"Who Will Deliver our Babies?: Crisis in the Physician Workforce"

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Abstract

Recruitment, retention, and distribution of the primary care physician workforce remains one of the nation's more complex and persistent problems. Obstetrics and gynecology has become particularly prone to workforce challenges in relationship to concerns surrounding professional liability, lifestyle, declining medical student interest, reductions in the numbers of OB-Gyn residency programs, and increasing sub-specialization by graduating residents. These trends are associated with inadequate access to maternal and reproductive care, especially in underserved communities. This is particularly concerning given the persistent disparities in maternal and child health (MCH) outcomes. Addressing these concerns will require an emphasis on innovative models for the provision of primary care services in general and maternity care in particular. The MCH model for Family Medicine OB Fellowship programs has been designed to provide advanced training in Obstetrics for family physicians using a family medicine approach to primary care for women and their children.

Introduction

Recruitment, retention, and distribution of the primary care physician workforce remains a complex and persistent problem and is especially significant among urban underserved and rural communities. Specifically, the field of obstetrics and gynecology has increasingly become prone to a shortage in its workforce. Reasons frequently cited by obstetricians for stopping or excluding maternity care from their practice include pressures surrounding professional liability and the impact on lifestyle. There is also an apparent decline in medical student interest to join the field and a decrease in the number of OB/Gyn residency programs.[1] Of those who do choose an OB residency, there is an increasing trend to sub-specialize, which for most means excluding primary and maternity care from their practice. The decline in the number of physicians practicing obstetrics has a direct impact on the availability of adequate maternal and reproductive care for women. This is most evident among patients who are uninsured or underinsured and also for those in rural settings, regardless of their reimbursement status.

To address the growing concerns surrounding the provision of adequate care for women and children, particularly in the context of persistent disparities in maternal and child health (MCH) outcomes, alternative models for the provision of these services are called for. Adequately trained family physicians routinely provide the full spectrum of maternity care for women and are also the provider of primary care for their children and family.

The MCH model, as described here, is a Family Medicine OB Fellowship program designed to provide advanced obstetrics training in the context of family and community medicine. This model is particularly adept at recognizing and responding to the health-related conditions and circumstances prevalent in underserved urban and rural communities. The roughly 30 fellowship programs that are organized around the traditional family medicine OB training model have a track record of success. The MCH model described here is a variation on this theme, and one that appears to offer specific, additional benefits in addressing both the shortages in our health professions workforce and disparities in MCH outcomes.

Decline in Primary Care Physicians

Fewer individuals are choosing medicine as a career and, of those who do select health professions, even fewer are choosing primary care. Between 1998 and 2002, students matching into a residency program in family medicine declined substantially from 16.0% to 10.4%.[2] There are not enough primary care doctors to meet the current needs,[3] let alone the numbers needed to provide access for the almost 50 million among us

who, it thankfully appears, may soon be joining the ranks of the "insured." Market forces surrounding income and liability strongly encourage physicians to choose a specialty career over primary care and to then establish practices in areas that are already served.[4] Meanwhile, those who are in primary care are becoming less willing or able to meet the needs in underserved communities. Governmental efforts to "redistribute" the primary care workforce in response to these market and lifestyle choices have relied largely upon loan repayment and, in a less direct way, enhanced funding to health centers and hospitals that serve the safety net.[5] Despite these programs and incentives the primary care shortage appears to be getting worse.[6]

Like other primary care specialties, family medicine has attracted too few U.S. medical school graduates to meet the current healthcare needs.[7] Factors reported as having influence on these trends include compensation, lifestyle, and perceptions related to prestige.[8] Moreover, many of those who choose to specialize in family medicine either feel unprepared or are just not willing to provide routine maternity care, let alone the type of comprehensive perinatal care that is required if we are to address disparities in MCH outcomes. Many training programs struggle to provide adequate maternity care training, offering just two months of focused labor and delivery training, which is often limited due to a lack of adequate faculty supervision.[9] This experience is generally under the supervision of OB/Gyn physicians and occurs in an environment that is often described as antagonistic, or even "hostile," for the trainees. Family physicians who train under these circumstances rarely choose to include maternity care in their practices, and those who do are necessarily confined to the care of low-risk women.[10]

Meanwhile, the field of Obstetrics and Gynecology is facing its own challenges in responding to the trends and shortage in the workforce. Obstetrics and Gynecology is considered to be a primary care specialty based on the primary care reproductive health services that OB/Gyn physicians routinely provide for women. OB/Gyn training programs do include experience in general primary care for women.[11,12] Most would agree, however, that the scope of practice in OB/Gyn is not comprehensive to the primary care needs of women. This point is emphasized not to detract from the important services provided by OB/Gyn physicians, but rather to illustrate that as a specialty they are not routinely prepared to, on their own, meet the comprehensive primary care needs for women. Meeting these needs will, therefore, require primary care providers in addition to those in OB/Gyn.

Trends in the practice patterns and career choices of Ob/Gyn physicians show that many have either stopped delivering babies or plan to stop in the near future. Several factors are associated with this persistent decline in the obstetrician workforce. The wane in career satisfaction experienced by some OB/Gyn physicians can lead to early retirement. Professional liability was most frequently cited as the major factor influencing career dissatisfaction among practicing OB/Gyn physicians.[13] It appears as though the aging of the current physician workforce has exacerbated the decline in practicing obstetricians-gynecologists. As of 2007, over 50% of current OB/Gyn physicians are over 50 years of age.[14] The percentage of physicians practicing obstetrics has been shown to significantly decrease with age from 96% among physicians under age 35 to 34% among those aged 65 and over, thus contributing to the decline of these services.[15] Of the OB/Gyn physicians who remain in practice, many have chosen to forego obstetrics from their practice due to its negative impact on lifestyle. A study by the University of Washington revealed that physicians practicing obstetrics were working more total professional hours, had more weekly outpatient visits, attended a greater number of deliveries per year, and spent a higher proportion of total hours in direct patient care than physicians who chose to stop obstetric practice.[16]

In addition, there has been a decrease in the number of OB/Gyn residency programs from 272 programs in 1995 to 252 in 2005.[1] Graduates from OB/Gyn residency programs are increasingly choosing to sub-specialize in areas such as endocrinology, oncology, and urology, thereby excluding maternity care from their practice. Between 1999 and 2002, this increase in the trend to sub-specialize in obstetrics and gynecology coexists with a 20% decline in medical student interest in primary care obstetrics.[2]

Inadequate Access to Primary Care

The challenges surrounding recruitment, retention, and distribution of the primary care physician workforce are especially significant among urban underserved and rural communities. Along with the roughly 50 million Americans who are under or un-insured, there is an estimated 80 million among us who are considered "medically disenfranchised," a term that has been applied to those who lack adequate access to a primary care physician. The scope of the problem is also apparent when one considers that more than 75% of the counties in America are now considered to be either complete or partial health professional shortage areas (HPSAs).[17]

A review of the literature over the past two decades shows a consistent and positive relationship between more primary care physicians and improved health outcomes.[18,19] The much needed attention currently placed on expanding insurance coverage to many more people appears to presume that the lack of coverage is the only barrier. However, the lack of access to comprehensive primary care has been linked to the persistent disparities in health outcomes for underserved populations.[20]

Maternal and Child Health

According to the World Health Organization, maternal and child health outcomes are among the most fundamental indicators used to assess the health status and health care infrastructure for communities and populations around the world. Better outcomes are associated with access to safe and effective health care and the availability of qualified health professionals. The literature consistently demonstrates a positive relationship between better maternal and child health outcomes and more primary care.[21]

The current approach generally places the care of women in the hands of clinicians who specialize in reproductive health and who are not prepared to provide the level of comprehensive primary care needed to meet the larger health needs.[12] Meanwhile, in many instances the level of pre-natal care provided in primary care settings is declining.[22] More than any other aspect of primary care, maternity care is increasingly being viewed as unnecessary among the otherwise comprehensive scope of Family Medicine. Factors associated with this phenomenon that are pertinent to the rationale for an MCH Fellowship program include: limitations and obstacles in the training environment for Family Physicians, including the absence of role models in many settings; the lack of consensus among Family Medicine leaders regarding the role of Maternity Care in Family Medicine; and finally, the fallout from the emerging crisis in perinatal risk management and medical malpractice.

The increasing availability of specialists in Maternal-Fetal medicine has helped to meet the pregnancy-related medical needs for women in many urban settings. However, access to this care is not proportionate to population or disparity-based needs, nor does it completely replace the need for primary care. Certified nurse midwives (CNMW) are providing an increased role in maternity care for a growing number of women, though again, not in a way that is comprehensive to primary care. In addition, though CNMWs have many skills, they still routinely rely on physicians at times for medical treatment and operative procedures.

An appropriate health profession response to address the workforce needs in a way that will also truly impact the persistent health disparities is long overdue. Improving both access and outcomes will not only require more providers, but also something more than our current approach to care. Those who are most vulnerable need a patient-centered, evidenced-based, and comprehensive approach that is dynamic and responsive to public health goals.

Description of MCH model in Family Medicine

The specialty of Family Medicine has been applied successfully to address the needs of underserved urban and rural communities and is a viable alternative to the multi-specialty primary care model (Internal Medicine, Pediatrics and OB/Gyn). Adequately trained family physicians routinely provide the full spectrum of maternity care for women, while also providing primary care for their children and families. The advantages of having one provider who can care for the entire family across the life cycle has been well established.[23] Standards for what constitutes “adequate training” in maternity care have been well defined for family physicians in the area of routine obstetrics (AAFP and ACOG joint statement on curriculum). Competency with regard to the adequacy of this training is subsequently validated and confirmed by board certification in family medicine after successful completion of an accredited family medicine residency program. However, until now there has not been a similar, standardized path to define, verify, and confirm the adequacy of training and competency for the many family physicians that have completed advanced training in family medicine obstetrics, either through one of the family medicine obstetric fellowship programs or their equivalency.

We also feel that it is important to clearly acknowledge that family medicine residency programs already prepare physicians to provide primary care across the life cycle, including all the areas mentioned here. Completion of a residency program and subsequent board certification in family medicine are all that is needed to practice family medicine, including in the areas of OB and pediatrics. Therefore, neither advanced training nor the related new board certification in family medicine obstetrics is intended to be, and should not be construed as, a necessary or required component of assessing competency or defining routine privileges for family physicians. Rather, fellowship programs and the new family medicine OB boards are in recognition of the advanced training, skill, and competencies necessary to provide an additional level of care and, in particular, that are required for more complicated pregnancies and operative deliveries.

The MCH Fellowship was developed specifically in response to workforce challenges in maternity care. The MCH model represents a subset of family medicine OB fellowship programs that uniquely includes a clinical service and training focus on neonatal care and pediatrics in addition to obstetrics. It should be noted that the lead author’s first exposure to the MCH training model came in 1990 through an innovative proposal by faculty at the Brown University Department of Family Medicine to combine obstetric and pediatric rotations for medical students in conjunction with a family medicine residency program (please see Acknowledgements). Though the proposal was not approved as an alternative rotation for students at that time, it did result in a parallel redesign of the family medicine residency inpatient service and, subsequently, the design and implementation of what appears to be the first MCH version of OB family medicine fellowships. After completing the program at Brown in 1992, the lead author worked with others to replicate the model in a health center (PCC Community Wellness) and its affiliated hospital and family medicine residency program in Chicago. Both of these MCH fellowship programs are still actively involved in training.

We describe here those aspects of the MCH Fellowship program that focus on perinatal workforce and outcomes as they have been developed at PCC. A brief overview of the curriculum is presented here to illustrate how the program is generally organized, mostly as it relates to inpatient care. Fellows are actively involved in a variety of MCH outpatient clinical services but which are outside the intended scope of this presentation. However, for those who may be interested, a more in-depth description of several aspects of the curriculum can be found in a companion paper in this issue of ACJM.

Developing Skill and Competency: The Clinical Curriculum

Obstetrics

According to the AAFP fellowship directory there are 32 OB fellowship programs designed to advance training in pregnancy care for family physicians. The length of fellowship training varies in these programs from three months to two years. Core procedural skills taught in the fellowships include cesarean delivery, postpartum tubal ligation, and dilation and curettage. Studies have found that graduates of such training programs are successful in obtaining cesarean delivery privileges and providing care to high-risk pregnancy patients in their practice.[24]

With appropriate training obtained in a three-year family medicine residency (particularly one that emphasizes maternity care) and then further developed during fellowship training, the family medicine obstetrician is prepared to provide a level of maternity care consistent with that provided by an Ob/Gyn. Family medicine obstetrics is uniquely practiced as a part of comprehensive primary care, though clearly without the breadth in operative and clinical gynecology that is offered by specialists in Ob/gyn. As is true with all family medicine OB fellowship programs, the MCH model is focused on developing core competencies in prenatal care, labor and delivery, and operative obstetrics. These essential skills are augmented in the MCH fellowship by deliberately emphasizing the scope and breadth that define family medicine and, in this instance, especially those in maternal and child health.

The Newborn

Care of the newborn is an essential component in family medicine and, of course, MCH. The potential to encounter a sick or unstable infant, though uncommon, is present at every delivery and requires a predictable set of skills that must be developed and maintained. This is true for residents, fellows, and attending physicians alike. The tendency to avoid training and experience in high risk, low frequency occurrences, such as neonatal resuscitation, have been described elsewhere and must be discouraged and then replaced by developing a culture of competence that motivates those in training to see, do, and learn in a supervised setting.

For instance, neo-natal resuscitation (NRP) training and regularly held mock codes can be included in the duties and role of the fellows as part of the clinical and administrative process that already exists, or needs to be developed, at the hosting hospital. Interested faculty members and supervising community physicians should be encouraged and rewarded for taking a lead role. A similar, formal approach of active fellow participation can be followed for most any of the clinical scenarios encountered in the nursery, where the use of guidelines, care paths, and protocols can be enhanced. Goals for skill development by the fellows should be clearly stated, tracked, and documented as a requirement for progression within the program. Clarification of roles and expectations should be established and monitored for all those who work directly with the fellows and clinical team, with respect to training, evaluation, clinical supervision, and documentation. There are mutual benefits to formally include many staff members as a part of the expanded "faculty."

Though considerable attention to caring for the sick or potentially unstable neonate is warranted, there is also a need to encourage competency and emphasis on transitioning the neonate to home and the community. High priority MCH clinical scenarios and public health concerns deserve equal focus and should include skill development in areas such as risk factor surveillance, developmental screening, early intervention, and parenting.

Pediatrics

The MCH clinical teaching service naturally includes the infants we deliver, but also the entire spectrum of hospitalized children associated with our clinic and training programs. This includes newborns in special care, those who remain hospitalized after their mother is discharged (boarders), and also patients on the general pediatric ward. Fellows are understandably encouraged to prioritize their educational and clinical experiences in pediatrics on identified needs and goals. In addition to the standard clinical competencies for pediatrics, the curriculum also emphasizes community-based care, parenting support, and efforts to improve outcomes.

In family medicine we have the unique pleasure of first meeting a pediatric patient prior to birth in the context of a therapeutic relationship with its parent(s) and, ideally, future family. This affords the earliest possible opportunity for risk assessment and early intervention. Recognizing the profound social implications associated with perinatal disparities in underserved populations encourages us to take a robust approach to developmental screening and parenting along the entire pediatric continuum of care.

Mother Baby Care

Caring for mothers and their newborns has been described as one of the most enjoyable aspects of family medicine. However, family medicine trainees often rotate through Obstetrics/Gynecology when caring for the mother and through pediatrics when caring for the child. While this model has obvious advantages for other specialties, it essentially undermines one of the strengths in family medicine. The MCH model has been designed to foster continuity of care for both the mother and child. Newborns are admitted in the delivery room by the same physicians who attended labor and the birth.

Postpartum care for the mother is concurrent with that of the newborn. This approach affords many opportunities to coordinate care for mother and child, and combined follow-up visits are the norm. There are many evidence-based reasons to increase the frequency and expand the content of postpartum and neonatal care that are described elsewhere. Suffice it to say that the historical approach to a single, routine visit focused solely on gynecology at four to six weeks post-delivery is far from ad-

equate. We have found the use of specific chart tools for each of a few separate visits helps facilitate screening on psychosocial and medical concerns such as those during the early postpartum and newborn period.

Developing Skill and Competency: The Academic Curriculum

In addition to the clinical competencies addressed above, the list of competencies for MCH has grown to include a number of skills in non-procedural areas including evidence-based medicine, practice guidelines, performance improvement, quality assurance, and peer review. Thus, the MCH model incorporates the use of various routine and enhanced activities including indicator-based chart reviews, clinical case conferences, episodic and ongoing peer review, and interdisciplinary quality improvement committees as a means to address these "non-bedside" aspects of training. In addition, the completion of a scholarly project focused on translation or applied research is a core requirement of the MCH academic curriculum. An in-depth description of the academic curriculum included in the MCH model is the focus of a companion article included in this issue of the *American Journal of Clinical Medicine*.

Verification of Competency through Board Certification

In 2009 the American Board of Physician Specialties began offering a path to board certification in family medicine obstetrics as a means to verify training and competency for family physicians completing additional training in obstetrics. Eligibility for board certification in family medicine obstetrics requires successful completion of a recognized OB fellowship, such as the MCH program described herein, or the equivalency in training and practice experience. The latter eligibility component is in recognition of the fact that there is not yet a process to standardize or confirm accreditation of family medicine OB fellowship programs. The MCH training model as described herein satisfies the eligibility requirements for board certification in family medicine obstetrics and does so with an emphasis on a comprehensive, family medicine approach to women and children.

Conclusion

Workforce trends surrounding issues of liability, lifestyle, student and resident interest in obstetrics, and the role of training programs are significant factors in the challenges facing the provision of maternal care, especially in urban underserved and rural communities. Meanwhile, outcomes for maternal and child health indicators show persistent disparities, with differences most pronounced in these same underserved communities. Family physicians are uniquely able to help address the needs in both workforce and outcomes, though are hindered by a variety of barriers including training. The MCH model for Family Medicine OB Fellowship training has been designed specifically to address the needs by providing advanced training in obstetrics for family physicians, with a family and community medicine approach. Though continued innovation in program development and training along these lines should be encouraged, much can be gained by a process to standardize and externally validate both the training programs and their graduates. The new board certification in family medicine obstetrics offers a path for this validation and is solely focused on additional, advanced training and skill beyond that already provided for by accredited family medicine residency training programs and subsequent board certification in family medicine.

Acknowledgements

Drs. Brian Jack and Larry Culpepper were instrumental among the faculty leaders who helped develop the model as described, and Drs. Lisa Solinas, Alexander Wu, and Mark Gideonsen deserve recognition and thanks for their leadership in supporting the fellowship program at PCC.

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Potential Financial Conflicts of Interest: By AJCM® policy, all authors are required to disclose any and all commercial, financial, and other relationships in any way related to the subject of this article that might create any potential conflict of interest. The authors have stated that no such relationships exist.

References

1. Brotherton, S. E., P. H. Rockey, and S. I. Etzel. "Us Graduate Medical Education, 2004-2005: Trends in Primary Care Specialties." JAMA 294.9 (2005): 1075-82.
2. Newton, D. A., and M. S. Grayson. "Trends in Career Choice by Us Medical School Graduates." JAMA 290.9 (2003): 1179-82.
3. Colwill, J. M., J. M. Cultice, and R. L. Kruse. "Will Generalist Physician Supply Meet Demands of an Increasing and Aging Population?" Health Aff (Millwood) 27.3 (2008): w232-41.15.
4. Nesbitt, T. S., J. E. Scherger, and J. L. Tanji. "The Impact of Obstetrical Liability on Access to Perinatal Care in the Rural United States." J Rural Health 5.4 (1989): 321-35.
5. Rittenhouse, D. R., Fryer G. E., Phillips R. L., et al. "Impact of Title Vii Training Programs on Community Health Center Staffing and National Health Service Corps Participation." Ann Fam Med 6.5 (2008): 397-405.
6. Rosenthal, T. C. "Outcomes of Rural Training Tracks: A Review." J Rural Health 16.3 (2000): 213-6.
7. Pugno, P. A., McGaha, A. L., Schmittling G. T., et al. "Results of the 2008 National Resident Matching Program: Family Medicine." Fam Med 40.8 (2008): 563-73.
8. Senf, J. H., D. Campos-Outcalt, and R. Kutob. "Factors Related to the Choice of Family Medicine: A Reassessment and Literature Review." J Am Board Fam Pract 16.6 (2003): 502-12.
9. Gibson, M. V., and W. J. Hueston. "Recruiting Faculty to Perform Deliveries in Family Medicine Residencies: Results of a Residency Program Survey." Fam Med 39.3 (2007): 178-83.

10. Larimore, W. L., and J. L. Reynolds. "Family Practice Maternity Care in America: Ruminations on Reproducing an Endangered Species--Family Physicians Who Deliver Babies." J Am Board Fam Pract 7.6 (1994): 478-88.
11. Scherger, J. E. "Primary Care Training for Ob-Gyn Practitioners." Acad Med 71.5 (1996): 563.
12. Coleman, V. H., Laube, D. W., Hale, R. W., et al. "Obstetrician-Gynecologists and Primary Care: Training During Obstetrics-Gynecology Residency and Current Practice Patterns." Acad Med 82.6 (2007): 602-7.
13. Julie, L. Becker, P. Milad Magdy, and C. Klock Susan. "Burnout, Depression, and Career Satisfaction: Cross-Sectional Study of Obstetrics and Gynecology residents." American Journal of Obstetrics and Gynecology 195.5 (2006): 1444-49.
14. Anderson, B. L., Hale, R. W., Salsburg, E., et al. "Outlook for the Future of the Obstetrician-Gynecologist Workforce." Am J Obstet Gynecol 199.1 (2008): 88 e1-8.
15. Chan, B. T., and J. Willett. "Factors Influencing Participation in Obstetrics by Obstetrician-Gynecologists." Obstet Gynecol 103.3 (2004): 493-8.
16. Dresden, G. M., Baldwin, L., Andrilla, H. A., et al. "Influence of Obstetric Practice on Workload and Practice Patterns of Family Physicians and Obstetrician-Gynecologists." Ann Fam Med 6 Suppl 1.1 (2008): S5-11.
17. Zhang, X., Phillips, B., Bazemore, A., et al. "Physician Distribution and Access: Workforce Priorities." Am Fam Physician 77.10 (2008): 1378.
18. Macinko, J., B. Starfield, and L. Shi. "Quantifying the Health Benefits of Primary Care Physician Supply in the United States." Int J Health Serv 37.1 (2007): 111-26.
19. Shi, L., Macinko, J., Starfield, B., et al. "Primary Care, Infant Mortality, and Low Birth Weight in the States of the USA." J Epidemiol Community Health 58.5 (2004): 374-80.
20. Liu, J. J. "Health Professional Shortage and Health Status and Health Care Access." J Health Care Poor Underserved 18.3 (2007): 590-8.
21. Krueger, P. M., and T. O. Scholl. "Adequacy of Prenatal Care and Pregnancy Outcome." J Am Osteopath Assoc 100.8 (2000): 485-92.
22. "Family Physicians' Declining Contribution to Prenatal Care in the United States." Am Fam Physician 66.12 (2002): 2192.
23. Gill, J. M., and A. G. Mainous, 3rd. "The Role of Provider Continuity in Preventing Hospitalizations." Arch Fam Med 7.4 (1998): 352-7.
24. Chang Pecci, C., L. Leeman, and J. Wilkinson. "Family Medicine Obstetrics Fellowship Graduates: Training and Post-Fellowship Experience." Fam Med 40.5 (2008): 326-32.