Residency Training in Family Medicine: A History of Innovation and Program Support

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BACKGROUND: Residency programs have been integral to the development, expansion and progression of family medicine as a discipline. Three reports formed the foundation for graduate medical education in family medicine: Meeting the Challenge of Family Practice, The Graduate Education of Physicians, and Health is a Community Affair. In addition, the original core concepts of comprehensiveness, coordination, continuity, and patient centeredness continue to serve as the foundation for residency training in family medicine. While the Residency Review Committee for Family Medicine of the Accreditation Council for Graduate Medical Education has provided the requirements for training throughout the years, key organizations including the Society of Teachers of Family Medicine, the American Academy of Family Physicians, the Association of Family Medicine Residency Directors, and the American Board of Family Medicine have provided resources for and supported innovation in programs. Residency Program Solutions, National Institute for Program Director Development, and Family Medicine Residency Curriculum Resource are several of the resources developed by these organizations. The future of family medicine residency training should continue the emphasis on innovation and development of resources to enhance the training of residents. Areas for further development include leadership and health care systems training that allows residents to assume leadership of multidisciplinary health care teams and increase focus on the family medicine practice population as the main unit for resident education. (Fam Med 2017;49(4):275-81.)

Since the formation of the specialty, family medicine residency programs have been integral to the development, expansion and progression of the discipline. Fundamental to the success of these programs and, subsequently, to the success of the discipline, residency training in family medicine requires a structured yet flexible curriculum that allows the trainees, faculty, and program to maintain the central tenants of comprehensiveness, coordination, continuity, and patient centeredness while allowing individuals and programs to establish training, experience and expertise in specific areas of interest. Over the past 50 years, key organizations including the Society of Teachers of Family Medicine (STFM), the American Academy of Family Physicians (AAFP), the Association of Family Medicine Residency Directors (AFMRD) and the American Board of Family Medicine (ABFM) have provided significant support for the development, implementation, and maintenance of residency training in family medicine. As will be highlighted in this article, these organizations have fostered a culture of innovation and excellence in family medicine training.

Residency Training in Family Medicine: How It Began

With family medicine being recognized as a discipline in 1969, residency programs needed to be created and implemented. The reports of three advisory groups formed the foundation for graduate medical education in family medicine. The Ad Hoc Committee on Education for Family Practice was appointed by the American Academy of Family Physicians (AMA) Council on Medical Education in September 1964 and issued their report “Meeting the Challenge of Family Practice” two years later (also known as the “Willard Report”). Elements of this report called for curriculum flexibility and internship abandonment with replacement by a 3- to 4-year integrated training program.
program with 50% of the training occurring in an outpatient model of family practice. The report recommended subject matter to include internal medicine, pediatrics, surgery, psychiatry, obstetrics and gynecology, community medicine, social and behavioral sciences.

Also sponsored by the Council on Medical Education of the AMA, the Millis Commission published their report entitled “The Graduate Education of Physicians” in August 1966. This report called for a “physician who focuses not upon individual organs and systems but upon the whole man…he who but knows only the diagnosis or treatment of a part often overlooks major causative factors and therapeutic opportunities.” It emphasized the need to focus “not upon individual organs and systems but upon the whole person, who lives in a complex social setting.” Finally, this report emphasized that comprehensive care such as delivered by the family physician is a high calling, different from specialization, and “not inferior in training, in rewards, or in position within the house of medicine.” In their report, the commission provided five specific recommendations for graduate programs for primary physicians (Table 1).

Finally, the Folsom Commission, sponsored by the American Public Health Association and the National Health Council, also published a report in 1966. This commission reiterated the findings of the previously mentioned committees and called for every person to have a personal physician who is the focal point for integration and continuity of medical care including prevention as well social and environmental factors. To achieve this aim, family medicine residency training programs needed to be created and expanded in order to provide the necessary workforce of primary care physicians.

The Role of the AMA and ACGME

With the creation of residency training programs and need for accreditation, the Liaison Committee for Graduate Medical Education of the AMA (now the Accreditation Council for Graduate Medical Education or ACGME) developed the Residency Review Committee (RC) for Family Practice (now the Review Committee for Family Medicine or RC-FM). The first set of requirements were known as the Essentials for Approved Residences (Special Requirements for Residency Training in Family Practice) and provided a structure for training programs. Three program types with associated curricula variations were suggested and included educational experiences in medicine, pediatrics, and psychiatry along with either: (1) obstetrics and surgery, (2) community medicine and electives, or (3) community medicine and administrative services, including health service administration and electives.

The second iteration of these Special Requirements, also known as “Special Essentials,” was implemented in 1979. This version continued to emphasize both a structured curriculum in internal medicine, pediatrics, obstetrics and gynecology, surgery, and community medicine in addition to other disciplines, electives and research, and experience in the continuity of care offered in a Family Practice Center. The requirements continued to allow flexibility in training by including the statement that it was “not necessary or even desirable that all residents adopt exactly the same program, nor that they offer a rigidly uniform sequence of experience.”

With the implementation of requirements and a structure for training, the growth in number of family medicine residency programs accelerated during the 1960s and 1970s (Figure 1). Six years following the incorporation of the American Board of Family Practice in 1969, 259 family practice residency programs across the United States had been created.

Over the next 30–40 years, the overall principles of graduate medical education in family medicine remained consistent and emphasized the core concepts of the discipline: comprehensiveness, coordination, continuity, and patient centeredness. With this remarkable expansion of programs, additional support and resources were required. As will be discussed, these needs were met through various programs and organizations, mainly under the leadership of the AAFP and STFM.

Also during this same time period, several areas of training generated significant discussion, debate, and study within the specialty: maternity care, underserved and rural training, and the role of research in training. For instance, obstetric practice remained common among family physician faculty despite the marked decrease in the number of

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**Table 1. Recommendations of the Graduate Education of Physicians (Millis Commission)**

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<th>Recommendations</th>
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<td>1. Simple rotation among several services, in the manner of classical rotating internship, is not sufficient.</td>
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<td>2. Some experiences in the handling of emergency cases and knowledge of the specialized care required before and after surgery should be included.</td>
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<td>3. A new body of knowledge should be taught in addition to the medical specialties that constitute the majority of the program.</td>
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<td>4. Opportunities for individual variations in the graduate program should be present.</td>
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<td>5. The level of training should be on a par with other specialties and a 2-year graduate program is insufficient.</td>
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family physicians providing obstetrical care. Training in a community health center had a statistically significant association with the likelihood of practice in an health professional shortage area for both initial and current practice. Furthermore, training in a rural residency site was associated with initial and current rural practice. Finally, the research requirement during family medicine residency was found to be growing despite a negative relationship found between student interest in research and their interest in family medicine.

In July 2014, the most recent ACGME Program Requirements for Graduate Medical Education in Family Medicine were implemented. Integral to the current version of the requirements were numerous comments and suggestions from numerous sources, including STFM. As emphasized in the requirements throughout the years, the underlying principles of comprehensive, continuous, and compassionate care provided by a highly competent family physician who provides quality care to both individuals as well as to a population of patients continue to be basic to residency training in family medicine. A significant change in requirements occurred as the population of patients cared for by a resident and program (delineated as the family medicine practice or FMP) became core to the educational experience rather than the family practice site or facility. “Family Medicine Practice” was consciously chosen not to replace the family medicine center (FMC) but to acknowledge that family physicians care for patients, populations, and communities beyond the walls of the FMC.

**Residency Assistance Program/Residency Program Solutions**

The AAFP assumed more responsibility for the development of family medicine residencies during the 1970s. A formal structure for training and dispatching consultants was inaugurated by AAFP in 1975 as the Residency Assistance Program (RAP, now known as Residency Program Solutions or RPS). A project board composed of representatives of AAFP, ABFM, STFM, and the AAFP Foundation secured funds and these organizations were instrumental in the development of RAP. As noted by David, "RAP was formed as a way..."
of increasing the quality and the excellence of family medicine training programs by providing consultation services based on a set of criteria that would raise the bar for family medicine residency training programs.”

In addition to individual program consulting services, the AAFP established national workshops to meet the educational needs of residency directors and faculty. The largest was the Annual Workshop for Directors of Family Practice Residencies (known as Program Directors Workshop or PDW) conducted under the direction of the AAFP. The AAFP also created the Developing Program Workshop designed for faculty and staff interested in the development of new residencies. This workshop evolved into the RAP Workshop, later known as the RPS workshop. In 2012, the PDW and RPS workshops were merged into a single workshop, currently known as the PDW and RPS Residency Education Symposium, providing family medicine residency program directors, faculty, nurses, and administrators educational and networking opportunities through selected topic workshops, plenary sessions, and other interactive forums.

**Association of Family Medicine Residency Directors**

The Association of Family Practice Residency Directors (AFPRD, renamed Association of Family Medicine Residency Directors or AFMRD in 2004) was incorporated in 1990. This organization was developed to serve as a resource for program directors in their unique role in graduate medical education. This role included being “on call practically for 24 hours a day with regard to residents in their program, serving as a model of a good physician, having the ability to understand delayed gratification, and understanding the lives of residents are subject to more than the rigors of medical training.”

Additionally, the AFMRD has allowed programs to have a unifying voice when presenting issues important to family medicine residency training. For instance, the AFMRD members approved a series of principles for reform of the “Special Requirements for Residency Training in Family Practice,” which included sections on curriculum definition, family physician faculty, removal of arbitrary time limits, and movement towards a competency-based curriculum.

Of particular note, AFMRD partnered with the ABFM to sponsor the Preparing the Personal Physician for Practice (P4) Family Medicine Residency Demonstration Initiative. This project was designed as a pragmatic, comparative case study of fourteen experimenting residencies, beginning in 2007 and concluding in 2012. The goal of P4 was to promote innovation in family medicine residency training as well as focus on important challenges for training family physicians and engage in evaluation of the innovations implemented.

**National Institute for Program Director Development (NIPDD)**

Despite high student interest and an increase in the number of residency programs in the early 1990s, US family medicine program directors were experiencing high rates of stress and burnout with a resulting average position longevity of only 3 to 4 years. In an effort to provide program directors specific administrative training, the National Institute for Program Director Development (NIPDD) was created in 1994 as a “school for program directors” through a collaborative effort involving the AFMRD, AAFP, ABFM, STFM, and RPS.

The NIPDD was designed as a 9-month fellowship, with both episodic and longitudinal components built around a curriculum emphasizing leadership development, comprehensive knowledge of resources and standards, resource distribution, educational methods, finance and management skills. To date, nearly 1,000 family medicine residency educators have participated in NIPDD, with over half (56%) of current program directors as graduates. (Communications with AFMRD staff, 8/15/16)

The graduates of NIPDD have consistently rated their experience as favorable in terms of the content importance and relevance to the job. Most participants described reduced job stress, expanded network of educational contacts and resources and enhanced job satisfaction, with 83% stating that participation in the program made it more likely they would continue as program directors. This finding was confirmed by a follow-up survey that found an increase in program director tenure from 3 to 4 years in 1994 to greater than 6 years in 1999. As reported by the ACGME in 2016, the mean tenure of family medicine program directors continue to be greater than 6 years. Participation in NIPDD was found to be associated with higher pass rates of new graduates on the board certification examination and predictive of residencies being in the upper tertile of programs in terms of board certification pass rates.

**Length of Training Debate**

The ideal length of family medicine training has been unclear and controversial since the initial accredited training programs began. No studies existed at the time to support any time-based education. In 2004, concerns with the 3-year model were being expressed and were based on several factors: (1) the amount of knowledge and skills necessary to be a generalist that provides truly comprehensive care had significantly increased, (2) graduates were facing a changing practice environment that required more training to maintain their scope of practice, (3) work hours were decreasing the available time for learning during training, and (4) the attributes of comprehensive family medicine were constantly changing and evolving as activities such as the patient-centered medical home were being introduced.

Pugno proposed a new Family Physician Educational Model in 2010...
with a 4-year residency length, longitudinal educational experiences in continuity of care with a patient population based in the community and the capacity for trainees to customize residency experiences by selecting “value-added” components to their training.28

These proposals were met with resistance as many reported that the current process appeared to be graduating competent physicians, extra training would add burden to debt-loaded residents, current GME funding would not cover the cost of an additional year thus adding to the expense of individual programs, students would not be universally interested in a 4-year training program, and that a longer program would exacerbate the primary care workforce shortage.29,30 Others have suggested that a 2-year training program would be adequate.31

In an effort to inform the RC-FM of the specialty’s preference for the minimum length of residency training to be proposed in the new requirements, AFMRD, ABFM, and other members of the “Family” supported two initiatives. First, a Length of Training Summit was conducted in January 2011 and included all of the major stakeholders within family medicine as well as invited residency training redesign experts from internal medicine and pediatrics. This event explored the current and future desired state of family medicine training, the gap between these two, and whether a change in the length of training was necessary to close this gap. While no consensus could be agreed upon with regard to the optimal length of training, consensus did develop around the need for further research and more data to assist in future deliberations and decisions regarding this issue. The Length of Training project pilot, using the existing ACGME pathway for innovative projects, was approved in 2012 in order to address this issue and to allow innovations tested in residencies to inspire and guide substantial changes in content, structure, and location of training of family physicians and guide revisions in accreditation and certification requirements.32

Milestones

To serve as a resident assessment tool and as an indicator for the educational effectiveness of residency programs, the ACGME developed and implemented the Milestones in 2014. These Milestones were designed to help all residencies and fellowships produce highly competent physicians to meet the 21st century health and health care needs of the public. Additionally, the Milestones provide descriptive assessments, provide guidance on curriculum by defining the general and essential competencies within a discipline, serve as a guide and “item bank” to create more meaningful assessments, and, after identifying learners’ gaps, provide individualized coaching to help residents with knowledge or performance gaps progress to the next level.

Understanding the unique aspects of our discipline, the specific Milestones for Family Medicine were developed by a select group of family medicine educators with “the goal of characterizing the breadth, depth, and integrative functions of the specialty.”33 “In developing the Milestones for Family Medicine, the committee attempted to minimize duplication across competencies and sought to highlight family physicians’ relationships with their patients by integrating the biopsychosocial model, population, and community health and by working in health care teams. The committee also believed that it was important to emphasize the fact that family physicians must have the skills to deal with complex patients and the health care system, as well as demonstrate the thinking skills critical to managing both the complexity and often the uncertainty of care over the course of an illness and over a patient’s lifespan, particularly for chronic disease.”34

Recently, the actual activities that a competent physician performs in practice in the given specialty, commonly known as entrustable professional activities (EPAs), are being developed by various disciplines. A list of EPAs for family medicine have been proposed and can be used as a starting point for residency programs interested in moving toward a competency-based approach to residency education and assessment.35 At this time, the role of EPAs in family medicine residency training is uncertain, especially as the RC-FM has not required their use.

The Family Medicine Residency Curriculum Resource

To better support programs by providing a standardized curriculum, the Family Medicine Residency Curriculum Resource was created. This resource is a proprietary collaborative project between the AFMRD and STFM and is an online, peer-reviewed, competency-based curriculum organized by postgraduate year (PGY).35,36 The site currently contains presentations, facilitators’ guides, and quizzes for over 132 medical topics. As an overall goal, the Family Medicine Residency Curriculum Resource comprises learning and teaching tools for the core content of family medicine education. Furthermore, the resource produces consistency in family medicine residency education, ensures the delivery of competency-based education, and reduces the burden of curriculum development for individual programs.

Some programs are currently using the Residency Curriculum Resource for organizing their curriculum and learning sessions, filling in areas where previously quality content was not readily available.37 Faculty are using the learning sessions to improve their own lectures by adding case studies, as well as pre- and post-tests. Because these
The outpatient setting as the primary location of physician and other services appears to be continuing despite the significant changes in health care system that are occurring. As such, family medicine residency training should be well positioned to provide the needed care in the community setting as a major- ity of training programs reported the use of community or federal public health centers as sites of training.

The future of family medicine residency training should continue with an emphasis on innovation and support from partnering organizations. The curricula must continue to be guided by the needs of the population and community as well as the interests of the program and residents. Further, the education should include knowledge and principles learned for the study of successful programs and practices, such as is presented in “The 10 Building Blocks of High-Performing Primary Care”.

The current RC-FM requirements serve to encourage programs with acceptable outcomes to seek new and innovative methods in which to teach residents. The following areas will need to be included in the curriculum of residency programs for family medicine graduate medical education training to continue to meet the demands of residents and the expectations of patients and communities: (1) effectively utilize of the electronic medical record for improved physician-patient communication and streamlined documentation that permits the physician to spend less time documenting and more time providing direct care to the patient and using the record as a tool for quality improvement and population health management, (2) enhance leadership and health care systems training that includes such topics as quality improvement, population health, and change management as to allow residents to assume leadership of multidisciplinary health care teams, (3) maintain standardization of learning experiences to ensure residents provide care for conditions common in the general population, (4) allow customization of educational activities and experiences as to allow residents to tailor their training to their career goals and the specific needs of the community they plan to serve, (5) increase focus on the family medicine practice population and community as the main constituent of resident education, and (6) incorporate both minimum numbers and quality metrics into educational experiences.

Of particular note, the P4 project identified key leadership actions associated with successful educational redesign. These actions included: (1) manage change, (2) develop financial acumen, (3) adapt best evidence educational strategies to the local environment, (4) create and sustain a vision that engages stakeholders, and (5) demonstrate courage and resilience.

In order to more efficiently and effectively increase the primary care physician supply, one area of increasing focus has been the acceleration of medical education. This acceleration of medical education has been previously attempted. In the 1980s and 1990s, approximately 25 US medical schools offered accelerated family medicine programs that allowed students to begin residency training while finishing their fourth year of medical school. Studies showed performance of students in these programs to be comparable to that of students in traditional four-year curricula in terms of standardized test results, initial resident characteristics, performance outcomes, practice choices, patient visit profiles, resident demographics, and graduate surveys. While this particular model was eventually discontinued due to accreditation and certification concerns, the idea of an accelerated training period has recently recurred. The potential advantages of a three-year medical school curriculum, such as the new programs described above, include reduced educational debt burden and more rapid entry into clinical practice, transitional pathways into medical school for those with appropriate experiences, and redirection of the fourth year of medical school to create opportunities for enriching medical education. Accelerated medical school programs that incorporate family medicine graduate training may be an attractive and feasible alternative to our current model and could potentially present an opportunity to bolster the family physician workforce.

Conclusion
In summary, family medicine residency training has undergone tremendous growth and evolution since the birth of the discipline and continues to lead further enhancement and innovation in graduate medical education. This growth has been supported by several key organizations and has led to the creation of valuable knowledge and resources available to residents, faculty, and program directors. The ongoing work of these key organizations along with collaboration with communities within and outside of medicine will ensure family medicine education continues to develop physicians to innovate as they continuously seek to meet the future healthcare needs of individuals, communities and populations of patients.

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