

## Choice of Specialty and Attitude of Undergraduate Medical Interns towards Family Medicine

### *Elección de especialidad y actitud de médicos internos de pregrado hacia la Medicina Familiar*

Baltazar Joanico Morales,\* Ángel Giovanni Duran Patiño,\*\* María de los Ángeles Salgado Jiménez,\*\*<sup>\*\*\*</sup> Guillermina Juanico Morales,<sup>\*\*\*\*</sup> Gustavo Leyva Leyva\*

#### Summary

**Objective:** to analyze the choice of specialty and attitude of undergraduate medical interns (UMI) towards Family Medicine (FM) after pursuing a new educational model with an approach on the Primary care level. **Methods:** cross-sectional analytical study conducted from December 2018 to February 2019, 141 UMI participated of the Vicente Guerrero General Regional Hospital No.1 of the Mexican Institute of Social Security. Subsequent to the year of development of a new modality of medical internship focused on the Primary care level, in which the rotation time in Family Medicine was increased from two to four months, the Attitude towards Family Medicine Questionnaire (AFMQ) was applied, which explores the attitude towards FM, opinion about rotation, and its choice as a specialty and associated factors. Univariate and multivariate analyses were performed. **Results:** 98.6% had a good attitude towards FM (n=139), 34.5% chose it as a possible specialty option (n=38), only 3.5% chose it as the first choice (n=5); the main cause, FM provides comprehensive care (22.6%, n=32) and the reason for not choosing it was because they do not like FM (18.4%, n=26). The new rotation time was perceived as good by 48% (n=54); through logistic regression analysis, the student who liked rotation or practices per Family Medicine consultation is 6.7 times more likely to choose Family Medicine as a specialty option (ic 95%: 1.45-31.2). **Conclusions:** one year after the implementation of the new model with an approach to the Primary care level, most UMI have a good attitude towards FM, however, it does not represent their first choice as a specialty; the qualities of the specialty are the main reasons to choose it, the internship time did not influence their choice.

**Keywords:** Family Medicine; Attitude; Professional Education

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\*Coordinación Clínica de Educación e Investigación en Salud. Hospital General Regional Núm. 1. Instituto Mexicano del Seguro Social.

\*\*Coordinación Clínica de Educación e Investigación en Salud. Unidad de Medicina Familiar Núm. 9. Instituto Mexicano del Seguro Social.

\*\*\*Clínica de VIH. Hospital General Regional Núm. 1. Instituto Mexicano del Seguro Social.

\*\*\*\*Coordinación de Planeación y Enlace Institucional, Delegación Guerrero. Instituto Mexicano del Seguro Social.

Correspondence:  
Baltazar Joanico Morales  
balta2083@live.com.mx

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## Resumen

**Objetivo:** analizar la elección de especialidad y actitud de los médicos internos de pregrado (MIP) hacia la Medicina Familiar (MF) después de cursar un nuevo modelo educativo con enfoque en el primer nivel de atención. **Métodos:** estudio transversal analítico realizado de diciembre de 2018 a febrero de 2019; participaron 141 MIP del Hospital General Regional No.1 Vicente Guerrero del Instituto Mexicano de Seguro Social. Posterior a un año de que se implementara una nueva modalidad de internado médico enfocado al primer nivel, en el que se incrementó el tiempo de rotación por Medicina Familiar de dos a cuatro meses, se aplicó el Cuestionario de Actitud hacia la Medicina Familiar (CAMF) que explora la actitud hacia la MF, opinión de la rotación y su elección como especialidad y factores asociados. Se realizó análisis univariado y multivariado. **Resultados:** 98.6% presentó buena actitud hacia la MF (n=139), 34.5% la eligió como posible opción de especialidad (n=38), solo 3.5% la eligió como primera opción (n=5); la causa principal para elegirla es que brinda atención integral (22.6%, n=32) y para no elegirla es porque no les gusta (18.4%, n=26). La nueva rotación fue percibida como buena por 48 % (n=54); mediante análisis de regresión logística se encontró que al alumno que le gustó la rotación o prácticas por consulta de Medicina Familiar tiene 6.7 veces la probabilidad de seleccionar Medicina Familiar como opción de especialidad (IC 95%: 1.45-31.2). **Conclusiones:** a un año de la implementación del nuevo modelo con enfoque al primer nivel, la mayoría de los MIP tienen buena actitud hacia la MF, sin embargo, no representa su primera elección como especialidad;

las cualidades de la especialidad son los principales motivos para elegirla, el tiempo de internado no influyó su elección.

**Palabras clave:** Medicina familiar, actitud, educación profesional

## Introduction

In response to the fragmentation of health systems and a limited general physician practice, Family Medicine as a medical specialty emerged formally in the 1960s, with the aim of enhancing the training of a comprehensive specialist capable of serving the entire population.<sup>1</sup>

The Mexican Institute of Social Security (IMSS) has a leading role in the development of this specialty, even before its emergence in the world. In 1954, the IMSS implemented the model of the Family physician and in 1971 formally began the specialization course in FM with the endorsement of the National Autonomous University of Mexico (UNAM).<sup>1</sup>

In 1978, the Alma-Ata stated that Primary Care was an important part of the national health systems;<sup>2</sup> in 2008 the World Health Organization (WHO) titled its report on worldwide health: "Primary health care, more necessary than ever."<sup>3</sup> In this context, the Family physician is a leader in the Primary Care level and is a key piece in addressing health challenges around the world.<sup>1,4-6</sup>

Due to the importance of the Primary Care level, medical school programs are focused on more graduated professionals to work at this level of care;<sup>7,8</sup> in January 2018 the IMSS started a program aimed to the Primary Care level, increasing the rotation time of the UMI by the FM.

It is identified in the literature that most UMI and medical students have good opinions about Family Medicine.<sup>9-12</sup> However, in Mexico and in other countries such as South Africa, France, Malaysia, Great Britain, Nigeria and Spain, it is unattractive as a specialty option;<sup>13-19</sup> given this context, the objective of this study was to know the attitude of the UMI towards Family Medicine, their opinion on rotation and their choice as a specialty after one year of the implementation of a new educational model with an approach to Primary Care level.

## Methods

Analytical cross-sectional study. Undergraduate Medical Interns of the Vicente Guerrero General Regional Hospital No. 1 of the Mexican Institute of social Security in Acapulco, Guerrero, Mexico participated; from December 2018 to February 2019.

The population consisted of all the UMI that were enrolled in their clinical cycle during the study period. 141 UMI were included by non-randomized sample, 42 were finishing internship, while 55 were in the middle of the cycle; in these two groups most already knew the FM rotation; to compare the results 44 UMI, who were to begin the cycle, were included.

Since January 2018, the IMSS modified the national educational program that considered a Family Medicine two month rotation, increasing it to four months; these were divided into two months as specific rotation by FM and two months in which the UMI would go to a Family Medicine Unit during their rotations in the services of Surgery, Internal Medicine, Pediatrics and Gynecology, to review topics of these

specialties, but focused on the Primary Care level.

The criteria for inclusion were to be an UMI of the hospital, agree to participate in the investigation and to sign the informed consent letter; the exclusion criteria were to be absent for vacation, paid leave or disability. The validated AFMQ instrument consisting of 24 questions<sup>9</sup> was applied, which explores, through sixteen open questions and three multiple-choice questions, sociodemographic data, choice of medical specialty and associated factors of choosing Family Medicine; the remaining five multiple choice questions explore the attitude of the UMI towards FM. These questions were given a score and, according to this, the attitude was classified as good or bad. Two more questions were added about the perception of the usual rotation and two more about the rotation of the new educational model with an approach to Primary care level.

The study was authorized with the registration number: R-2018-1102-001 by the Local Committee for Research and Ethics in Health Investigation 1102 of the IMSS.

Descriptive and inferential analyses, and logistic regression analyses were performed, simple frequencies, percentages, OR and a confidence interval of 95% were obtained.

## Results

141 UMI participated, and were distributed as follows: 31.2% were new students (n=44), 39% were at their second semester (55) and 29.8% were almost graduated (42).

51.8% were female (n=73); average age 23 years, the youngest was 22, the oldest 34; 96.5% was single (n=136),

2.1% were married (n=3) and 1.4% in union (n=2).

83.7% graduated from the local university (Autonomous University of Guerrero) (n=118), the rest came from seven different universities in the states of Oaxaca, Puebla, Morelos and Mexico City.

During their university education, 96.5% studied the FM subject (n=136); 97.2% reported knowing the specialty of FM (n=137) and 96.5% claimed to have received information about it (n=136). 98.6% of the UMI had a good attitude towards FM (n=136). 97.2% knew that FM was a specialty (n=137), 1.4% responded no (n=2) and 1.4% did not respond (n=2). In regards to their opinion about the family physician, 97.2% answered to have a good opinion (n=137), 1.4%, a bad one (n=2), and 1.4% said that the Family physician's work is not transcendent (n=2).

When asked if they knew the field of action of FM, 28.4% mentioned that it was engaged in the Primary care level (n=40), 19.9%, to prevention of diseases (n=28), 17.7% was engaged in the study of the family and its diseases (n=25), 5 %, to the study of the entire population (n=7), 27% did not know (n=38), and 2.1% did not answer (n=3).

As for the usual rotating shift in FM, of 80 UMI that had been in that area, 91.2% considered it good or excellent (n=73); about this rotating shift, the positive perception was mainly due to they consider that they learn a lot from resident doctors.

In relation to the two-week rotating shift in a Family Medicine Unit corresponding to the new educational program, 94 UMI had already been there, from which 42% perceived it as good (n=40), the rest considered it regular,

bad, unnecessary and disorganized, the positive opinions on this rotating shift were that it is learned a lot and it is possible to get acquainted with the Primary care level; adverse opinions were also found, such as that it was better to rotate by external consultation of the hospital (other specialties) and that there was no good tutoring by physicians, see Table 1.

94.3% of all respondents wanted to course a medical specialty (n=133); as a first choice, FM was chosen by 3.5% (n=5), ranking in 8<sup>th</sup> place; as a second and third option ranked in first place and was chosen by 14.2% (n=20) and 16.3% (n=23) respectively, see Table 2.

The reasons that the UMI had to choose FM as a specialty were: because it provides comprehensive care to the patient, because of the field of work where it is developed and because it is one of the most complete specialty; whereas the main reasons for not choosing it were because they did not like it and it is monotonous, see table 3.

A logistic regression analysis was performed, it was found that the UMI who liked the rotating shifts or practices in external consultation of Family Medicine are 6.7 times more likely to select this specialty as one of their first options; having taken six months or a year as UMI, that is, having already rotated by FM was not an associated factor to their choice, see table 4.

## Discussion

Most UMI have a good attitude towards FM, due to the good opinion about the specialty and the Physician who specializes in FM; this coincides with other studies, one of them conducted in the same hospital where in 2018 it was reported that more than 90% of the

**Table 1. Perceptions of Undergraduate Medical Interns about Family Medicine Rotations**

Regular rotation by Family Medicine		
Perception of regular rotation by Family Medicine	Excellent	15 (18.75%)
	Good	58 (72.5%)
	Bad	7 (8.75%)
	Total	80
Undergraduate Medical Interns opinion who had a positive perception of regular rotation by Family Medicine	Learned a lot from the residents	55 (75.3%)
	Good patient care	11 (15%)
	Missing more teaching by physicians and residents	6 (8.2%)
	Physicians do not take undergraduate interns into account	1 (1.3%)
Total	73	
Implementation of the new program rotation focused on Primary Care level		
Perception of the new rotation by the Family Medicine Units due to the new educative program	Good	40 (42.5%)
	Regular	21 (22.3%)
	Bad	21 (22.3%)
	Unnecessary	10 (10.6%)
	Disorganized	2 (2.1%)
Total	94	
Undergraduate Medical Interns opinion about their perception of the rotation by the Family Medicine Units due to the new educative program	Learned a lot	29 (30%)
	Familiarized with Primary Care level	22 (23.4%)
	It is best to rotate in the outpatient clinic of each specialty	19 (20.2%)
	Not good mentoring by some doctors	10 (10.6%)
	Practice is not related to rotation	9 (9.57%)
	Rotation takes time	3 (3.19%)
	We are not allow to make consultation therefore we do not learn	2 (2.12%)
	Total	94

**Table 2: Specialty Options for Undergraduate Medical Interns**

First Option	n	%	Second Option	n	%	Third Option	n	%
Surgery	37	26.2	FM	20	14.2	FM	23	16.3
IM	19.1	IM	18	12.8	IM	20	14.2	
Pediatrics	24	17.0	G&O	18	12.8	G&O	18	12.8
G&O	11	7.8	Surgery	17	12.1	Pediatrics	16	11.3
T&O	10	7.1	T&O	14	9.9	ORL	15	10.6
ORL	7	5.0	Emergency Medicine	10	7.1	Anest	12	8.5
FM	5	3.5	Pediatrics	10	7.1	Surgery	8	5.7
Emergency Medicine	4	2.8	ORL	7	5.0	Emergency Medicine	6	4.3
Anest	3	2.1	Nephrology	6	4.3	Pathology	5	3.5
Others	13	9.2	Others	19	13.4	Others	18	12.7

FM: Family Medicine; IM: Internal Medicine; G&O: Gynecology & Obstetrics; T&O: Traumatology & Orthopedics; ORL: Otolaryngology; Anest: Anesthesiology. Other choices selected by two or less: Dermatology, Ophthalmology, Gastroenterology and Epidemiology

UMI had a good attitude towards Family Medicine;<sup>9</sup> in Mexico City, in 2009 the majority who had contact with family physicians had good opinion of them,<sup>10</sup> and in Spain in 2013, most students surveyed perceive family medicine as an essential area of the health system.<sup>11</sup>

Most of the participants had a positive opinion of their usual rotating shift by FM, because they learned a lot from resident doctors, in relation to this, De Benedetto, in Brazil, reported that both medical students and residents improved their knowledge of family medicine and found motivation in their studies from meeting patients in an FM office.<sup>12</sup>

In contrast, the rotating shift corresponding to the new program was perceived as good for less than half of the UMI, there are no research studies on this new modality of internship school published to date.

It is likely that some of the perceptions reported in the present work are due to the usual rotation by FM is in a place where there are years of experience receiving UMI and medical residents, the latter play a very important role, as they are a fundamental element in the healthcare-educational process.<sup>21</sup>

In Mexico, different studies show a low choice or preference for FM as a specialty; in a hospital, 1% of the UMI selected FM as a first choice;<sup>9</sup> students of the National Autonomous University of Mexico showed that this specialty is not of high priority,<sup>13</sup> in Spain mixed results have been reported,<sup>11,20</sup> this scenario has been reflected in several countries, in which there is a coincidence where the choice is of surgical and hospital specialties.<sup>14-19</sup>

The UMI who liked Family Medicine rotation or practices were more likely to choose it, this is probably related to

**Table 3. Reasons for Undergraduate Medical Interns to choose or not choose Family Medicine as a specialty**

Reasons for choosing	n	%
Due to a comprehensive care of the patient	32	22.6
Due to the field of work where it develops	28	19.8
It is a very complete specialty	27	19.1
Early Diagnosis of diseases	17	12
A better relation physician - patient	16	11.3
It would not be chosen	8	5.6
Convenience	4	2.8
Specialty Duration	3	2.1
It is easier to achieve the ENARM score (National Examination for Medical Residency Applicants)	1	0.7
Having no other options	1	0.7
Without information	4	2.8
Total	141	100
Reasons for not choosing	n	%
Have no reasons	70	49.6
Do not like it	26	18.4
It is monotonous	12	12
Labor field saturation	7	4.9
It is not well paid	7	4.9
No prestige and recognition	7	4.9
It is like being a general physician	4	2.8
Without information	8	5.6
Total	141	100

**Table 4. Logistic Regression Model taking as a Dependent Variable the Choice of Family Medicine as a Specialty Option**

	OR	Sig.	IC 95%	
			Lower Limit	Upper Limit
Women	1.252	0.553	0.595	2.634
Local University	3.240	0.050	1.000	10.498
Seniority from 6 months to one year	1.058	0.891	.473	2.367
Like the rotation or practice by Family medicine consultation	6.748	0.015	1.458	31.230
Get to know the field of action of Family Medicine	0.864	0.729	0.377	1.978

the characteristics that motivate UMI to select FM are both the qualities already known that distinguish this specialty, and its comprehensive approach. Other studies indicate that women show greater predilection for this specialty.<sup>14,20</sup>

The reasons for not choosing it are because they do not like it or because they perceive it monotonous and low-paid. Previous studies conducted in this same hospital showed that the UMI saw the FM as boring and with little recognition,<sup>9</sup> other studies have pointed out that students see as a barrier that prevents changing this perception the little knowledge of UMI about this specialty,<sup>14</sup> while others give greater importance to the job, prestige and economic remuneration.<sup>17,20</sup>

In general, there is a good opinion about the FM and the Family physician, but that is not enough to be considered as a specialty option for students, who leave it relegated as a second and third option; it is important that this perception is changed as FM is a major specialty of enormous importance for health systems.

Increasing rotating shifts time at the Primary care level is important and a great attempt to give FM its place in the training of physicians; in this context, further studies should be carried out to determine whether the program has a greater impact on the opinion and choice of this specialty. These results are of great importance, as they suggest that more than the rotation time at primary level, what influences students is the quality of this rotation.

Limitations on this study are recognized as it was only focused on one hospital, geographical region and a certain time, this makes it impossible to make broader conclusions which



could be extrapolated to other national scenarios.

### Conclusions

Most UMI have a good attitude towards FM, however, it is not considered as a first choice of specialty, interest in FM is significantly associated with their choice. The qualities of the specialty are the main reasons to choose it. Improving the quality of FM rotation can have a greater impact than increasing the assigned time.

### References

1. Dávila Torres J, Garza Sagástegui MG. Medicina Familiar. México D.F: Editorial Alfil; 2013:275.
2. Organización Panamericana de la Salud. Conferencia Internacional sobre Atención Primaria de Salud, Alma-Ata, URSS, 6-12 de septiembre de 1978 [Internet]. [Citado 2019 Mar 18]. Disponible en: [www.paho.org/hq/index.php?option=com\\_docman&task=doc\\_view&gid=19004&Itemid=270&lang=en](http://www.paho.org/hq/index.php?option=com_docman&task=doc_view&gid=19004&Itemid=270&lang=en)
3. Organización Mundial de la Salud. Informe sobre la salud en el mundo 2008 [Internet]. [Citado 2019 Feb 22]. Disponible en: <http://www.who.int/whr/2008/es/>
4. Starfield B. Family medicine should shape reform, not vice versa. *Fam Pract Manag*. 2009;16(4):6-7.
5. Organización Mundial de la Salud. Discurso de apertura en el Congreso Mundial de la Organización Mundial de Médicos de Familia (wonca)-2013, Praga, República Checa, 26 de junio 2013 [Internet]. [Citado 2020 Ene 1]. Disponible en: [http://www.who.int/dg/speeches/2013/family\\_medicine\\_20130626/en/](http://www.who.int/dg/speeches/2013/family_medicine_20130626/en/)
6. Varela Rueda CE, Reyes Morales H, Albavera Hernández C, Ochoa Díaz López H, Gómez Dantés H, García Peña C. La Medicina Familiar en México: presente y futuro. *Gac Med Mex*. 2016;152:135-40.
7. Universidad Nacional Autónoma de México, Plan de estudios 2010 y programas académicos de la licenciatura de médico cirujano [Internet]. [Citado 2019 Mar 19]. Disponible en: <http://oferta.unam.mx/carrera/archivos/planes/medicina-fmedicina-planestudio13.pdf>
8. Universidad Autónoma de Guerrero, Misión, Visión y Objetivos de la carrera de medicina [Internet]. [Citado 2019 May 20]. Disponible en: <http://medicina.uagro.mx>
9. Joánico Morales B, Méndez Nava O, Salgado Jimenez M, Juanico Morales G. Actitud de médicos internos de pregrado hacia la medicina familiar en un hospital general regional de Acapulco, Guerrero, México. *Atención Familiar*;25(2):75-79.
10. Godínez Tamay E., Narro Robles J., Sánchez Escobar L., et al. Importancia de la Enseñanza de la Medicina Familiar en el pregrado. Estudio de la opinión de un grupo de Médicos Internos sobre la especialidad de Medicina Familiar. *Arch Med Fam*. 2009;11(2):57-63.
11. Zurro AM, Jiménez VJ, Monreal HA, Mundet TX, Otero PA, Coello PA. Los estudiantes de medicina españoles y la medicina de familia. Datos de las 2 fases de una encuesta estatal. *Aten Primaria*. 2013;45(1):38-45.
12. De Benedetto Ma., Joncudis Ma., Leoto RE, et al. Pacientes, Residentes y Estudiantes descubriendo la Medicina Familiar. *Arch Med Fam*;2006(1):9-17.
13. Vargas HI., Muggenburg Ma E., Palacios J., et al. "Preferencias de especialidad médica entre los estudiantes de pregrado de la Facultad de Medicina de la UNAM: ¿En qué lugar se ubica la psiquiatría?" *Salud Mental*. 2012;35(6):465-473.
14. Hagemester DT, Pal A, Naidoo N, Kristen U, Moggosana N, Joubert G. Undergraduate medical students' interest in specialising in Family Medicine at the University of the Free State, 2014, South African Family Practice. 59;(5):166-171.
15. Azu OO, Naidu E, Naidu J. Choice of speciality amongst first-year medical students in the Nelson R. Mandela School of Medicine, University of KwaZulu-Natal. *Afr J Prm Health Care Fam Med*. 2013;5(1):7.
16. Lefèvre J, Karila L, Kernéis S, Fiessinger J, Rouprêt M. Désintéret des futurs médecins pour la médecine générale. résultats d'une enquête nationale sur les choix de spécialisation auprès de 1 870 externes français. *Presse Med*. 2010;39:e58-e65.
17. Yu Wei Chew, Sudeash Rajakrishnan, Chin Aun Low, Prakash Kumar Jayapalan, Chandrashekar T. Sreeramreddy. Medical students' choice of specialty and factors determining their choice: A cross-sectional questionnaire survey in Melaka- Manipal Medical College, Malaysia. *BioScience Trends*. 2011;5(2):69-76.
18. Ibrahim M, Fanshawe A, Patel V, Goswami K, Chilvers G, Ting M, Pilavakis Y, Rao C, Athanasiou T. What factors influence British medical students' career intentions? *Medical Teacher*. 2014;36:1064-1072.
19. Ossai EN, Uwakwe KA, Anyanwagu UC, Azougu BN, Ekeke N. Specialty preferences among final year medical students in medical schools of southeast Nigeria: need for career guidance *BMC Medical Education*. 2016;16:259.
20. Ayuso RM, Escobar RE, López THJ, Montoya FJ, Téllez LJ, Campa VE. Elección de Medicina Familiar en los exámenes para médicos residentes españoles de 2011 y 2013. *Rev Med Inst Mex Seguro Soc*. 2015;53(1):44-52.
21. Méndez López J, Mendoza Espinosa H, Uri Torruco García, Melchor Sánchez Mendiola. El médico residente como educador. *Inv Ed Med*. 2013;2(7):154-161.