

Orthopedic residency survey regarding several aspects of the program

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ABSTRACT

We conducted a survey among 299 Orthopedics residents on Residency entry aspects, activities and preferences during this formative time. During the 2015 Yearly Orthopedics Congress, we handed out a questionnaire among residents getting training at Residencies acknowledged by the *Asociación Argentina de Ortopedia y Traumatología* (AAOT). Thirty-nine percent of the Residencies are in the Province of Buenos Aires; 25%, in CABA; and 34.88%, in the rest of the provinces. Seventy-one dot four percent were public institutions and 26.9, private ones. Residency duration was of 4 years in 80.9% of the cases. Fifty-five percent of doctors sat only once for entrance examination. Reasons for choice were surgical practice as the most important one (70%). Fifty-three percent of the residents felt satisfied with the Residency, little satisfaction stemming from premises deficit (58%), workload (47%) and poor academic training (41%). Residencies were fulfilled in 55% of the cases; unfulfilled Residencies were so due to residents' resigning (56%) and lack of applicants (49%). Ninety-four percent of the Residency syllabuses included the AAOT's Bi-yearly Course. These data show the current state of affairs in Orthopedics Residencies, but they are partial, since they do not include info from not acknowledged Residencies. In 2016 we carried out a new survey, whose results are being analyzed.

Key words: Orthopedics; Residency; survey.

ENCUESTA DIRIGIDA A LOS RESIDENTES SOBRE ASPECTOS DE LA RESIDENCIA EN ORTOPEDIA Y TRAUMATOLOGÍA

RESUMEN

Se realizó encuesta a 299 residentes de Ortopedia y Traumatología sobre los aspectos del ingreso, las actividades y las preferencias durante ese período formativo de posgrado. Durante el Congreso anual de la especialidad en 2015, se entregó un formulario a los residentes de Residencias acreditadas por la Asociación Argentina de Ortopedia y Traumatología. El 39,3% de las Residencias era de la Provincia de Buenos Aires; el 25%, de la Ciudad Autónoma de Buenos Aires y el 34,88%, del resto de las provincias. El 71,4% eran estatales y el 26,9%, privadas. El 80,9% de las Residencias tenían una duración de 4 años. El 55% de los médicos rindió examen una sola vez. Los motivos de elección fueron que la práctica quirúrgica era la más importante (70%). El 53% se sentía satisfecho con la Residencia, la poca satisfacción obedece a las fallas estructurales (58%), la sobrecarga laboral (47%) y el poco desarrollo académico (41%). Las Residencias estaban completas en el 55% de los casos; las Residencias incompletas se debían a renuncias (56%) y a la falta de postulantes

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(49%). El 94% de los programas de Residencia tenía incorporado el Curso Bianual de la Asociación Argentina de Ortopedia y Traumatología.

Estos datos nos muestran el estado actual de la Residencia en nuestra especialidad, pero son parciales, al no contar con datos de las Residencias no acreditadas. En 2016, se efectuó una nueva encuesta, cuyos resultados están en proceso de análisis.

Palabras clave: Ortopedia; Traumatología; Residencia; encuesta.

Introduction

Word has it that knowing how medical residents join institutions—what their activities are and what they prefer during their formative years has always aroused interest. There have been several attempts, and surveys have been undertaken inquiring about these or similar data. During the 2014 Argentine Orthopedics Association (AAOT, by Spanish acronym) Congress, we conducted a preliminary survey and, afterwards, upon analyzing 111 residents' answers, we improved our ways and means. In the 2015 Congress, we repeated the survey among the residents that attended the Residents Congress, and their involvement was greater—299 answers, what means a 63%-increase as compared to the previous year. In 2016, we carried out another survey with new elements while leaving others aside, and the number of answers increased with analysis coming soon.

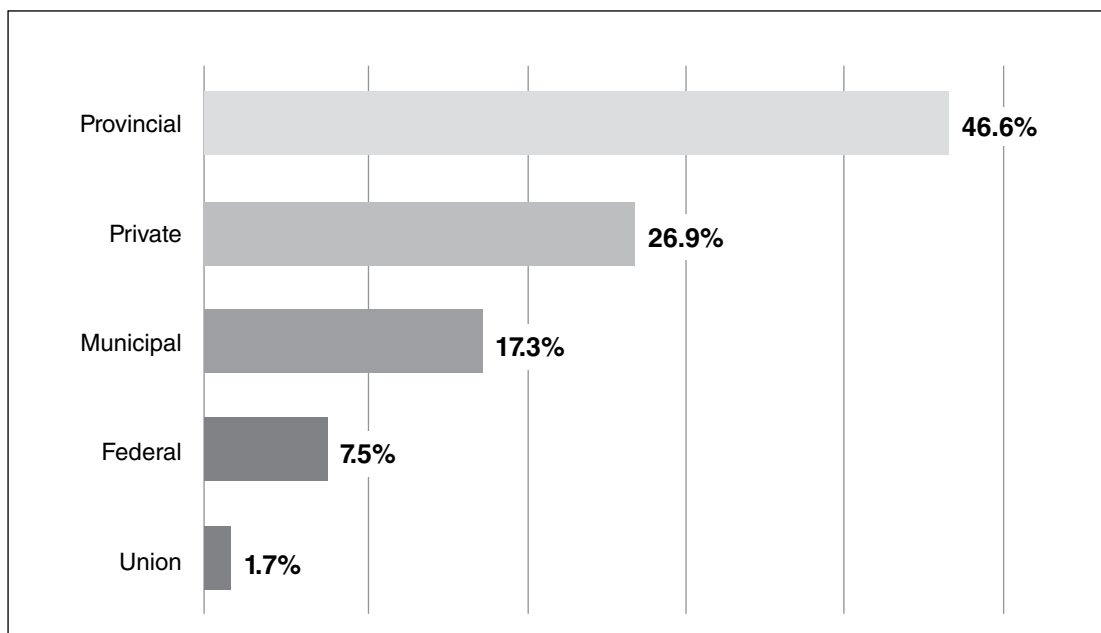
Our aim has been to gather data about residents' entry into institutions, activities and preferences during their formative years.

Materials and Methods

We used self-administered questionnaires handing them out among residents who attended the AAOT's Residents Congress; therefore, all of them belonged to Residencias acknowledged by the AAOT. We asked data about: institutional jurisdiction, geographical area, average score in medical degree course, entry modality, reason and criteria for choice, previous options, number of entrance examinations sat for, Residency duration in years, validation and satisfaction, as well as likely number of unfulfilled stages (Appendix).

Results

Analyzing 299 anonymous answers, we found that 46.6% of Residencias belong to provincial jurisdictions, with 71.4% of public and 26.9% of private institutions (Figure 1). With respect to geographical areas, there is 39.3% of Residencias in the Province of Buenos Aires,



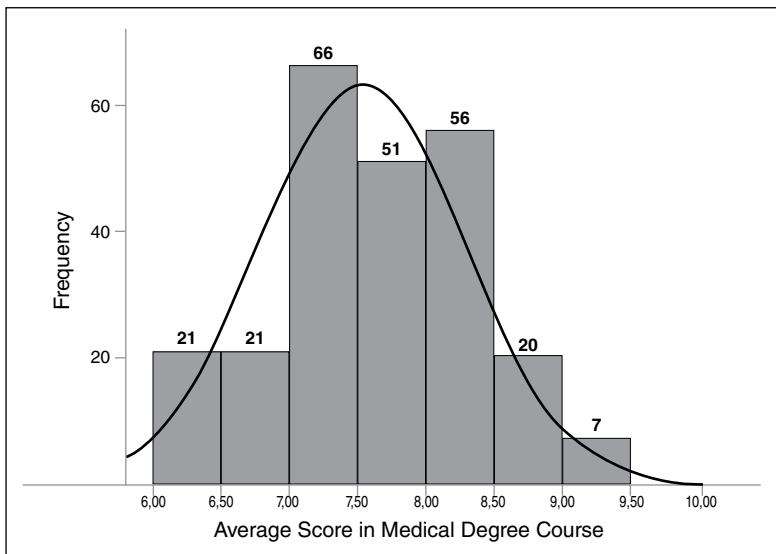
▲ **Figure 1.** Residency jurisdiction.

25% in *Ciudad Autónoma de Buenos Aires* (CABA, by its Spanish acronym), and the remaining 34.88% in the rest of the provinces (Table 1). Regarding entry modality, we verified that all residents sat for an entrance examination. Apart from this exam, 37.5% of the Residencies considered the applicant's average score in the medical degree course; 33.1%, this one plus a personal interview and the applicant's background; 17.1%, average score in medical degree course plus interview, and, 12.3%, only the entrance examination. It is worth highlighting that the mean

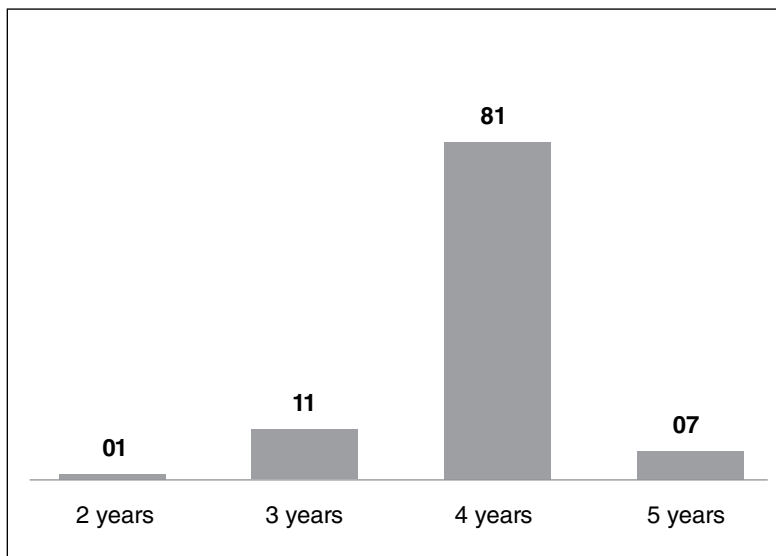
Table 1. Geographical area

Jurisdiction	Frequency	%
Buenos Aires	116	39.32
CABA	74	25.08
Córdoba	33	11.19
Santa Fe	20	6.78
Mendoza	11	3.73
Misiones	9	3.05
Jujuy	7	2.37
Chaco	5	1.69
Santiago del Estero	5	1.69
Neuquén	5	1.69
Corrientes	3	1.02
Tucumán	3	1.02
La Pampa	2	0.68
San Juan	1	0.34
Salta	1	0.34
Total	295	100

Lost data: 4 (1.3%) CABA= Ciudad Autónoma de Buenos Aires



◀ **Figure 2.** Average Score in Medical Degree Course.



◀ **Figure 3.** Orthopedics Residency duration in years.

average score in the residents' medical degree course was 7.6 (Figure 2).

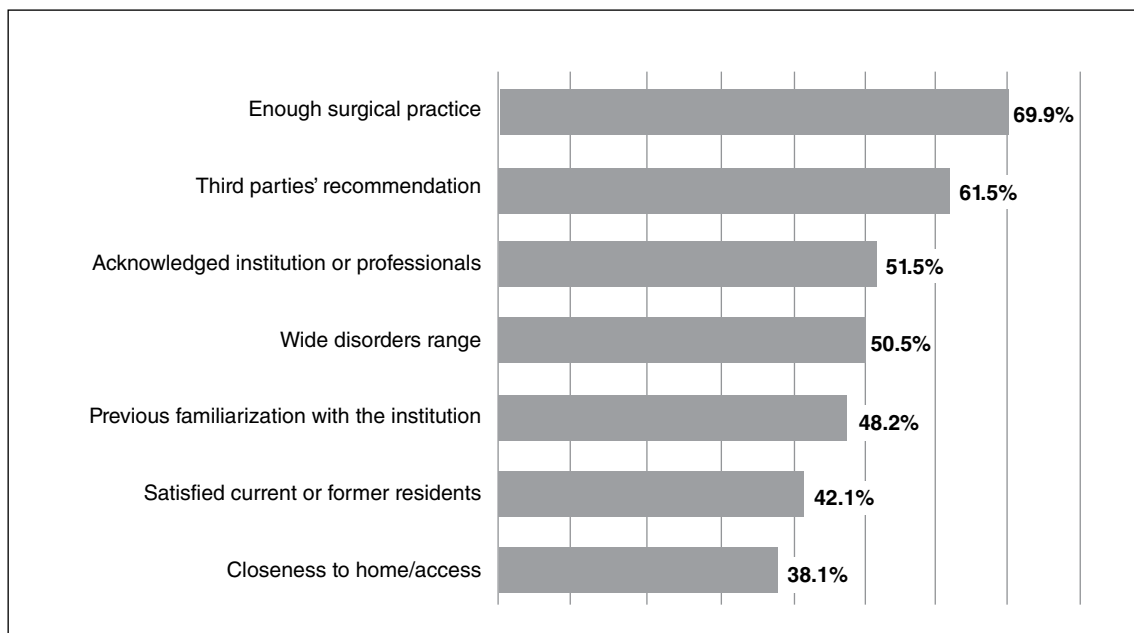
Residency duration is of 4 years in 80.9% of the cases, of 5 years in 6.7%, and of 3 years in 11.4% (Figure 3).

As regards Residencies validation, data show that 16.1% of them are validated by the CONEAU; 54.8%, by the National Health Department; 31.4% by Medical Colleges; and 27.4% by Universities, to say the most representative figures.

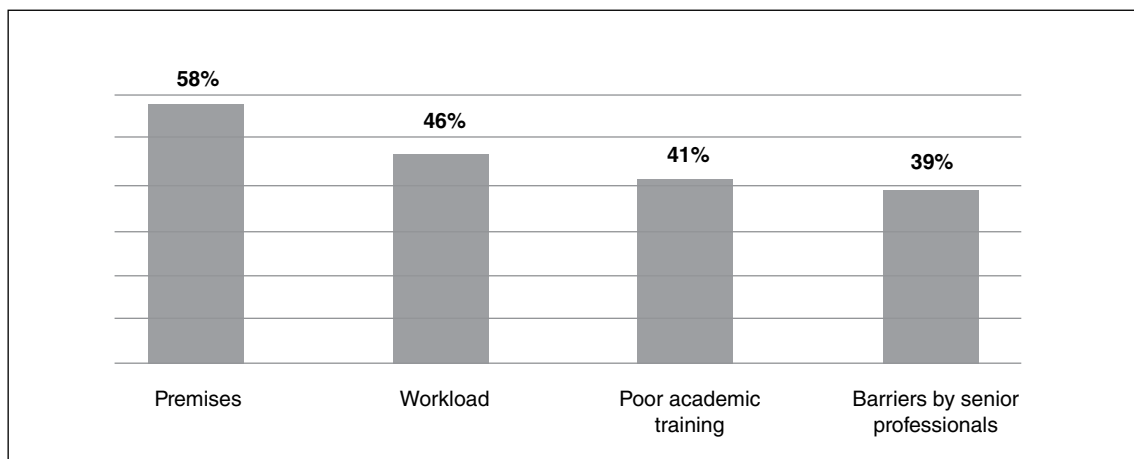
Fifty-five percent of Residency applicants sat only once for the entrance examination and 55% only did it in one place. Forty-five percent sat in more than one place. Eighty-six percent of the applicants asked third parties for advice about the institutions where to sit for entrance examination.

Seventy-four percent of the survey respondents are at the Residency they prefer, with 77% to 89% of them preferring hospitals to clinics or a other kind of private institutions as first option if given the choice, although there are a lot of lost data about second and third options. With respect to the reasons for choice, surgical practice represents 70%, third parties' recommendations, 62%, and closeness to home, 38%. Only 48% was previously acquainted with the Residency. Fifty-four percent of the residents preferred public institutions (Figure 4).

The reasons for which they would not choose a given Residency were: They would operate on few patients (70%), limited disorders range (50%), and poor training. Small salaries, although not *one* among the reasons for choice, did worry the 28% of the residents, and 23% of



▲ **Figure 4.** Reasons for choice of Residency.



▲ **Figure 5.** Drawbacks for those partially satisfied or unsatisfied with Residency .

Table 2. Satisfaction with Residency

Satisfied	Frequency	Percentage
Yes, totally	159	53.4%
Yes, partially	132	44.3%
No	7	2.3%
Total	298	100%

Lost data: 1 (0.3%).

them did not choose it because of the few visits to other institutions that were scheduled.

Fifty-three percent is totally satisfied with the Residency, whereas 44% of them are partially satisfied (Table 2). Among the reasons for partial satisfaction they mention premises deficit (58%), workload (47%), and poor academic training (41%) (Figure 5).

Every year Residencies show only 55% of filled vacancies, i.e. there are not enough residents—some stages lack in 45% of the residents. Fifty-six percent of them have resigned their position, whereas in 49% of the cases there have not been enough applicants (Figure 6).

Ninety-four percent of the syllabuses include the AAOT's Bi-yearly Course, whereas 90% of the residents believe the syllabus they follow is aligned with the AAOT's educational project.

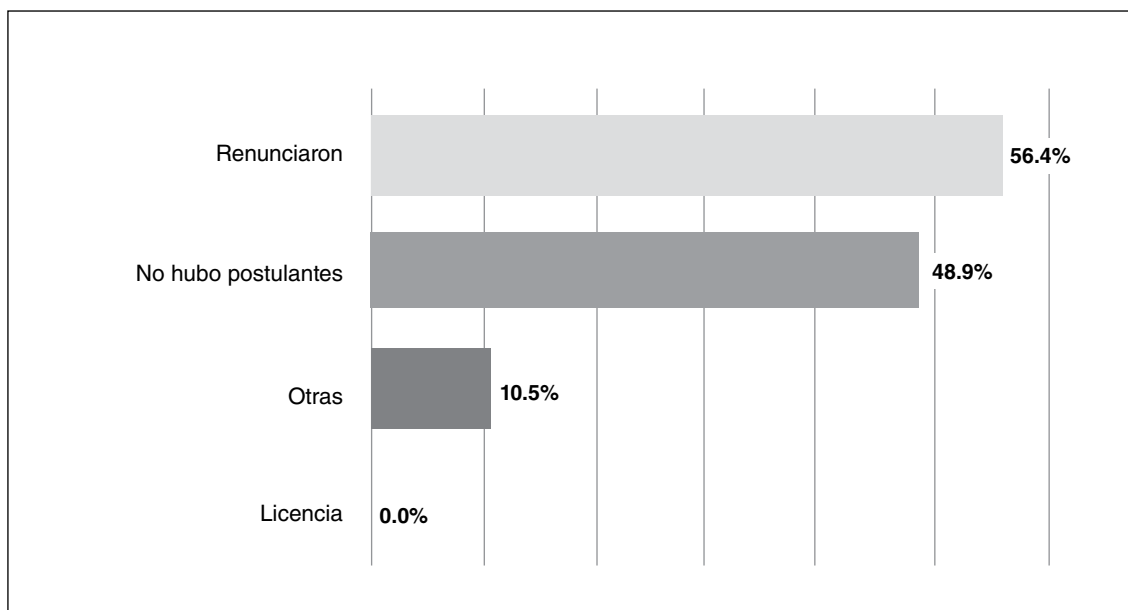
Discussion

In view of these percentages, we can draw some conclusions. This is a survey into a homogeneous population of residents working at Residencies acknowledged by the AAOT; therefore, they belong to Orthopedics Departments already acknowledged. In our records there are 100 Residencies acknowledged by the AAOT, which are made up of 1034 residents.

The figure assessed for this survey, 299, represents approximately 29%—representativeness can be called into question.

More than 70% of Orthopedics residents get training at public institutions, whereas less than 30% of them receive it at private ones. These figures are difficult to compare between each other, because when it comes to define them, institutions are not always clear-cut public or private—there is an intermediate status. However, it goes without saying that two thirds of Orthopedics residents are trained at public institutions at municipal, provincial or federal centers.

Moreover, it is worth highlighting that most of the residents that attend the Congress come from the Province of Buenos Aires, and we get a similar figure when adding the rest of the provinces by themselves. CABA is relatively significant, if we happen to consider its geographical area and population, although undoubtedly this is explained by the great number of institutions within its jurisdiction—In CABA there are 29 Residencies acknowledged by the AAOT and 469 residents.



▲ **Figure 6.** Reasons for unfulfilled Residencies in terms of the number of residents.

The National Health Department was the entity that validated the greatest percentage—more than half the Residencies, whereas the CONEAU validated the lowest percentage. The AAOT is the National Health Department's articulating organ and its tool for Residencies acknowledgment, what explains the close contact between both institutions.

With respect to both entry modality and criteria for choice, it is noteworthy that 55% sat only once for the entrance exam, and also 55% only did it in one place; therefore, 74% of the residents are getting trained at their favorite institution. Hospitals are the preferred centers as first options in almost 90% of the cases, and more of half the residents looked for public institutions. Preference was guided especially by third parties' recommendations, and the most important reason for choice seems to have been surgical practice (70%), what is also the main reason for which also 70% of the residents would not choose a given Residency if there they operated on few patients—this highlights the surgical drive our youngsters have.

In turn, at the time of considering satisfaction vs. expectations, only 53% of the residents were totally satisfied. The most frequent reasons were premises deficit and poor academic training. On the other hand, we will have to watch workload, which represents partial satisfaction for 47% of the residents.

Moreover, it is worth highlighting the role of the AAOT's Bi-yearly Course as a formative tool and, needless to say, as an unavoidable requirement for Certification. The fact that 90% of the survey respondents affirm that their Residency syllabus is aligned with our Association's educational project, although satisfactory info might be biased by the partial profile of the survey. It is welcomed, anyway.

Finally, even when the analysis of this data is promising, the fact that some Residency stages are unfulfilled should come as worrisome. Fifty-six percent were cases of residents' resigning, whereas 49% was due to lack of


applicants. This situation, that we have become aware of over time during Residencies acknowledgement interviews, sometimes make it difficult if not impossible to acknowledge a given Residency, and it is worthy of careful analysis. Undoubtedly it goes beyond the Residency framework and has to do with social, educational and economic factors. Anyway, it is a situation that will go against the formative process.

Among the weaknesses of this piece of research, it is worth mentioning that we took neither residents' age nor residents' stage into account. We believe that this does not change the report substantially. Although this work does not consider the previous study (2014) results, comparison came as unavoidable. Regarding the aforementioned data, then, out of 111 answers we concluded that residents averaged 30 years old and were at three-year stage (mn1-mx5) with standard deviation of 1.1.

We have thought about repeating this survey next year. We will include as few open-ended questions as possible so as to improve statistical analysis, and we will improve writing style adding other questions to broaden knowledge. It is difficult to know the exact number of Orthopedics residents at any given time. As we have already stated, there are approximately 1034 in more than 100 Residencies. There are many Orthopedics Departments and Residencies that have not been acknowledged by the AAOT yet and, therefore, neither are their residents. The aim of the AAOT is to be present in doctors' doings at this Orthopedics formative stage. Consequently, we expect the figures we produce are more representative. We should also consider that we conducted this survey using the Committee's methodology—we should not rule out the possibility to use professional statistics tools for more reliable outcomes.

Last but not least, access to these data allows our membership and also the AAOT's authorities to get at least partially acquainted with the educational status of our youngsters, who are the Orthopedics specialists of the future.

Appendix



CURRENT RESIDENCY

Municipal public Private (Clinic or any other kind of public institution)
 Provincial public Union's clinic
 Federal public Other

LOCATION OR GEOGRAPHICAL AREA

CABA <input type="checkbox"/>	Province of Buenos Aires <input type="checkbox"/>	Santa Fe <input type="checkbox"/>	Entre Rios <input type="checkbox"/>
Misiones <input type="checkbox"/>	Corrientes <input type="checkbox"/>	Chaco <input type="checkbox"/>	Formosa <input type="checkbox"/>
Córdoba <input type="checkbox"/>	San Juan <input type="checkbox"/>	La Rioja <input type="checkbox"/>	Tucumán <input type="checkbox"/>
Salta <input type="checkbox"/>	Jujuy <input type="checkbox"/>	Catamarca <input type="checkbox"/>	Santiago del Estero <input type="checkbox"/>
San Luis <input type="checkbox"/>	La Pampa <input type="checkbox"/>	Mendoza <input type="checkbox"/>	Neuquén <input type="checkbox"/>
Río Negro <input type="checkbox"/>	Chubut <input type="checkbox"/>	Santa Cruz <input type="checkbox"/>	Tierra del Fuego <input type="checkbox"/>

Say which one (city and province) _____

RESIDENCY ENTRY MODALITY

Entrance examination
 Entrance examination + Average score in Medical Degree Course
 Entrance examination + Average score in Medical Degree Course + Interview
 Entrance examination + Average score in Medical Degree Course + Interview + Background

Average score in Medical Degree Course

RESIDENCY DURATION IN YEARS


VALIDATION

CONEAU National Academy of Medicine
 National Health Department Others
 Medical College
 University What University? _____
 Course of studies for University specialist Yes No

How many entrance examinations did you sit for to join an Orthopedics Residency?

Did you sit in more than one geographical area among the aforementioned ones? Yes No

1



Did you ask third parties for recommendation of any Residency?
 Yes No

The Residency you are getting training at, is the option you had first preferred?
 Yes No

Mention which were your original first three Residency options ranked from first one to third one in order of preference independently of premises (hospital, clinic, any other kind of institution)

- _____
- _____
- _____

What were the criteria you based your preference for a given Residency on?
 (You can identify more than one option)


Closeness to home/access	<input type="checkbox"/>
Recommendation by third parties	<input type="checkbox"/>
Previous acquaintance with the institution	<input type="checkbox"/>
Background acknowledged by the institution and/or leader professionals	<input type="checkbox"/>
Satisfied current or former residents	<input type="checkbox"/>
Enough surgical practice	<input type="checkbox"/>
Variety of disorders	<input type="checkbox"/>

Independently of the type of Residency you have joined (hospital, clinic, or other kind of private institution), what do you prefer for your training?

Private institutions
 Public institution
 University institution

Say why you would not have chosen a given Residency

2



Examples (you can identify more than one option)

You were told you would operate on few patients	<input type="checkbox"/>
Senior professionals do not devote time to young doctors' training	<input type="checkbox"/>
Limited disorders range	<input type="checkbox"/>
Limited possibilities to make scheduled visits to other institutions	<input type="checkbox"/>
Sub-optimal reputation of the institution	<input type="checkbox"/>
Few anesthesiologists	<input type="checkbox"/>
Small salary	<input type="checkbox"/>
Long distance	<input type="checkbox"/>
Other reasons	<input type="checkbox"/>


Mention other reasons:

Does the institution you are getting training at satisfy your previous expectations?
 Yes, totally Yes, partially No

If you answered "Yes, partially" or "No", what are the prevailing drawbacks?
 (You can identify more than one option)

Barriers by senior professionals (lack of enthusiasm, they do not accept any other academia)	<input type="checkbox"/>
Poor academic training (poor participation in Courses and Congresses)	<input type="checkbox"/>
Workload (duty schedules, "a lot of medical history/little of surgery")	<input type="checkbox"/>
Premises (equipment, building, access to surgical instruments)	<input type="checkbox"/>

3



The syllabus followed by the Residency you are getting training at:

Do you feel that it is aligned with the AAOT's educational project?
 Yes No

It is scheduled to attend the AAOT's Bi-yearly Course?
 Yes No

It is scheduled to attend other Official Courses organized by member societies?
 Yes No

Which ones?

The Residency you are getting training at show:

Fulfilled positions at all stages
 Lack of residents at some stages—which ones?

If you answered "lack of residents", the main reasons are (You can identify more than one reason)

Residents' Resigning	<input type="checkbox"/>
Leave of absence	<input type="checkbox"/>
There were no applicants	<input type="checkbox"/>
Others	<input type="checkbox"/>

4