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## Trends and Evolution in Women's Health Workforce in the First Quarter of the 21<sup>st</sup> Century

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### Abstract

Medicine in general, and particularly women's health, is rapidly evolving. This brief communication exposes some of the changes in Obstetrics and Gynecology but are relevant to all areas of medicine. As medical knowledge grows exponentially, there may be a greater sub-specialization of physicians, residency education must adapt, physician burnout remains an issue and clinician-scientists are becoming a dying breed. In addition, healthcare delivery systems and technological innovations, such as intelligent-EMRs, promise to support physician and prevent medical errors.

### Keywords

Burnout; OB/GYN; Physician workforce; Resident training; Subspecialty; Technology

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Conflict of interest

No conflicts of interest exist.

## Introduction

Like all of medicine and nursing, the practice of Obstetrics and Gynecology is rapidly evolving. The specialty is continually pressured by the forces from managed care, the reimbursements from government programs such as Medicare and Medicaid, and the need for greater efficiency and patient safety. The demographics of physicians and other providers have dramatically changed as more women and more traditionally underrepresented individuals are joining the workforce and expecting better work/life balance. The knowledge base in the field has greatly expanded and the rate of change has been accelerating as new specialized treatments, procedures, instruments, medications, genomics are continuously evolving the standard of care. Traditional clinician-scientists working at academic institutions are finding it more difficult to both innovate and practice medicine as economic forces are reshaping academic medicine. Patients are becoming more knowledgeable, as they tend to research on the internet, and more discriminating as they choose the optimal treatment and best physicians to help them. These elements, together, are impacting Obstetrics and Gynecology. We will now explore how the specialty of Women's Health is affected by these changes and how it may evolve.

## More Board-Certified subspecialists

Residents who graduate from residency training programs have undergone extensive training, have demonstrated clinical competency, and have acquired a sufficient fund of knowledge to practice the specialty independently. Over time, they will gain experience and develop greater confidence and judgement. Residency trains very broadly and, in addition to general obstetrics and gynecology, exposes residents to many subspecialties such as urogynecology, gynecologic-oncology, maternal-fetal medicine, reproductive endocrinology, family planning, and research. As the field becomes increasingly more complex, as more surgical procedures and techniques are developed and as new equipment, genetic assays and biological drugs come to market, it becomes increasingly difficult for a practitioner to maintain clinical and surgical competency through such a wide array of disciplines. While some OB/GYNs choose to practice the entire breadth and depth of the specialty, many choose to subspecialize either through formal fellowship programs or through concentrating their practice on their areas of interest.

From an employment perspective, an increasing number of larger physician groups as well as major academic centers will career "track" physicians. Quality metrics have shown that higher volume surgeons have less complications than lower volume surgeons (1) and that obstetric hospitalists have lower cesarian section delivery rates and are better trained to deal with obstetrical emergencies. As such, office-practice based physicians will refer patients to obstetrical hospitalists or to dedicated gynecological surgeons. Similarly, for obstetrics, complex patients may be managed best by perinatologists with the support of obstetrical geneticists and other specialized individuals. Such "redistribution" of cases may have an impact on how we train residents and on the availability of Ob/Gyn generalists to tend to patients (2).

As the specialty evolves into more subspecialties, quality metrics and accreditation standards must accompany this evolution to ensure patient safety and physician competence. The American Board of Obstetrics and Gynecology recently introduced new board certifications in complex family planning and female pelvic medicine and reconstructive surgery (FPMRS) as well as focused practice designations in pediatric and adolescent gynecology and minimally invasive gynecologic surgery. This trend may continue with the institution of new board certifications in areas such as hospitalist, menopause and transgender care.

## Expansion of Hospitalists

With the pressures of managed care, the declining rates of reimbursements, the economies of scale in private practice, the need to maintain efficiency and patient safety coupled with the demand for improved work/life balance (3) an evolution in our field became necessary. Near the turn of the century, Wachter and Goldman described the concept of “hospitalist” (4) as a physician who provides care in the hospital setting. This concept was adapted from internal medicine into OBGYN and today the Society of OB/GYN Hospitalists (SOGH) defines a hospitalist as “an obstetrician-gynecologist who has focused their professional practice on the care of the hospitalized woman”. Similarly, a laborist is an “OB/GYN who focuses their practice on the care of pregnant women”. Hospitalists can help private OB/GYN physicians, serve as extenders for perinatologists (5), improve care and safety (6), and increase efficiency (7) while decreasing costs of care (8), reducing liability claims, teaching residents and staff through example and simulations and improving physician satisfaction and well-being (9). As hospitalists tend to be younger and less experienced physicians, structured fellowship programs geared towards expanding inpatient obstetrical and emergency gynecological skills, will continue to develop. In the past decade this field has continued to expand and, eventually, will culminate in its own subspecialty board certification.

## Addressing Physician Burn-Out

Many physicians chose to leave practice or reduce their hours. The increasing pressures of the health care system and the tone and pace of work have led many OB/GYNs to feel overwhelmed and burnt out (10). In one study, 64% of physicians reported experiencing burnout with 31% agreeing with the statement “I want to quit” (11). Many physicians, particularly female physicians, have considered scaling back practice hours (12) or early retirement as a result (13, 14). The United States is already facing a shortage of OB/GYN providers, and the projected shortage is expected to increase by up to 22,000 by 2050 as the population of the country expands (15, 16). As this crisis unfolds, we begin to recognize that many factors contributed to burnout and attrition. Potential solutions may include wellness and resiliency training, adapting work schedules, providing reasonable time for patient encounters, better schedules to recuperate from emotional exhaustion, greater support from advanced practice providers and nurses and more focused areas of clinical responsibilities. Such adaptations are important especially during times of crisis, such as with the COVID-19 pandemic, where burnout affected all physicians, including OB/GYNs (17).

## Decreasing Number of Clinician-Scientists

An ideal academic obstetrician/gynecologist is typically a well-funded researcher, a clinician with strong evidenced-based knowledge, an educator passionate in teaching residents and medical students and a well-rounded individual who remains a passionate advocate for social change, health care access and women's health. Many programs such as the NIH Women's Reproductive Health Research (WRHR) grant and the Building Interdisciplinary Research Careers in Women's Health (BIRCH) seek to increase the research capacity of clinically trained OBGYNs and to create clinician-scientists. However, with the limitations of departmental funds available for research and the competition involved in obtaining independent grant funding, the possibilities of maintaining a pool of clinician-scientists have become difficult. Additionally, even with "protected" research time, it is still challenging for physicians to maintain clinical excellence and remain productive investigators without reducing the scope of practice and research. Such a climate makes it difficult, particularly for women, to become physician-scientists and can make it problematic for students and residents to find mentors. In order for the United States to maintain leadership, new grant mechanisms and novel collaborative models between basic scientists and busy clinicians may need to be built.

## New Technological Innovations

New technologies are currently being developed and validated which may change the way Obstetrics and Gynecology is practiced. For example, in the past half-century, electronic fetal monitoring (EFM) has been the cornerstone method by which labor is managed and fetal wellbeing is assessed. This method indirectly assesses the fetus for acidosis and relies on physician interpretation. In many cases, cesareans are performed for NIH-category II tracings remote from delivery, only to find that fetal blood gases were normal. Newer technologies, such as photo acoustics, directly assess fetal tissues for hypoxia with better accuracy, reducing unnecessary caesarian deliveries. Similarly, the decision to administer antenatal corticosteroids in patients at risk of preterm delivery will be individualized by noninvasively checking for the presence of a protein found in maternal blood, which serves as a surrogate marker for fetal lung maturity and the potential for respiratory distress syndrome (18). Furthermore, novel therapeutics which can hasten fetal lung maturity without the negative side effects of antenatal corticosteroids may have an impact on how we practice obstetrics. These technological innovations will help laborists manage laboring and preterm patients more efficiently, standardize care and increase safety on the obstetrics service.

## Improved Healthcare Delivery

Although telemedicine has existed for some time, the COVID-19 pandemic changed the processes through which we deliver care. Leveraging the electronic infrastructure of the internet, more OB/GYN visits may be conducted remotely, particularly consultations, and result review visits. With new billing regulations, clinicians will continue to expand the scope of visits which can be conducted on-screen. Working remotely, subspecialists such as perinatologists will be able to document on the electronic medical record (EMR), send

requisitions for studies and lab work electronically and e-prescribe treatments. Such access will improve care by connecting subspecialists at remote academic institutions with patients in smaller communities who traditionally were unable to access higher levels of care easily.

Intelligent EMRs will integrate artificial intelligence to help physicians deliver the safest and most up-to-date care. For example, laboratory results can be examined by the EMR which will suggest the latest CDC approved regimen for the treatment of a patient's positive gonorrhea test. Medication errors and failure to diagnose errors are still very common. Having an intelligent EMR will assist in catching errors, spotting trends in the patient's data, saving lives and reducing liability. The higher level of automation will also help physicians have more face-to face time with patients, instead of charting, and may increase physician satisfaction, retention and efficiency.

## Conclusion

The landscape of Obstetrics and Gynecology is quickly evolving as it is being molded by external forces (insurance companies, increasing number of potential patients) and internal pressures (retirements, need for a better quality of life, increasingly female-led specialty, migration towards sub specialization). The projected worsening shortages in OB/GYNs will further exacerbate these pressures. Unless the paradigm shifts towards one that is more inclusive of part-time physicians, allows physicians to re-enter clinical positions and treats physicians more humanely to avoid burnout, the shortage of physicians will continue to deepen. Technological innovations and improvements in the healthcare delivery infrastructure may help support physicians and increase quality of care and patient safety.

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## References

1. Siedhoff MT, Truong MD, Wright KN. Gynecologic surgery tracking in obstetrics and gynecology residency. *Curr Opin Obstet Gynecol*. 2020;32(4):298–303. Epub 2020/05/27. doi: 10.1097/GCO.0000000000000640. [PubMed: 32453127]
2. Rayburn WF, Xierali IM. Subspecialization in Obstetrics and Gynecology: Is It Affecting the Future Availability of Women's Health Specialists? *Obstet Gynecol Clin North Am*. 2021;48(4):737–44. Epub 2021/11/11. doi: 10.1016/j.ogc.2021.06.003. [PubMed: 34756293]
3. Frigoletto FD, Greene MF. Is there a sea change ahead for obstetrics and gynecology? *Obstet Gynecol*. 2002;100(6):1342–3. Epub 2002/12/07. doi: 10.1016/s0029-7844(02)02470-5. [PubMed: 12468182]
4. Wachter RM, Goldman L. The emerging role of "hospitalists" in the American health care system. *N Engl J Med*. 1996;335(7):514–7. Epub 1996/08/15. doi: 10.1056/NEJM199608153350713. [PubMed: 8672160]

5. McCue B What is an Obstetrics/Gynecology Hospitalist? *Obstet Gynecol Clin North Am.* 2015;42(3):457–61. Epub 2015/09/04. doi: 10.1016/j.ogc.2015.05.011. [PubMed: 26333635]
6. Wachter RM, Goldman L. The hospitalist movement 5 years later. *JAMA.* 2002;287(4):487–94. Epub 2002/02/02. doi: 10.1001/jama.287.4.487. [PubMed: 11798371]
7. Chaty B Hospitalists: an efficient, new breed of inpatient caregivers. *Healthc Financ Manage.* 1998;52(9):47–9. Epub 1998/08/05. [PubMed: 10182743]
8. Diamond HS, Goldberg E, Janosky JE. The effect of full-time faculty hospitalists on the efficiency of care at a community teaching hospital. *Ann Intern Med.* 1998;129(3):197–203. Epub 1998/08/08. doi: 10.7326/0003-4819-129-3-199808010-00006. [PubMed: 9696727]
9. Weinstein L The laborist: a new focus of practice for the obstetrician. *Am J Obstet Gynecol.* 2003;188(2):310–2. Epub 2003/02/20. doi: 10.1067/mob.2003.133. [PubMed: 12592231]
10. Shanafelt TD, Hasan O, Dyrbye LN, Sinsky C, Satele D, Sloan J, et al. Changes in Burnout and Satisfaction With Work-Life Balance in Physicians and the General US Working Population Between 2011 and 2014. *Mayo Clin Proc.* 2015;90(12):1600–13. Epub 2015/12/15. doi: 10.1016/j.mayocp.2015.08.023. [PubMed: 26653297]
11. O'Connell VA, Youcha S, Pellegrini V. Physician burnout: the effect of time allotted for a patient visit on physician burnout among OB/GYN physicians. *J Med Pract Manage.* 2009;24(5):300–13. Epub 2009/05/22. [PubMed: 19455869]
12. West CP, Dyrbye LN, Shanafelt TD. Physician burnout: contributors, consequences and solutions. *J Intern Med.* 2018;283(6):516–29. Epub 2018/03/06. doi: 10.1111/joim.12752. [PubMed: 29505159]
13. Vetter MH, Salani R, Williams TE Jr., Ellison C, Satiani B. The Impact of Burnout on the Obstetrics and Gynecology Workforce. *Clin Obstet Gynecol.* 2019;62(3):444–54. Epub 2019/04/23. doi: 10.1097/GRF.0000000000000452. [PubMed: 31008731]
14. Sinsky CA, Dyrbye LN, West CP, Satele D, Tutty M, Shanafelt TD. Professional Satisfaction and the Career Plans of US Physicians. *Mayo Clin Proc.* 2017;92(11):1625–35. Epub 2017/11/06. doi: 10.1016/j.mayocp.2017.08.017. [PubMed: 29101932]
15. Rayburn WF, Tracy EE. Changes in the Practice of Obstetrics and Gynecology. *Obstet Gynecol Surv.* 2016;71(1):43–50. Epub 2016/01/29. doi: 10.1097/OGX.0000000000000264. [PubMed: 26819135]
16. Rayburn WF, editor *The obstetrician-gynecologist workforce in the United States: facts, figures, and implications, 2017/2017: American Congress of Obstetricians and Gynecologists Washington, DC.*
17. Riggan KA, Reckhow J, Allyse MA, Long M, Torbenson V, Rivera-Chiauszi EY. Impact of the COVID-19 Pandemic on Obstetricians/Gynecologists. *Mayo Clin Proc Innov Qual Outcomes.* 2021;5(6):1128–37. Epub 2021/12/02. doi: 10.1016/j.mayocpiqo.2021.11.002. [PubMed: 34849457]
18. Welch RA, Recanati MA, Welch KC, Shaw MK. Maternal plasma LPCAT 1 mRNA correlates with lamellar body count. *J Perinat Med.* 2017. Epub 2017/09/20. doi: 10.1515/jpm-2017-0057.