

Production of OB/GYN physicians to reduce the deficit of maternity providers in Alabama

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Abstract

Background: Alabama has the second highest rate of infant mortality of any state in the United States. This high rate of infant mortality is related to closure of rural labor and delivery units, closure of rural hospitals, lack of access to obstetric care and lack of OB/GYN and family physicians obstetrics providers. Obstetrician/gynecologists or family physicians trained in obstetrics are essential for hospitals to provide obstetrical care. This study was designed to determine if the production of obstetrician/gynecologists by the University of Alabama School of Medicine was comparable to other similar medical educational institutions.

Materials and Methods: A list of 6271 graduates of the University of Alabama School of Medicine from the Birmingham, Tuscaloosa and Huntsville campuses from 1974 to 2015 was obtained from the published records of the main campus in Birmingham. Variables included the years of matriculation and graduation, full names, specialty choice, name and location of PGY1 institution and name and location of residency.

Results: A total of 435 medical students assigned to the Birmingham, Tuscaloosa and Huntsville Campuses matched into OB/GYN from 1974 to 2015. Some 334 graduates practiced OB/GYN (84.9%). Thirty graduates switched from other specialties into OB/GYN. Twenty-two graduates who matched into OB/GYN, changed specialties or the specialty was unknown. Among the graduates who matched into OB/GYN, 67 pursued fellowships and practiced subspecialties.

Conclusions: On average, 6.9% of medical students from the University of Alabama School of Medicine matched into OB/GYN compared to the national average of 5.9% The production of obstetrician/gynecologists is consistent with the most recent data from the ACOG Workforce Study.

Introduction

Alabama has the second highest infant mortality rate in the United States [1,2]. This high infant mortality rate is related to closure of rural labor and delivery units, closure of rural hospitals, lack of access to obstetric care and lack of OB/GYN and family physician obstetrics providers [2]. Lawsuits, cost of malpractice insurance, lack of trust by the community, bad outcomes, insufficient numbers of specialized nursing staff, lack of 24-hour anesthesia coverage, lack of up to date technology necessary to meet the standard of care, low reimbursement, patients with no health insurance coverage and insufficient numbers of patients who want to deliver locally contribute to the loss of local obstetric services [2]. For these reasons, small, rural hospitals that struggle financially, often choose to discontinue labor and delivery services. The result of this is more out-of-hospital deliveries, more deliveries in transit, more deliveries at hospitals without obstetric services, longer travel times, and more preterm deliveries [2]. Obstetrician/gynecologists or family physicians trained in obstetrics are essential for hospitals to provide obstetrical care.

The greatest need for obstetrical care is in rural, underserved areas of this country [3]. According to Rayburn's frequently quoted 2012 article in *Obstetrics and Gynecology*, approximately half of U. S. Counties have no obstetrics provider, leaving some 10 million reproductive-aged women (aged 15 to 45 years) without care [4]. Unfortunately, many of these women live in rural, underserved communities [4]. Lack of obstetrics care and providers is associated with poor outcomes, poor access to care, more complications and more expensive care [5]. Most OB/GYN residency graduates practice in larger, urban areas, rarely in rural communities. These factors contribute to a maldistribution of obstetric providers which could worsen [4].

The number of OB/GYN residency programs in this country has decreased from 306 to 246 since 1993 with no immediate plans of developing new programs [6]. In the 1980's there were four OB/GYN residency programs in Alabama and now there are only two. There are currently 1200 PGY1 first year positions in OB/GYN [7]. Some 5.9% of U.S. medical school graduates match into OB/GYN [7]. The number of retiring obstetrician/gynecologists closely approximates the number of graduating OB/GYN residents [7]. There is a projected need for 6% more OB/GYN physicians by 2020 according to a study by Dall *et al.* [8]. This number translates to about 2090 more physicians [8]. There were 474 obstetrician/gynecologists serving slightly more than 2,000,000 women in Alabama in 2014 [9]. The female population is expected to increase by 6% by 2030 [9]. Half of Alabama's counties have no OB/GYN [9]. Alabama is predominantly rural with the exception of 7-8 cities. More than 50% of births are funded by Medicaid [9]. The goal of this study was to examine the production of OB/GYN physicians from the graduates of the University of Alabama School of Medicine main and regional campuses.

Materials and methods

This project did not require approval by the Institutional Review Board of the University of Alabama because it did not involve human

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subjects. A list of 6271 graduates of the University of Alabama School of Medicine from the Birmingham, Tuscaloosa and Huntsville campuses from 1974 to 2015 was obtained from the published records of the main campus in Birmingham. Graduates assigned to the Montgomery campus were not included in this study because this campus opened in 2014. Variables included the years of matriculation and graduation, full names, specialty choice, name and location of PGY1 institution and name and location of residency.

Researchers expanded this database to include additional information found in Table 1. Information was obtained primarily from Google Search Engine. Publicly available data from internet sources was selected as the primary source of information with verification from other sources when feasible, recognizing the positives as well as the limitations of internet-based data. Information was obtained on 6238 (99.5%) graduates assigned to the three campuses from 1974 to 2015. Physicians were identified by their practice website. The database was then configured into a SPSS database.

Results

Results of the study are found in Table 2. From 1974 to 2015, 435 medical students assigned to the Birmingham, Tuscaloosa and Huntsville Campuses matched into OB/GYN. Detailed information including

practicing specialty and location of practice was obtained on all but two graduates. On average, 6.9% of medical students matched into OB/GYN compared to the national average of 5.9% [6]. As of 2015, 42 graduates were still in residency training. A total of 30 graduates changed from other specialties into OB/GYN (Internal Medicine, Pediatrics, Family Medicine, Pathology, Transitional Year, General Surgery, Psychiatry, Preliminary Medicine and Preliminary Surgery). Among graduates who matched into OB/GYN, 22 changed specialties (Emergency Medicine, Internal Medicine, Ophthalmology, and Family Medicine) or their practice was unknown, Sixty-seven graduates pursued fellowship training and practiced OB/GYN subspecialties including Maternal Fetal Medicine, GYN Oncology, Reproductive Endocrinology and Infertility, Uro-gynecology and Pelvic Reconstructive Surgery. Ultimately, some 334 graduates practiced general OB/GYN (84.9%). It is unknown how many practicing obstetrician/gynecologists are hospitalists, laborists, academicians, researchers or administrators.

Conclusions

The production of OB/GYN generalists and subspecialists are consistent with the most recent data from the ACOG Obstetrician/Gynecologist Workforce Study in the United States from 2017 [6]. While the production of OB/GYN physicians is consistent with the national data, more OB/GYN physicians are needed to supply the projected need [7]. Physicians matching into OB/GYN often changed

Table 1. Expanded Database of the University of Alabama School of Medicine Graduates from the Tuscaloosa, Birmingham and Huntsville Campuses (1974-2015)

Matriculation Year	Zip Code
Graduation Year	RUCA Code
MD Granted Date	Rural/Urban Area
Full Name	MUC (Medically Underserved Community)
PGY1 Specialty	Board Certification
PGY1 Institution	Matched in Categorical Surgery
PGY1 City	Matched in Preliminary Surgery
PGY1 State	Practiced General Surgery
Training State to Practice State	Practiced General Surgery in Alabama
Practicing Specialty	Practiced General Surgery in Rural Alabama
Subspecialty	Practiced General Surgery in Rural U.S.
Rural Medical Scholars Program	Matched in Subspecialty Surgery
Primary Care/Other	Matched in Family Medicine
Practicing Matched Specialty	Practiced Family Medicine in Alabama
Practice Location	Practiced Family Medicine in Rural Alabama
Practice State	Practice Primary Care
Address	Practiced Primary Care in Alabama
Contact Telephone	Practiced Primary Care in Rural Alabama
Stayed in Alabama/Left Alabama	

Table 2. Production of Obstetrician/Gynecologists in the UASOM System, 1974 to 2015

CAMPUS ¹	BIRMINGHAM	TUSCALOOSA	HUNTSVILLE	TOTAL
Total Students	4498	850	923	6271
Matched in OB/GYN	332	51	52	435
Matched Percentage	7.3%	6.0%	5.6%	6.9%
# Still in Residency	28	6	8	42
Changed to OB/GYN	22	4	4	30
Changed to Other or Unknown Specialty	18	1	3	22
Practiced OB/GYN	254	40	40	334
Percentage Practicing OB/GYN	83.5%	88.9%	90.9%	84.9%
Practiced Subspecialties	54	8	5	67

¹The Montgomery campus opened in 2014 and that data was not included in this study

specialties for a variety of reasons including lifestyle, work hours, litigation concerns and salary. Some medical students who enjoyed OB/GYN and matched into other specialties may ultimately practice OB/GYN. To meet the needs of the future, medicine must maximize the use of and encourage the production of obstetrics providers.

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