

The Initiative on Subspecialty Clinical Training and Certification (SCTC): Background and Recommendations

AUTHORS: David K. Stevenson, MD,^a Gail A. McGuinness, MD,^b John D. Bancroft, MD,^c Debra M. Boyer, MD,^d Alan R. Cohen, MD,^e Joseph T. Gilhooly, MD,^f Mary Fran Hazinski, MSN,^g Eric S. Holmboe, MD,^h M. Douglas Jones, Jr, MD,ⁱ Marshall L. Land, Jr, MD,^j Sarah S. Long, MD,^k Victoria F. Norwood, MD,^l Daniel J. Schumacher, MD, MEd,^m Theodore C. Sectish, MD,ⁿ Joseph W. St Geme III, MD,^o and Daniel C. West, MD^o

^aDepartment of Pediatrics, Stanford University, Palo Alto, California; ^bAmerican Board of Pediatrics, Chapel Hill, North Carolina; ^cDepartment of Pediatrics, Maine Medical Center, Portland, Maine; ^dBoston Children's Hospital, Boston, Massachusetts; ^eThe Children's Hospital of Philadelphia, Philadelphia, Pennsylvania; ^fDepartment of Pediatrics, Oregon Health and Science University, Portland, Oregon; ^gDepartment of Pediatrics, Vanderbilt Children's Hospital, Nashville, Tennessee; ^hAmerican Board of Internal Medicine, Philadelphia, Pennsylvania; ⁱDepartment of Pediatrics, University of Colorado School of Medicine, Aurora, Colorado; ^jPediatric Medicine, South Burlington, Vermont; ^kSt Christopher's Hospital for Children, Philadelphia, Pennsylvania; ^lDepartment of Pediatrics, University of Virginia, Charlottesville, Virginia; ^mDepartment of Pediatrics, Boston University School of Medicine, Boston, Massachusetts; ⁿBoston Children's Hospital, Boston, Massachusetts; and ^oDepartment of Pediatrics, University of California, San Francisco, San Francisco, California

KEY WORDS

competency, education, entrustment, fellowship, milestones, subspecialty, training

ABBREVIATIONS

ABP—American Board of Pediatrics
 ABMS—American Board of Medical Specialties
 ACGME—Accreditation Council for Graduate Medical Education
 CBME—competency-based medical education
 EPA—entrustable professional activity
 FOPO—Federation of Pediatric Organizations
 MOC—Maintenance of Certification
 SCTC—Subspecialty Clinical Training and Certification

(Continued on last page)

ROLE OF THE AMERICAN BOARD OF PEDIATRICS

The American Board of Pediatrics (ABP) certifies general pediatricians and pediatric subspecialists based on standards of excellence that lead to high-quality health care during infancy, childhood, adolescence, and the transition into adulthood. Thus, central to the ABP's mission is assurance to the public that a general pediatrician or pediatric subspecialist has successfully completed accredited training and fulfills the continuous evaluation requirements that encompass the 6 core competencies of the Accreditation Council for Graduate Medical Education (ACGME) and the American Board of Medical Specialties (ABMS). The ABP's quest for excellence is evident in its rigorous evaluation process and in new initiatives undertaken that not only continually improve the standards of its certification but also advance the science, education, study, and practice of pediatrics.

The ABP's responsibilities and authorities in standard setting and evaluation overlap through interest and influence the responsibilities and authorities assumed by the ACGME through its Pediatric Review Committee in the area of training, as well as those of the American Academy of Pediatrics and the subspecialty societies with respect to advocacy and education. Although the respective organizations have distinct missions and roles, they often work in collaboration and synergy regarding training and advocacy. Nonetheless, standard setting, evaluation, and certification remain the sole purview of the ABP. Because of the centrality of accredited training to certification, a decision by the ABP to offer a subspecialty certificate leads to a petition to the ACGME to accredit training programs. The ABP provides substantial input to the development of initial subspecialty program requirements and periodic revisions through its respective subboards, and the ABP standards for certification heavily influence the content of program requirements.

COMPETENCY-BASED MEDICAL EDUCATION

In the late 1990s, the ACGME and ABMS introduced the concept of competency-based medical education (CBME) with the establishment of 6 domains of competence: patient care, medical knowledge, practice-based learning and improvement, interpersonal and communication skills, professionalism, and systems-based practice.¹ Although the domains of competence have been widely adopted across medical education, the ability to measure a learner's performance of the skills related to the competencies has emerged as a major limiting factor to realizing the full potential of CBME. To address this issue, the ACGME partnered with the member boards of ABMS in the Milestones Project. In

Pediatrics, this effort refined the ACGME competencies in the context of the specialty, creating milestones that describe the behaviors of learners along a developmental continuum from the novice behaviors of the early medical student to the behaviors of the expert who is years into practice.^{2,3} Performance level on a subset of milestones will be reported to ACGME at 6-month intervals throughout training for each individual trainee. It is within this context that the ABP called on thought-leaders within the pediatrics community to form this task force to reassess the clinical component of fellowship training.

HISTORY OF SUBSPECIALTY TRAINING REQUIREMENTS

Before 1978, a trainee could be eligible for subspecialty certification after fellowship training and 2 years of general pediatrics residency. In the late 1980s, the requirement for in-depth research experience was first introduced. In 1990, the Federation of Pediatric Organizations (FOPO) formulated a position that the goal of fellowship training should be the development of future academic pediatric subspecialists and that graduates of fellowship training programs should be proficient in clinical care, direct and consultative, teaching, and a selected area of research. The 1990 FOPO statement was, and continues to be, the underpinning of the ABP's requirement that each applicant for certification must provide evidence of a meaningful accomplishment in research. In 2004, the ABP further modified the Training Requirements for Subspecialty Certification by: (1) requiring each training program to provide a core curriculum to support scholarly activity; (2) allowing greater flexibility in the types of activities and work products that can meet the requirement for scholarly activity; and (3) requiring a process for evaluation of scholarly accomplishments at the local level by institutional

scholarship oversight committees.⁴ These 2004 modifications established the standards that are in use today and were designed to recognize the multiple career paths available to subspecialists and the diverse roles they play in academic centers and in the community. The FOPO subsequently updated its position statement to align with the training required by the ABP.⁵

CLINICAL TRAINING

Other than defining the length of training, the ABP has largely remained silent on the requirements for clinical training. However, the shift to CBME raises the question of whether eligibility for certification could be based on demonstrated achievement of expected outcomes of training, rather than completion of a "one size fits all" time requirement. CBME leads to the question of whether the duration of training could vary according to subspecialty and anticipated career pathway. To address these questions and others related to clinical training, the ABP held an Invitational Conference on Subspecialty Clinical Training and Certification (SCTC), July 28 and 29, 2010. Subsequently, a Task Force was appointed and charged by the ABP with "examining the current model of pediatrics subspecialty fellowship training and certification with emphasis on competency-based clinical training and with recommending changes in the current requirements, if warranted." This article presents the report and recommendations from the Task Force to the Board of Directors of the ABP for its consideration.

TASK FORCE METHODS AND FINDINGS

The Task Force began its work by collecting input from the various stakeholder organizations and the broader pediatric community through numerous stakeholder meetings and by conducting surveys of current fellows, program

directors, and graduates of fellowship programs. Through this effort, important aspects of the ABP's existing requirements for subspecialty clinical training and certification were affirmed while some new considerations were also identified. First and foremost, the Task Force's recommendations must be aligned with the mission of the ABP to set standards of excellence that lead to high-quality care for children and to provide accountability to the public.

There was broad consensus among subspecialist and stakeholder groups that scholarship is a core value in subspecialty training because scholarly activity serves to teach fellows to be critical thinkers and evidence-based practitioners and to analyze, interpret, and apply research evidence at the point of care. This level of scholarship is expected of all trainees independent of career pathway and should be sustained through Maintenance of Certification (MOC) during a lifetime of practice. Scholarly activity also serves as an enticement for fellows to consider careers as physician–scientists or clinician–investigators.

There are a number of aspects of the initiative on SCTC that need to be acknowledged. Although the initiative was originally designed to focus on clinical training, the charge expanded beyond clinical training to include scholarship and teaching because it is not possible to consider the clinical aspects of training in isolation. In addition, the Task Force affirmed current requirements for general pediatrics training and certification as a prerequisite for certification in a subspecialty. The Task Force chose not to address the issue of creating additional certificates even if there are advanced skills obtained or tailored training built into the subspecialty fellowship. In discussions with stakeholders, some subspecialists questioned the need for all fellows to participate in laboratory-based or experimental

research activities as a requirement for certification. With respect to this issue, the Task Force affirmed that substantial flexibility within subspecialty training already exists in the current ABP and ACGME requirements. In addition, the ABP has several nonstandard pathways to foster the careers of physician–scientists and to shorten the overall length of training in certain circumstances. Moreover, various career paths are easily accommodated because the Pediatric Review Committee of the ACGME stipulates an expectation (not a requirement) for 12 months of clinical time and a recommendation (not a requirement) that 12 months be available for pursuit of scholarship. Because the remaining 12 months are unspecified with respect to requirements or expectations, they are available for individualized and flexible training. Thus, the Task Force concluded that current flexibility in training requirements, although underused, is sufficient to achieve individualized training appropriate for the subspecialty and to enable trainees to achieve their individual career goals.

TASK FORCE RECOMMENDATIONS

The complete Task Force recommendations, which have been approved by the ABP Board of Directors, are listed in detail at the conclusion of this article. Although the current requirement for 3 years of subspecialty training will remain for now, as the ability to measure subspecialty training outcomes improves, the ABP may, in a staged and deliberate fashion, consider allowing fellowship training of shorter, longer, or variable lengths. Moreover, the ABP recognizes that, for many interested parties, organizations, and individuals, the issue of length of training is a concern, whereas the ABP has been focused primarily on competency. Competency definition and assessment are methods of modifying the length of training in

a given discipline and, possibly over time, the length of training for individuals, although this aspect is a much greater challenge. Modification of training depends on the maturity of assessment technologies and the setting of expectations by the individual subspecialties for what is required of an individual to qualify for certification. Thus, Task Force recommendations regarding clinical training, the expected competencies to be achieved, and the nature of the scholarly activity are focused on disciplines and not individuals. To reemphasize, the length of training will be fixed for an individual subspecialty for now. However, by focusing on competency, the ABP recognizes that it is inviting a future training paradigm that addresses the ability of a quick learner to meet core competencies in less time than usual and to use the remaining time to enhance training opportunities and expertise. The philosophy of education and the technologies that support it are changing rapidly, and the implementation of such change over the next decade will require wise decisions with the future in mind.

The key Task Force recommendation is the need for a core set of competencies (clinical, procedural, and scholarly) for all fellows, regardless of the subspecialty or career path. The Task Force emphasizes that completion of subspecialty training and verification of competence to practice without supervision should reflect an expected level of accomplishment along a developmental continuum of performance. With attestation by the subspecialty training program director in this regard, the ABP will determine eligibility to sit for the initial certifying examination and to enroll in MOC. In this way, the ABP recognizes that fellowship training and subboard certification in a subspecialty does not imply mastery of all competencies, but instead is only one step in a lifelong learning process.

Ongoing commitment to professional development is the path to mastery, and engagement in MOC is meant to facilitate that journey.

MILESTONES, ENTRUSTABLE PROFESSIONAL ACTIVITIES, AND OUTCOMES-BASED MEDICAL EDUCATION

Recent advances in medical education allow the question of required duration of training to be examined by using the metric of the pediatrics milestones to meaningfully assess the acquisition of competencies by trainees in the clinical context of their subspecialty. Demonstration of a level of performance in a core set of competencies, adequate progression along related milestones, and determination of entrustment to perform designated subspecialty-specific professional activities without supervision should be required of every subspecialty trainee.

The Pediatrics Milestone Project provides narrative descriptions of behaviors to assess learners at each milestone along a developmental continuum for every competency. It is of equal importance to assess the integration of competencies as care is delivered to patients. Entrustable professional activities (EPAs)^{6,7} are the routine care delivery activities that define a specialty or subspecialty. For example, care of the normal newborn would be an EPA for the general pediatrician. The EPAs provide a meaningful way to assess the integration of the competencies in the context of clinical activities that can be observed. The word “entrustable” refers to the learner’s ability to effectively perform the professional activity without supervision.

As a general rule, the routine clinical activities in a specialty or subspecialty can be aggregated into 20 to 30 EPAs. Trainees are entrusted when they are able to perform an EPA without supervision.

Although one might argue that all competencies apply to all EPAs, a particular set of competencies are especially important to entrustment decisions for a particular EPA. This set of competencies will vary from one EPA to another. EPAs, the competencies important to entrustment for that EPA, and milestones associated with those competencies complement one another in the assessment of trainees. It should be mentioned that the entrustment decision for each EPA does not depend exclusively on progress in mastering individual competencies; it also depends on the ability of a learner to integrate competencies to effectively engage in care delivery.

To assist with the development of EPA frameworks, the ABP has begun to convene leaders from each subspecialty subboard, professional society, and program director association. This group, under the leadership of the ABP, will develop the EPAs common to all subspecialties and those specific to individual subspecialties. These EPAs will be mapped judiciously to competencies and their milestones, and a subset of these milestones will be reported to the ACGME as required for the Next Accreditation System in the latter half of 2014. This approach is feasible because pediatrics milestones span the developmental continuum from undergraduate through graduate medical education and extend into MOC. The ACGME is supportive of this plan and acknowledges that there is no need for pediatric subspecialties to write additional sets of milestones. The identification of the subspecialty EPAs to inform certification and, potentially, the length of fellowship training is a sea change from our current system.

NEXT STEPS

Going forward, the ABP will consider modifications in requirements for training through a staged and de-

liberate process, which must have 3 components:

1. It will be the responsibility of the subspecialty to petition the ABP for a modification in training.
2. There must be a framework for competency assessment (EPAs are one possible framework).
3. There must be a measurement component to assess outcomes of training.

Within this context, the following affirmations and recommendations are made. It should be noted that the recommendations which follow here are only the first step in a process to actualize CBME and outcomes assessment. The ABP is committed to working with program directors and subspecialty leaders to move forward along a pathway that will foster enhanced evidence of competence to ensure that individuals are qualified to take the initial certification examination and prepared for unsupervised practice. For the immediate future, the requirements for evaluation and tracking of fellows that are reported to the ABP annually, as well as the verification of competence provided at the completion of training, will remain unchanged.

1. Subspecialty training will remain 3 years for now, but in the future, the ABP, upon the request of a subspecialty, may decide to allow a shorter or longer period to demonstrate achievement of competencies sufficient to practice without supervision in a particular subspecialty. Such a change must occur in a staged and deliberate fashion and will require assessment and study to inform the required length of training for a given subspecialty.
2. The respective subspecialties, in collaboration with the ABP, will be responsible for identifying expected outcomes of fellowship training. The most promising framework to ac-

complish this work is identifying EPAs, the routine activities that define the subspecialty, and linking them to competencies and milestones for purposes of assessment. Both subspecialty-specific EPAs and shared EPAs (common to all subspecialties) and their related competencies and milestones will provide the basis for assessment of individual trainees.

3. Valid and reliable methods that are practical, cost-effective, and have educational impact are needed to measure the clinical skills developed during training. The ABP is committed to partnering with other organizations to support methods to assess outcomes and the development and testing of more robust assessment tools. These tools will help faculty assess performance of all trainees in achieving a core set of competencies and their milestones as well as inform entrustment decisions related to performing designated professional activities. Individual trainee performance will be measured against expectations that are: (1) set by consensus of the subspecialty in conjunction with the ABP; and (2) informed by evidence gathered in the development and testing of the tools. Trainees' ability to meet these expectations will determine their readiness to complete training in a particular subspecialty.
4. Programs are encouraged to use fully the flexibility in the current requirements to develop individualized training plans that are aligned with the career goals of each trainee. Provided that appropriate faculty expertise and institutional resources are both available, such plans could prepare fellows for careers with an emphasis in laboratory research, clinical investigation, clinical care, educational research, quality improvement,

or other areas. The requirements for scholarly activity are applicable to different career goals, and neither the requirements nor the need for Scholarship Oversight Committees will change.

5. The program director is responsible for ensuring oversight and assessment of clinical performance. This assessment must be informed by the input of other faculty and

accomplished through the clinical competency committee consistent with ACGME requirements.

6. The program director, with appropriate input, has the responsibility for and is charged with determining that the trainee has attained the required clinical and scholarly outcomes. Program director verification of competence to practice without supervision is required to

determine eligibility to sit for the ABP subspecialty certifying examination and enroll in MOC.

ACKNOWLEDGMENT

The authors gratefully acknowledge the assistance of Carol L. Carraccio, MD, in advising the Task Force on the education concepts surrounding assessment and EPAs and in the review and revision of the manuscript.

REFERENCES

1. Batalden P, Leach D, Swing S, Dreyfus H, Dreyfus S. General competencies and accreditation in graduate medical education: an antidote to over-specification in the education of medical specialists. *Health Aff (Millwood)*. 2002;21(5):103–111
2. American Board of Pediatrics. The Pediatrics Milestones Project. Available at: <https://www.abp.org/abpwebsite/publicat/milestones.pdf>. Accessed July 1, 2013
3. Hicks PJ, Schumacher DJ, Benson BJ, et al. The pediatrics milestones: conceptual framework, guiding principles, and approach to development. *J Grad Med Educ*. 2010;2(3):410–418
4. American Board of Pediatrics. Training requirements for subspecialty certification, Available at: <https://www.abp.org/abpwebsite/publicat/trainingrequirements.pdf>. Accessed July 1, 2013
5. Federation of Pediatric Organizations. Policy statement: pediatric fellowship training. *Pediatrics*. 2004;114(1):295–296
6. ten Cate O, Scheele F. Competency-based postgraduate training: can we bridge the gap between theory and clinical practice? *Acad Med*. 2007;82(6):542–547
7. Jones MD Jr, Rosenberg AA, Gilhooly JT, Carraccio CL. Perspective: competencies, outcomes, and controversy—linking professional activities to competencies to improve resident education and practice. *Acad Med*. 2011;86(2):161–165

(Continued from first page)

Dr Stevenson led the Initiative on Subspecialty Clinical Training and Certification and chaired the Task Force; drafted the initial version of the manuscript; solicited the commentaries; and served as co-editor of the supplement. Dr McGuinness conceptualized the Initiative and provided leadership from the American Board of Pediatrics; extensively revised the manuscript; and co-edited the supplement. Drs Bancroft, Boyer, Cohen, Gilhooly, , Holmboe, Jones, Land, Long, Norwood, Schumacher, Sectish, St Geme, and West and Ms Hazinski vetted the concepts and recommendations from the Initiative during a series of meetings over a 3-year period. Each member made substantial conceptual contributions to the manuscript, critically reviewed and revised it, and developed the final recommendations. All authors approved the final version of the manuscript as submitted.

www.pediatrics.org/cgi/doi/10.1542/peds.2013-3861C

doi:10.1542/peds.2013-3861C

Accepted for publication Jan 30, 2014

Address correspondence to David K. Stevenson, MD, Harold K. Faber Professor of Pediatrics, Stanford University School of Medicine, Medical School Office Building, 1265 Welch Rd, X157, Stanford, CA 94305. E-mail: dstevenson@stanford.edu

PEDIATRICS (ISSN Numbers: Print, 0031-4005; Online, 1098-4275).

Copyright © 2014 by the American Academy of Pediatrics

FINANCIAL DISCLOSURE: The authors have indicated they have no financial relationships relevant to this article to disclose. Dr McGuinness is employed by the American Board of Pediatrics.

FUNDING: Funds for this research were provided by the American Board of Pediatrics Foundation.

POTENTIAL CONFLICT OF INTEREST: The authors have indicated they have no potential conflicts of interest to disclose.

**The Initiative on Subspecialty Clinical Training and Certification (SCTC):
Background and Recommendations**

David K. Stevenson, Gail A. McGuinness, John D. Bancroft, Debra M. Boyer, Alan R. Cohen, Joseph T. Gilhooly, Mary Fran Hazinski, Eric S. Holmboe, M. Douglas Jones Jr, Marshall L. Land Jr, Sarah S. Long, Victoria F. Norwood, Daniel J. Schumacher, Theodore C. Sectish, Joseph W. St Geme III and Daniel C. West
Pediatrics 2014;133;S53
DOI: 10.1542/peds.2013-3861C

Updated Information & Services

including high resolution figures, can be found at:
http://pediatrics.aappublications.org/content/133/Supplement_2/S53

References

This article cites 5 articles, 2 of which you can access for free at:
http://pediatrics.aappublications.org/content/133/Supplement_2/S53#BIBL

Permissions & Licensing

Information about reproducing this article in parts (figures, tables) or in its entirety can be found online at:
<http://www.aappublications.org/site/misc/Permissions.xhtml>

Reprints

Information about ordering reprints can be found online:
<http://www.aappublications.org/site/misc/reprints.xhtml>

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN®



PEDIATRICS®

OFFICIAL JOURNAL OF THE AMERICAN ACADEMY OF PEDIATRICS

The Initiative on Subspecialty Clinical Training and Certification (SCTC): Background and Recommendations

David K. Stevenson, Gail A. McGuinness, John D. Bancroft, Debra M. Boyer, Alan R. Cohen, Joseph T. Gilhooly, Mary Fran Hazinski, Eric S. Holmboe, M. Douglas Jones Jr, Marshall L. Land Jr, Sarah S. Long, Victoria F. Norwood, Daniel J. Schumacher, Theodore C. Sectish, Joseph W. St Geme III and Daniel C. West

Pediatrics 2014;133;S53

DOI: 10.1542/peds.2013-3861C

The online version of this article, along with updated information and services, is located on the World Wide Web at:

http://pediatrics.aappublications.org/content/133/Supplement_2/S53

Pediatrics is the official journal of the American Academy of Pediatrics. A monthly publication, it has been published continuously since 1948. Pediatrics is owned, published, and trademarked by the American Academy of Pediatrics, 345 Park Avenue, Itasca, Illinois, 60143. Copyright © 2014 by the American Academy of Pediatrics. All rights reserved. Print ISSN: 1073-0397.

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN®

