Stakeholders Task Force led by Bill Seitz, MD (link to complete work group with charges). In addition, because we wanted our education and curriculum initiative to comprehensively cover the entire upper extremity, we involved our colleagues from the ASES in another group led jointly by Scott Steinmann, MD and Martin Boyer, MD (see link for steering work group list and charges).

Financial Details

Finally, because we know that expanding curriculum and the length of training programs will require additional funding sources, a group led by Steve Glickel, MD was charged to explore these opportunities (insert link to funding work group). They investigated potential options and partnerships with interested parties. The AFSH is positioned and has agreed to manage the distribution of funds to fellowship programs once a selection process is developed.

A Brief History of Our Specialty: Why This Initiative is Sensible

Hand Surgery is maturing and in many ways is undergoing a metamorphosis. In his landmark book, Surgery of the Hand, Sterling Bunnell stated that “Throughout the world in peacetime were myriads of hands in need of repair. The war is adding such an appalling number of crippled hands, depriving men of their earning power, that surgeons now have had thrust upon them this work of reconstruction. It is with this desire to aid in this work of restoration that this book is written.” In the formation of the American Society of Surgery of the Hand, Bunnell and other American military surgeons set themselves apart from their orthopaedic, plastic, neurosurgical and general surgical colleagues to focus on reconstruction of the hand following injury, usually caused in battle. Surgical treatment of injuries and infections of the hand “require(d) the correlation of the various specialties- orthopaedics, plastics, and neurological surgery- the knowledge of any one of which alone is inadequate for repairing the hand.” The “hand surgeon” was thus conceptualized as a specialist in reconstruction and restoration of hands following “malformation, injury, and infection.” In its early years, our specialty concerned itself with this task: restoring the ability of those injured in battle to become gainfully employed following their return.

How has our role and the nature and extent of our scope of surgical practice changed over the past sixty-five years? By one measure, our tools have improved. New fields of surgical possibilities have opened up for us based upon the development of new technologies and techniques- witness the field of microsurgery, wherein the first microvascular anastomosis was done scarcely 50 years ago. In 2010, microsurgical free tissue transfer is a recognized and available surgical option for the treatment of deficiencies of both structure (i.e., provision of soft tissue coverage) and function (i.e., great toe or second toe transplantation, or free muscle transplantation), and we have seen the introduction of successful upper extremity transplantation. Another pervasive change involves the improvement and refinement of our surgical techniques based on a sound scientific understanding of the pathophysiology of healing of connective tissue- witness the improvements in patient care for lacerations of the intrasynovial flexor tendons of the hand. Core and peripheral suture techniques, rehabilitation methods and understanding of the gliding surface have all improved care based on careful scientific investigation of the relevant component parts of treatment. A third change involves our greater understanding of the physiology of the peripheral nerve and its response to compression and to injury- witness the new techniques of nerve transfers and the potential for

functional restoration of the upper extremity following previously irrecoverable injury such as occurs in brachial plexus palsy injuries.

This is only a small part of the story of our metamorphosis. Whereas our tools and techniques have improved and developed over the past sixty-five years, so has our reach. In the first edition of Bunnell's book, there are no mentions of carpal tunnel syndrome, trigger finger or basilar thumb joint arthritis. Fractures of the distal radius are not addressed, nor had prosthetic implant arthroplasty even entered the lexicon of the practicing surgeon, let alone merited mention in the book. Arthroscopy of large and small joints was decades away when the first edition was published, and the development of the total hip arthroplasty by Sir John Charnley, followed by the development of myriad prosthetic implant arthroplasties of joints both large and small of the upper extremity, has not yet improved the lives- and lifestyles- of millions. At the time of publication, the tools of the hand surgeon's trade included tendon transfers, arthrodeses, pedicled flaps and local soft tissue rearrangements and drainage of purulent infection.

What about now? In a fairly routine fashion we can treat most conditions, both acute and chronic, that affect the lives of our patients. It is not unusual for hand surgeons to make use of the knowledge and techniques learned in both orthopaedic and plastic surgical training to refine and improve their ability to affect surgical cures for their patients. Peripheral nerve surgery, arthritis surgery, soft tissue rearrangements, microvascular surgery and fracture surgery are all within our realm of expertise.

The question arises though as to why, in 2010, the hand surgeon needs to be boarded in either orthopaedic OR plastic surgery (rarely both) OR general surgery to become eligible for further refinement as a hand surgeon by virtue of a year or more of fellowship training. A separate but related question is why there are such differences in skill sets, knowledge base and technical capability for hand surgeons that have trained by the plastic, orthopedic or general surgical pathways. The answers to these questions lie in the history of the creation of our specialty. If we choose to look forward, though, how can we improve the development of the upper extremity surgeon of the future to maximize their skills and minimize the variability contained within their training? The answer to this question informs the reason behind the work done by the ASSH Council under President Szabo's direction in order to define our specialty. The 'SHUE' (Spectrum of the Hand and Upper Extremity) Curriculum document that has been conceptualized and approved by Council outlines competency-based goals and objectives and contains the comprehensive content-based curriculum that will serve as the ASSH's initial attempt at codifying and systematizing our specialty.

The SHUE Curriculum

To be perceived as a distinct specialty apart from our orthopedic, plastic and general surgical parents, we need to define our specialty in language that could be understood by those regulatory organizations that determine what constitutes a specialty as separate and distinct. This definition must have several components, including all six 'competencies' as outlined by the ACGME. The most critical component of this definition of who we

are and what we do is by necessity the SHUE curriculum document- the patient care curriculum that outlines which conditions we treat, topics over which we have expertise and which operations and procedures we do. In consultation with the ASES, we have created such a document that outlines what a surgeon of the upper extremity knows and does. These two parts of the SHUE document, a description of the competencies as well as the curriculum itself, serve as the basis for beginning a discussion in earnest of what we want the training of our colleagues to consist. The curriculum document is a starting point for discussion; it is just the first iteration of multiple potential iterations in the future, and it is meant to be inclusive rather than exclusive. It is NOT a finished product, and it is NOT a proscription regarding what every upper extremity surgeon must know prior to completion of fellowship.

In part, we modeled our SHUE curriculum on a similar curriculum document recently put forth by the American College of Surgeons titled the “Patient Care Curriculum of the Surgical Council on Residency Education.” At present, the first iteration of the hand surgical equivalent of the ACS document has been vetted by the Council of the ASSH and will soon be subjected to a more widespread vetting by the ASSH and the ASES membership. The Fellowship Directors of the ASSH, chaired by Lee Osterman, MD, are going to take the lead role in this task. The enthusiasm engendered for this initiative within the ranks of our industry partners is great and represents an opportunity for the ASSH and the ASES to partner with external sources of funding to realize this initiative in a practical way.

What's Next

This initiative to enhance and improve education and training of future upper extremity surgeons will not only widen the scope of our specialty, but it will, in time, lead to a more complete training of those who enter our specialty in the future. What form will our specialty take after another sixty-five years have elapsed? Will we, as upper extremity surgeons, be masters of our own destiny with our own training programs and our own governing bodies, or will we still be required to complete residencies replete with topics, conditions, procedures and operations for which we have no need or necessity in practice? We have matured as a specialty, and we now face an exciting opportunity to discover whether or not there is value and benefit in establishing ourselves as unique and distinct. We believe that there is value in defining and developing a curriculum that is focused on the upper extremity, and we have begun with the SHUE Curriculum and Competencies contained in the adjacent documents. We welcome your comments and input.