Tiered Maternity Care Training in Family Medicine

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BACKGROUND AND OBJECTIVES: Maternity care training in family medicine is a major component of our specialty. The Association of Family Medicine Residency Directors (AFMRD) issued a position paper calling for a two-tiered system of training for family physicians based on concern that some residency programs are unable to meet the current Residency Committee-Family Medicine (RC-FM) requirements for maternity care training. This two-tiered system was also endorsed by other family medicine organizations, including the AAFP, ADFM, NAPCRG, and STFM. Despite this support of the new system, there remains concern among some family medicine educators about this two-tiered approach. The Society of Teachers of Family Medicine Group on Hospital Medicine and Procedural Training met in 2009 and 2010 to develop an alternative tiered system for the training of family medicine residents in maternity care.

METHODS: Working from previous requirements for maternity care training and the AFMRD document, the group used a multi-voting process to identify the tiers and their elements.

RESULTS: The group generated a three-tier system for maternity care training in family medicine residencies. These included curriculum, patient volume, faculty expectations, and institutional requirements.

CONCLUSIONS: The three tiers we propose address the importance of maternity care, the limitations that some residencies face in providing adequate patient volumes, and the need to teach more advanced skills to those family medicine residents who will work in rural and underserved areas upon graduation. We urge family medicine governing bodies to adopt this system and believe that it will help preserve the essential role that family physicians serve in the care of pregnant women starting with basic maternity care and extending to advanced roles including care of complicated pregnancies and cesarean delivery.

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In the fall of 2008, the Association of Family Medicine Residency Directors (AFMRD) issued a position statement calling for a change in maternity care training in family medicine.1,2 The AFMRD proposed a tiered training system. In that proposal, “Level One” training would expose residents to maternity care with no expectation of being competent to perform prenatal or intrapartum care upon graduation. “Level Two” of that proposal would train residents to be competent for the independent practice of maternity care, including average risk vaginal delivery.3

Despite controversy about the role of family physicians in maternity care, birth is a core event in formation of the family. In many areas, family physicians are the major providers of maternity care.5 These physicians report greater practice satisfaction, increased revenues, and enhanced pediatric practice volumes.6-10 However, only 29.8% of family physicians provide maternity care, and some residencies lack sufficient training volumes and skilled faculty to provide maternity care training.6,11 Table 1 shows many of the related arguments.

The Society of Teachers of Family Medicine (STFM) Group on Hospital Medicine and Procedural Training is made up of family medicine educators from around the country with expertise in both teaching procedures and in maternity care. This group, with the endorsement of STFM, has published work defining core curricula in procedural skills for family medicine residencies.19,20 This group met in 2009 and 2010 to discuss the AFMRD statement and...
Table 1: Arguments for and Against Universal Maternity Care Training in Family Medicine

<table>
<thead>
<tr>
<th>For</th>
<th>Against</th>
</tr>
</thead>
<tbody>
<tr>
<td>Childbirth is a core event in the formation of a family and integral to family medicine and to continuity of care.</td>
<td>Only 29.8% of family physicians provide maternity care.⁶</td>
</tr>
<tr>
<td>A family medicine resident never knows if he/she will need to provide maternity care some time in the future.</td>
<td>Some programs cannot provide sufficient training volume to ensure competency and achieve accreditation under current Residency Review Committee requirements.¹¹</td>
</tr>
<tr>
<td>In many areas, family physicians are the major providers of maternity care and are critical in access to these services⁵</td>
<td>Some programs lack sufficient skilled faculty to provide maternity care training.¹³</td>
</tr>
<tr>
<td>Family physicians who provide maternity care add revenue to their communities.⁷,⁸,¹⁰</td>
<td>Liability insurance for maternity care can be prohibitively expensive.¹⁴-¹⁶</td>
</tr>
<tr>
<td>Family physicians who provide maternity care have greater practice satisfaction than those who do not.⁹</td>
<td>Intrapartum care can be disruptive to office practice and lifestyle.</td>
</tr>
<tr>
<td>Maternity care enhances pediatric and procedural practice volumes.¹⁰</td>
<td>Some family physicians have difficulty obtaining consultation and surgical backup.</td>
</tr>
<tr>
<td>Family physicians provide high-quality maternity care.¹²</td>
<td></td>
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</tbody>
</table>

develop curriculum for teaching maternity care in family medicine. These recommendations include a definition of three tiers of maternity care training and competencies required to meet these goals.

Methods
All members of the STFM Group on Hospital Medicine and Procedural Training participate in e-mail discussions and were invited to the meetings held in Phoenix in 2009 and 2010. The goals of the discussion were to (1) review the AFMRD statement that called for a tiered approach, (2) define maternity care practice patterns in family medicine, (3) describe tiered training that matches these practice patterns, and (4) recommend curricular elements and define competencies for each tier. A designated leader facilitated the consensus-building processes used to achieve each goal through discussion and a multi-voting process.

Twenty-one members of the STFM Group on Hospital Medicine and Procedural Training attended and voted at the 2-day meeting. An open discussion and consensus method was used. The group first reviewed the AFMRD statement calling for a two-tiered approach to maternity care training. The group discussed whether maternity care training should involve one, two, or three tiers. Each participant was invited to be involved in the discussion; consensus about the three tiers was then arrived upon by a multi-voting process.

Using literature review and group discussion, the members generated a list of maternity care practice patterns currently provided by family physicians in the United States and grouped them into major tiers of competencies. Finally, the group assigned curriculum training elements to the various tiers as minimum requirements. Using current RRC-FM requirements as a framework, each of the major areas was then discussed and voted upon. These included competencies, curricular elements, training volumes, family medicine faculty requirements, and institutional requirements. Current literature was cited for some of the training volume recommendations.

Results
Participants
The group consisted of 21 family medicine educators representing 15 residencies or departments of family medicine in 10 states, spanning all areas of the country (Alaska, Arizona, California, Colorado, Illinois, Michigan, New Mexico, New York, Tennessee, and Washington). Seven educators (33%) were women. Participants had been practicing for an average of 16 years. Nine of the participants have hospital privileges in surgical obstetrics, 10 conduct advanced maternity care training within their residency programs or in postgraduate programs (fellowships), and 12 have served as national advisory faculty for Advanced Life Support in Obstetrics (ALSO). Names and programs of participants are listed at the end of this paper.

Ten different patterns of maternity care practice were identified and are shown in Table 2. The participants recognized that a tiered system would have to consolidate these 10 modes of maternity care into a smaller number that could be defined and implemented based on these five parameters for each “tier:” (1) Competencies for skill level of graduates, (2) Curriculum requirements, (3) Training volumes, (4) Family medicine faculty requirements, and (5) Institutional requirements.

Three Tiers of Maternity Care Defined
The group created three tiers of maternity care based on target competencies. Each tier is described below according to the five parameters listed above and summarized in Table 3:
Curriculum requirements: The program must include at least one family physician faculty member who participates in this education and has privileges to supervise average risk deliveries.

Institutional requirements: The institution must have in place a mechanism for credentialing family physicians, including its own graduates, to perform average risk vaginal delivery.

Tier 3: Cesarean Section/Advanced Maternity Care

Competency: To produce family physicians capable of independently performing cesarean delivery and advanced maternity management including cognitive and procedural skills beyond those provided in Tier 2.

Curriculum requirements: Tier 3 curriculum includes all the skills described in the previous levels, plus the care of complicated pregnancies. Target skills for this tier include all the procedures listed in Table 5. Although not required, this level could include training in tubal ligation, operative management of ectopic pregnancy, and operative management of cesarean deliveries.
pregnancy, and other related women’s health procedures referenced in Table 5. Tier 3 also includes standard diagnostic ultrasound examination skills including fetal biometry and anatomic survey.

**Training volumes:** In addition to the training volumes required for Tier 2, Tier 3 requires the additional completion of 50 primary cesareans as the primary operator verified by a faculty member.24-27

**Faculty requirements:** Tier 3 training programs must have family physician faculty who supervise prenatal, intrapartum, and postpartum care. It is preferred that at least one family physician faculty at Tier 3 programs be credentialed in assisted vaginal delivery and cesarean delivery; however, this teaching may be provided by consultants.

**Institutional requirements:** The institution must have in place a mechanism for credentialing family physicians, including its own graduates, in performing average risk vaginal delivery, assisted vaginal delivery and cesarean delivery.

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**Table 3: Summary of the Three Tiers**

<table>
<thead>
<tr>
<th>Competency Required in These Curriculum Elements</th>
<th>Tier 1</th>
<th>Tier 2</th>
<th>Tier 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prenatal care</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Intrapartum care</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Average risk delivery</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Newborn care</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Postpartum care</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Cesarean assist</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Cesarean primary surgeon</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Medically complicated</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>ALSO course</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>OB ultrasound</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Training Volumes</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Labor management and delivery experience</td>
<td>20</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Continuity cases</td>
<td>3 (delivery not required)</td>
<td>10 (pre/postnatal and delivery required)</td>
<td>10 (pre/postnatal and delivery required)</td>
</tr>
<tr>
<td>Cesarean assist</td>
<td>0</td>
<td>10</td>
<td>Not defined</td>
</tr>
<tr>
<td>Cesarean primary surgeon</td>
<td>0</td>
<td>0</td>
<td>50</td>
</tr>
<tr>
<td>Labor and delivery total</td>
<td>20</td>
<td>60</td>
<td>110</td>
</tr>
<tr>
<td><strong>Family Physician Faculty Needs</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prenatal care faculty</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Normal vaginal delivery faculty</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Cesarean faculty</td>
<td>No</td>
<td>No</td>
<td>No, but recommended</td>
</tr>
<tr>
<td><strong>Institutional Requirements</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Credentialing in vaginal delivery</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Credentialing in cesarean</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Resolution of Questions and Controversies

Our discussion of tiered maternity care raised many questions: (1) How is continuity of care defined? (2) How are target training numbers for maternity care procedures chosen? (3) How will a tiered system help programs that cannot meet the current requirements for maternity care training? (4) Can individual programs train specific residents to different levels of competency within that residency program based on individual interests and local resources? and (5) What is the necessary extent of family physician faculty participation in maternity care training?

**Continuity:** Continuity of care is central to the importance of including maternity care in family medicine. Can more than one resident “count” a continuity patient or a delivery procedure? The group’s answer to this is no, since double-counting dilutes experience for a technical skill. For vaginal delivery, only one resident should be permitted to count delivery credit. Similarly, the group recommends that participation in the active phase of labor, in the birth, and in care during the immediate postpartum period are necessary components of a meaningful labor/delivery experience. Simply “catching a baby” does not provide a resident with knowledge of, or appreciation for, the human birth experience. Some procedures like cesarean delivery may involve more than one resident, but only one should count delivery credit; the other can claim surgical assist. Elimination of “double counting” of deliveries will improve the skill of our graduates and their credibility when seeking privileges.

**Target training numbers:** Defining training numbers is a perpetual problem for all procedural skills, particularly since individual learners naturally develop competency at different rates. The group increased experience in labor management and the required number of vaginal births for Tiers 2 and 3 based on their experience. The numbers for cesarean delivery training come from the medical literature. There remains a need for validated tools to assess competency with various procedures.

**Help for programs that cannot meet current requirements for maternity care training:** These programs can become Tier 1 only. However, the group recommends that Tier 1 program requirements be met within the family medicine center and the hospital itself with family medicine faculty physicians and other consultants, rather than by sending residents to outside rotations for their maternity care experience. Because the birth process is so important to the family unit, we struggled with the issue of allowing a tier that included competency in prenatal care alone, recognizing that some programs are having difficulty producing residents capable of providing independent intrapartum care. The Tier 1 designation will help programs not able to meet current RRC requirements but will still...
preserve basic knowledge and training in maternity care for all family medicine graduates.

Multiple tiers within a program: Can a single program “track” residents into more than one tier within the same program? The group voted yes to this question, provided the program has the clinical resources and faculty to meet the highest tier that it trains for. This might allow a program to use its resources more efficiently by channeling them to residents who want the training. It could, however, create coverage problems if senior Tier 1 residents would be expected to supervise Tier 2 residents.

Family medicine faculty role in maternity care training: While the group recognized the importance of integrating other specialties into training, family medicine faculty role modeling remains the cornerstone of residency training in prenatal, normal intrapartum, and postpartum care; this is reflected in the definitions of the various tiers.

Discussion
In a 2006 study, 93% of family medicine residency program directors agreed that maternity care training should be mandatory. There is no dispute in academic family medicine that maternity care represents an important part of access to care and continuity of care within families, fitting well into the Patient-centered Medical Home. The organizations that define family medicine have always required maternity care in residency curriculum (RRC-FM). However, controversy exists regarding the depth of maternity care training that should be required for all family medicine residents. Complying with the ideals and regulations of the maternity care training has become increasingly difficult for many family medicine residencies. The AFMRD states that with the current maternity care requirements, 58% of programs have difficulty recruiting faculty, and 48% have difficulty complying with the minimal ACGME requirements for maternity care. These are the most common reasons for RRC-FM violations. The group took into serious consideration the many models of maternity care offered by family physicians today. These models were collapsed into a framework of three tiers of maternity care training rather than the two-tier model proposed by the AFMRD. In Tier 1, residents would be competent to perform prenatal and postnatal care but would not be expected to be competent to perform deliveries upon graduation. This may allow programs greater flexibility when it is difficult to provide the numbers of deliveries currently required. Tier 2 would train residents to deliver maternity care much as family physicians do now but requiring greater numbers of deliveries and maintaining continuity requirements. Tier 3 would “raise the bar” for those programs that wish to train their residents to provide advanced care. Tier 3 allows for standardization of training in advanced maternity care that is currently being offered during residency training and postgraduate “fellowships.” The group concluded that three tiers better represents both the way maternity care is taught in family medicine residencies and reflects in actual practice.

The tiered system offers a number of advantages including:
1. Recognition of the diversity that exists in our specialty relating to maternity care, including the important role that family physicians play in providing maternity care for rural and underserved populations, including cesarean delivery.
2. Relieving programs that cannot reasonably train their residents to competency of an educational burden they are unable to meet.
3. Making more robust requirements for programs that train their residents to competency, thereby increasing the likelihood they can obtain privileges to practice maternity care.
4. Fitting into the American Board of Medical Specialties recent recommendations to add procedural skills to the core competencies.
5. Providing medical students with a better picture of a given residency program’s maternity care curriculum. This allows for a clear separation of the training aspects of prenatal/postpartum care from intrapartum care, reflecting the current reality of group practice and shared care. This may enhance medical student recruitment by allowing programs to more clearly define and advertise to applicants what maternity care training tier(s) they provide.

Potential negative aspects of a tiered system include:
1. Tiers could add to confusion about family medicine training and practice among colleagues, hospitals, medical students, patients, and insurance companies. However, many specialties face this dilemma as few actually practice the full spectrum of care that they were trained to provide in residency. When family physicians face credentialing struggles to obtain privileges in what they were trained to do, a tiered system can actually address the confusion by improving the definition and documentation in support of credentialing.
2. Tiers could add to the complexity of matching medical students.
3. Tiers could add to the complexity of residency training if residents wish to change tiers midstream.

A tiered system of maternity care training provides a framework on which to reallocate clinical resources and faculty effort based on the realities of current family medicine practice while still allowing for the importance of continuity of care across the lifespan. By adopting a tiered system for maternity care training, the specialty of family medicine may also more clearly define the competencies for training
residential physicians. The proposed tier system allows for better standardization of maternity care training, including advanced training in maternity care currently offered in residency or fellowships. As a specialty, we need to identify the unresolved issues that accompany the proposal of tiered maternity training and work toward effective solutions.

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References