

Original Article

Compensation Among Graduated Fellowship in Minimally Invasive Gynecologic Surgery Fellows

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ABSTRACT **Study Objective:** The Fellowship in Minimally Invasive Gynecologic Surgery (FMIGS) is a postresidency fellowship developed with the mission to train the next generation of minimally invasive gynecologic surgeons. The need for surgeons trained in this field has increased, yet there remains a paucity of information regarding the compensation of these specialized surgeons.

Design: A survey was sent via e-mail to FMIGS graduates (N = 221) using an online survey tool; it was sent twice more to increase the response rate between July and December 2013. The survey collected information on current and starting salaries and benefits as well as academic rank, location, practice type, and practice breadth. Comparisons were analyzed using multivariable linear regression models (Canadian Task Force Classification II-2).

Setting: E-mail-based survey.

Patients: Graduates of the FMIGS.

Interventions: A single survey sent 3 times.

Measurements and Main Results: Of 221 graduates surveyed, 164 responded (response rate = 74%). Sixty-one percent of respondents (n = 100) were from academic institutions, and the remainder were from private practice (n = 64). Of all respondents, 27 (16.5%) reported less than 1 year of postfellowship experience and had a median starting salary of \$216 399 (range, \$106 834–\$542 930). Survey respondents were on average 3.3 years (range, 0–14) out of fellowship with a median salary of \$238 198 (range, \$108 200–\$993 765). Academic surgeons (average experience = 3.4 years) earned \$208 743 (range, \$106 834–\$542 930) compared with private practice surgeons (average experience = 3.2 years) who earned \$233 020 (range, \$115 000–\$454 448).

Conclusion: Salaries and compensation benefits of graduates of the FMIGS are varied. This information is very relevant to those attempting to hire or become employed as gynecologic surgical specialists. *Journal of Minimally Invasive Gynecology* (2015) 22, 469–474 © 2015 AAGL. All rights reserved.

Keywords: Compensation; Fellow; Fellowship; Fellowship in Minimally Invasive Gynecologic Surgery; Salary

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The authors declare no conflict of interest.

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The Fellowship in Minimally Invasive Gynecologic Surgery (FMIGS) has its origins in advanced reproductive surgery and, in its original form, was developed to address inadequate resident training in modern endoscopy. Reproductive surgeons served as the original preceptors for the Society for Reproductive Surgery (SRS) fellowship. In the years that followed, similar fellowships were established that focused on the particular interests of each site's

preceptor. These fellowships were without standardization or affiliation with a major society. In 2001, the American Association of Gynecologic Laparoscopists (AAGL) and SRS collaborated to establish the first FMIGS programs, standardizing the curriculum and the requirements for research [1]. Of the 44 current FMIGS sites, all are now 2-year commitments. Fellowship programs were previously either 1 or 2 years in duration. The mission of fellowship training as defined by the FMIGS is to serve as a “scholarly and surgical resource for the community ... to care for patients with complex gynecologic disease, and manage complications of minimally invasive techniques [2].”

The Association of American Medical Colleges (AAMC) publishes an annual report on medical school faculty salaries using data from a Web-based survey, which is completed by all accredited US medical schools. Similarly, the Medical Group Management Association publishes an annual report separating private practice and academic compensations and production. These reports include data on board-certified subspecialties, including gynecologic oncology, maternal fetal medicine, and reproductive endocrinology [3]. Minimally invasive gynecologic surgery, like the Fellowship in Family Planning, is not a board-certified subspecialty and thus has not been included in these reports.

In a study that compared overall physician salary compensation in obstetrics and gynecology to inflation over a 9-year period from 2001 to 2009, a net 3.5% increase was noted. Although salaries increased overall in each specialty, the growth was lowest in general obstetrics and gynecology followed by reproductive endocrinology/infertility and was not statistically different from the inflation rate. Salaries were consistently highest among faculty in gynecologic oncology followed by maternal-fetal medicine [4]. The financial loss of doing a fellowship is not guaranteed to be recouped in subsequent years and may require a higher than average salary to render the additional training financially neutral. A study of female pelvic medicine and reconstructive pelvic surgery graduates found that an annual income that was 16% to 31% higher than that of a general obstetrician/gynecologist was required to offset the financial opportunity cost (\$400 000–\$600 000) of fellowship training [5]. Now that the FMIGS is 2 years, rather than 1, the question of equitable salary compensation for fellowship training becomes increasingly relevant. The objectives of this study were to investigate the starting and current compensation of FMIGS graduates based on different practice types, locations, and years of experience.

Materials and Methods

To maximize the response rate, administrators of the FMIGS sent a survey to all fellowship graduates on 3 separate occasions between July and December 2013. SurveyGizmo (Boulder, CO) was used to produce and distribute the survey, and it was managed and executed by the FMIGS fellowship manager. To confirm that there were not multiple responses from a single individual, respondent

data were cross-referenced using demographic data, and no duplicate responses were present.

The survey consisted of items designed to determine general employment type, practice details, and compensation (Appendix 1, available at <http://jmig.org>). Survey participants were asked about practice model (academic vs private), practice location, initial starting rank (if academic), and practice focus (minimally invasive surgery [MIS] only vs gynecology only vs obstetrics/gynecology [OB/GYN] generalist). Regarding practice details, survey participants were asked about practice location, which was grouped into 5 groups: 1 international region and 4 US regions. Finally, survey participants were asked about current salary, starting salary, benefits, and compensation model. Starting and current salaries were inflation adjusted using the consumer price index obtained from the US Department of Labor, Bureau of Labor Statistics. Salary observations were converted to 2013 dollars to control for inflation and cost of living. Median values were used for total compensation because they are generally more consistent over long periods of time, are less affected by extreme values, and reflect industry standard use by the Medical Group Management Association (MGMA) and AAMC.

We used descriptive statistics to examine demographics by region, practice type, service type offered, years of experience for starting salary, and salary currently earned. Multivariable linear regression models (a separate model for each dependent variable) were then used to evaluate the effects of region, service type offered, and practice type. Means were used for these models. The effect of years of experience was examined additionally in the current salary model. The current salary regression model also controlled for starting salary. The model fit was assessed using residual plots. Log transformations were used in both the starting salary and current salary model to improve the model fit.

Data were collected by the AAGL and FMIGS for use by the fellowship in establishing a database of fellow salaries. This database contains no personal identifiers. Information was secured on password-protected computers only. The Institutional Review Board at the University of Utah granted analysis of these data institutional review board exempt status.

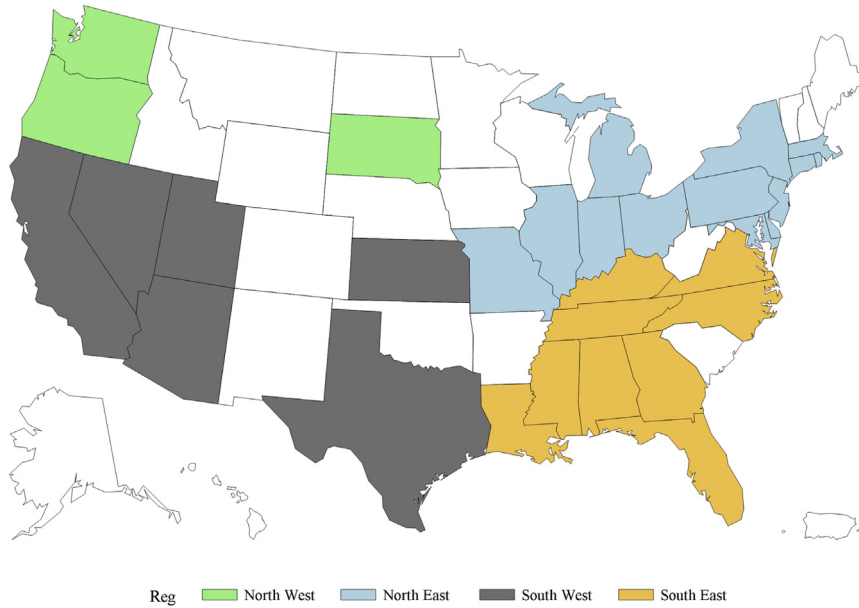
Results

Surveys were sent to all of the 221 physicians who graduated from FMIGS fellowships; 164 surveys were returned for a response rate of 74%. There were respondents from 8 countries including Israel, Lebanon, Oman, Saudi Arabia, South Africa, United Kingdom (1 each), Canada (4), and the United States (152). Ninety-three percent of the responses were from physicians practicing in the United States. US respondents were separated into 4 regions for analysis (Fig. 1). FMIGS graduate respondents tended to be mostly in academics (i.e., nontenure track assistant professors with 3 or fewer years of experience) (Table 1). The current median salary (inflation adjusted to 2013 US dollars) of all responding FMIGS graduates is \$238 198 (range, \$108 200–\$993 765) (Fig. 2). The median starting salary of FMIGS surgeons was reported as \$216 399 (range, \$106 834–\$542 930) (Fig. 3). The median starting salaries of the most recent graduating FMIGS fellows (postfellowship experience 0–1 years; n = 55) was \$200 000 (range, \$115

Fig. 1

Respondents were grouped by region. The United States was divided into four regions. States with respondents are shown in color grouped by their specific region of the country.

FMIGS Salaries Data Analysis Project: Region Definition



000–\$300 000) (Table 2), and the median starting salary over the last two years (2012 and 2013 fellowship graduates) is shown in Table 2.

Starting salaries among practice region were not statistically different ($p = .354$) nor were they different among

practice type ($p = .546$) or practice focus ($p = .246$) (Table 3). One hundred twelve (68.3%) respondents reported that their employer provided disability insurance, 128 (78.1%) matching retirement funds, 150 (91.5%) health insurance, and 106 (64.6%) life insurance.

Reported current salaries among practice region were also not statistically different ($p = .254$). Practice type did

Table 1

General employment characteristics of FMIGS graduates

Employment characteristics	Respondents	Percentage
Straight salary	92	56.1
Base + incentives	72	43.9
Academic	100	61.0
Private practice	64	39.0
Academic appointment		
Assistant professor	73	66.4
Clinical instructor	32	29.1
Associate professor	5	4.5
Academic track		
Tenure	23	29.5
Nontenure	38	48.7
Adjunct	3	3.8
1-year appointment	14	17.9
Years in practice		
0	27	16.5
1	28	17.1
2	22	13.4
3	30	18.3
4+	57	34.8

Fig. 2

The percentage of survey respondents and their compensation level at the time of the survey. Close to 70% earn between \$200 000 and \$300 000. These data include all FMIGS graduates including those earning their starting salaries.

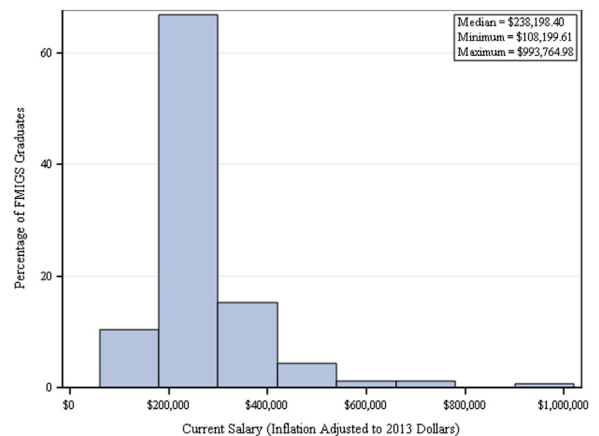
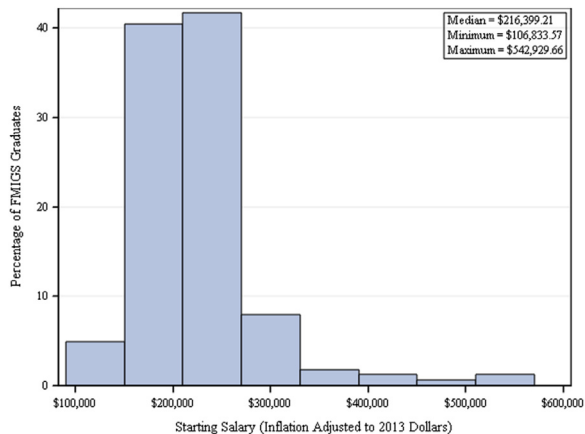


Fig. 3

The percentage of survey respondents and their compensation level at the first postgraduate employment. Compensation of FMIGS graduates is highly clustered. Greater than 80% of starting salaries are between \$150 000 and \$300 000.



not statistically alter salary ($p = .708$) nor did practice focus ($p = .571$). However, reported current salaries were affected by years of experience ($p \leq .001$) (Table 2) and starting salaries ($p \leq .001$).

Discussion

The median current salary compensation among FMIGS graduates was significantly less than that of generalist and board-certified specialties of OB/GYN as reported by the 2013 MGMA [6] (survey of 2012 salaries) (Table 4). How-

ever, comparisons among survey data and MGMA data must be made with caution because each has unique survey methodologies and thereby unique response biases. Similarly, data comparison is difficult because we are unable to compare years in practice among our survey data and MGMA data, and our models have shown experience is an important factor in physician compensation among FMIGS graduates.

Surprisingly, current and starting salaries of FMIGS graduates were not shown to be statistically different based on practice region, practice type, or practice focus, likely because of the inadequate sample size. In current salaries, there was, however, a trend toward higher salaries in the Southwest over other regions, in private practice compared with academics, and in MIS-only practice in contrast to other practice focuses. Given the high reimbursement rates connected with obstetric versus gynecologic procedures, the increased compensation of MIS surgeons versus those practicing both obstetrics and gynecology is somewhat surprising. Newly graduated FMIGS surgeons who practice obstetrics as well were better compensated. This may mean that compensation increases as a result of a more mature practice. Further study is necessary to determine the validity of these trends.

Geographic location of a physician’s practice did not play an important role in determining FMIGS graduates’ salaries although MGMA data show differences regionally among generalist OB/GYN physicians. The MGMA data show a \$58 000 difference between the highest- and lowest-paid regions for OB/GYN generalists and is a large enough sample size to be statistically significant. FMIGS graduates seem to follow this pattern, but survey data do not contain large

Table 2

Total compensation of Fellowship in Minimally Invasive Gynecologic Surgery (FMIGS) graduates grouped by practice location and characteristics

FMIGS graduates	Respondents (%)	Median salary	Range	p value
Current salary		238 198	108 200–993 765	
Position type				
Academic	99 (60.7)	231 829	108 743–739 938	.850
Private practice	64 (39.3)	241 876	108 200–993 765	
GYN only	78 (48.1)	239 728	108 200–993 765	.571
MIS only	24 (14.8)	267 983	182 637–647 445	
OB/GYN	37 (22.8)	235 034	108 743–739 938	
Some OB	23 (14.2)	234 575	160 000–434 344	
Practice region				
Northeast	79 (51.3)	228 296	108 200–671 184	.254
Northwest	5 (3.2)	277 477	181 622–310 694	
Southeast	24 (15.6)	229 128	120 000–434 344	
Southwest	37 (24.0)	258 911	179 000–993 765	
Outside US	9 (5.8)	200 000	108 743–739 938	
Postfellowship experience				
0–1 years	55 (33.5)	220 000	115 000–507 324	<.001
2–3 years	52 (31.7)	237 150	108 743–427 334	
4 or more years	57 (34.8)	280 598	108 200–993 765	

GYN = gynecology; MIS = minimally invasive surgery; OB = obstetrics.

Table 3

Starting compensation of Fellowship in Minimally Invasive Gynecologic Surgery (FMIGS) graduates grouped by practice location and characteristics

FMIGS graduates	Respondents (%)	Median salary	Range	p value
Starting salary	163 (99.4)	216 399	106 834–542 930	
Practice type				
Academic	99 (60.7)	208 743	106 834–542 930	.55
Private practice	64 (39.3)	233 020	115 000–454 448	
Practice breadth				
GYN only	78 (48.1)	209 493	106 833–417 486	.25
MIS only	24 (14.8)	217 908	162 879–542 930	
OB/GYN	37 (22.8)	227 841	108 742–519 933	
Some OB	23 (14.2)	218 149	160 000–336 616	
Practice region				
Northeast	79 (51.3)	207 997	115 000–454 447	.35
Northwest	5 (3.2)	181 621	154 153–310 693	
Southeast	24 (15.6)	221 104	123 589–336 616	
Southwest	37 (24.0)	240 000	171 765–388 477	
Outside US	9 (5.8)	200 000	106 834–542 930	

GYN = gynecology; MIS = minimally invasive surgery; OB = obstetrics.

enough numbers to adequately power a conclusion of differential pay by region among graduates.

These data represent a novel look at the current status of compensation among FMIGS graduates; however, there are some limitations to the study design. First, the salary data in this study are self-reported and therefore are subject to recall bias, response bias, and researcher bias. This is in contrast to the AAMC and MGMA salary surveys, which are performed annually and are reported by the principal business office of each institution [4]. Because salary reporting is optional in the methodology of all these studies, there is likely reporting bias present in each survey.

One must use caution interpreting the salary data generated by this study because it is not meant to be a guide for the determination of salary and compensation. The study was not designed to measure the value of an FMIGS-trained surgical specialist. More studies must be performed regarding productivity of the FMIGS-trained graduate to this end. Traditionally, these studies would need to measure clinical and surgical volume, commonly reported as revenue value units. However, with the currently changing health care compensation model, these data may be difficult to interpret because health care is moving toward a value-based payment system [7]. Therefore, the market value of the FMIGS-graduated surgeon will need to be determined on a variety of factors, not solely production [8].

Furthermore, caution must be taken in drawing conclusions based on salary compensation regarding practice location and practice type because the study is not likely powered to determine these correlations. The only statistically significant predictors for increased salaries are experience and starting salary. To improve future studies of this type, it would be helpful to include broader demographic information including whether respondents are full- or part-time, seek more objective data sources (such as direct from hospital or practice administrators), and determine total compensation provided to practitioners (which would include a valuation of benefits). Furthermore, data collected on the production and overall institutional value of FMIGS graduates may be a better mechanism to determine fair market salary compensation.

Table 4

Fellowship in Minimally Invasive Gynecologic Surgery salaries compared with American Board of Obstetrics and Gynecology/ Accreditation Council for Graduate Medical Education specialties

Specialty	First-year salary	Average salary
Maternal-fetal medicine	330 000	476 283
Gynecologic oncology	NA	404 631
Reproductive Endocrinology and Infertility	NA	363 376
Female pelvic medicine and reconstructive surgery	NA	345 220
Generalist OB/GYN	220 000	301 737
Fellowship in Minimally Invasive Gynecologic Surgery	216 399*	238 198*

NA = not applicable; OB/GYN = obstetrics/gynecology.

* Fellowship in Minimally Invasive Gynecologic Surgery data are reported salaries (from survey data), whereas data from other specialties represent total compensation as reported by the MGMA 2013 Report on Physician Compensation and Production Survey Report.

Conclusion

This study is the first detailed analysis of the salaries and benefits of those graduated from the AAGL/SRS-affiliated

FMIGS. These data may assist graduates and prospective employers in understanding the current employment market; however, it is important that both parties recognize this does not represent a valuation of the services provided by the minimally invasive gynecologic surgeon, merely current industry trends.

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Supplementary Data

Supplementary data related to this article can be found at <http://dx.doi.org/10.1016/j.jmig.2014.12.157>

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