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## Perception of preceptors of medical residency in anesthesiology on their roles in educational activities: a watchful eye



Dear Editor,

Medical Residency (MR) is a lengthy medical training program that has been regulated in Brazil since 1977 and aims to prepare medical specialists for developing their professional activities with responsibility and quality.<sup>1</sup>

In 2020, anesthesiology was the medical specialty with the fifth highest number of registered specialist titles (5.9%) in Brazil.<sup>2</sup> Medical Residency in Anesthesiology has direct access, lasts 3 years with a weekly workload of 60 hours, and must follow Brazilian Society of Anesthesiology (SBA) guidelines and structure.<sup>1</sup>

The preceptor is essential for the improvement of MR. In addition to assisting in resident training, the preceptor coaches' residents to act competently during clinical practice. However, preceptors need professional experience and curricular knowledge.<sup>3</sup> Training of preceptors and the role of preceptors in training specialists are relevant topics and therefore have been subject for debate.

A quantitative descriptive study was carried out at Universidade Estadual de Ciências da Saúde de Alagoas (UNCISAL) to determine the teaching profile of preceptors and examine their perceptions regarding MR. The study was approved by the UNCISAL Ethics Committee decision number 17781419.0.0000.5011.

The sample studied comprised 52 preceptors (80% of the total number of preceptors) from the three Anesthesiology Medical Residency Programs (MRPs) in the city of Maceió (AL).

Data was collected face-to-face between September 2019 and February 2020, and remotely from June to August 2020, using a tool for online questionnaires (Google Forms).

The preceptors answered both a sociodemographic questionnaire and another questionnaire developed and

validated by Giroto,<sup>4</sup> comprising 35 statements on preceptorship, with Likert-type scale answers.

Positive Perception (PP) was attributed to respondents choosing the answers "Totally Agree" (TA) and "Partially Agree" (PA). On the other hand, the answers "Indifferent" (I), "Partially Disagree" (PD) and "Totally Disagree" (TD) were put together in another group, defined as negative perception (NP), presenting points to be improved.<sup>4</sup> According to Giroto<sup>4</sup> five domains are identified: 1. Educational competence; 2. Learning support and resources; 3. Planning of the Learning Program; 4. Integration between teaching and service; and 5. Presence of students in the practice field.

When examining overall data, we observed that the mean age was  $42.69 \pm 11.97$  years, revealing a younger population compared to the overall mean age of anesthesiologists, which in 2020 was  $49.1 \pm 13.3$  years.<sup>2</sup> Probably, this is due to the new anesthesiology MRPs recently accredited.<sup>2</sup>

When examining the experience of the preceptors regarding MR, the finding of  $7.36 \pm 8.14$  years may suggest experienced preceptorship, which is beneficial regarding the teaching and training of residents. In addition, we observed that preceptors have a mean practice time as anesthesiologists of  $12.74 \pm 13.46$  years, indicating they were also clinically experienced.

Regarding MSc and PhD degrees (*stricto sensu* postgraduate courses), none of the preceptors had a PhD degree, with the majority (88.45%) being specialists (RM), and only 3.85% had a MSc degree. As preceptors are required to hold a MR specialty certificate or certificate of specialization,<sup>1</sup> this criterion can generate less interest of preceptors in pursuing MSc/PhD degrees.

In regard to the Giroto<sup>4</sup> questionnaire (Table 1), in Domain 1 (Educational Competence) a predominance of Positive Perception was recorded, showing an awareness of preceptors regarding the importance of using their competences in MR. This may also reflect confidence in their clinical skills, revealing competence in assisting residents' learning process.

Regarding Domain 2 (Learning Support and Resources), from the point of view of the preceptors, RM programs offer

**Table 1** Results from the questionnaire on preceptorship activities.

Domain 1 statements – educational competence	Positive perception (%)	Negative perception (%)	Mean	SD
11. I feel capable of performing teaching activities.	92.3	7.7	4.17	0.8
21. I use databases to keep myself updated.	74.5	25.5	3.73	1.35
22. My learning objectives comprise attitudes, skills, and knowledge.	98.07	1.93	4.75	0.55
23. I know my students and consider their baseline knowledge.	86.54	13.46	4.21	0.77
24. As a preceptor I perform theoretical-practical correlation.	100	0%	4.73	0.44
25. I realize my learning needs.	98.07	1.93	4.75	0.65
26. I evaluate my students regularly.	76.93	23.07	4.05	0.95
27. I evaluate students at the end of processes.	53.85	46.15	3.46	1.27
34. I am attracted to pursuing a teaching career.	38.46	61.54	2.71	1.49
35. My role as a preceptor improves my quality of life.	50	50	3.44	1.33
Domain 2 statements – learning support and resources	Positive perception (%)	Negative perception (%)	Mean	SD
7. I have the required resources to perform my teaching activities.	80.77	19.23	3.82	1.20
9. I received educational training to act as a preceptor.	28.85	71.15	2.21	1.36
10. I have support from my superior to develop the preceptorship.	74.5	25.5	4.13	1.02
13. I participate in discussion forums on teaching-service integration.	53.85	46.15	3.23	1.13
17. My activity as a preceptor is acknowledged by the professionals of the higher education institution.	63.47	36.53	3.59	1.27
32. I have a suitable setting at my job for performing the preceptorship activity.	76.93	23.07	3.88	1.26
Domain 3 statements: planning of the learning program	Positive perception (%)	Negative perception (%)	Mean	SD
4. I am not independent to develop learning proposals.	53.85	46.15	3.44	1.25
5. The health service network is co-responsible for the training of health professionals.	90.38	9.62	4.42	0.89
6. My preceptor activities comply with the National Curriculum Guidelines.	82.7	17.30	4.23	0.96
8. My preceptor activity integrates students into the health team.	90.38	9.62	4.34	1.04
14. My activities in the service have been rearranged as a function of the presence of students.	40.39	59.61	2.84	1.31
15. I am familiar with the curriculum of the course in which I am preceptor.	80.77	19.23	4.11	1.19
30. I develop research activities with students.	21.15	78.85	2.42	1.25
Domain 4 statements: integration between teaching and service	Positive perception (%)	Negative perception (%)	Mean	SD
18. My practice allows me to correlate biological, social, and cultural aspects of the health-disease process.	75	25	3.86	0.92

Table 1 (Continued)

Domain 4 statements: integration between teaching and service	Positive perception (%)	Negative perception (%)	Mean	SD
19. I identify the health needs of the assisted population to define educational objectives.	57.70	42.30	3.67	0.87
20. My learning objectives do not consider the population's health needs.	76.93	23.07	4.07	1.11

  

Domain 5 statements: presence of students in the practice field	Positive perception (%)	Negative perception (%)	Mean	SD
1. The presence of students in the work environment is a burden to my practice.	57.70	42.30	3.59	1.30
2. The presence of students upsets users.	57.70	42.30	3.98	1.19
3. The quality of my service is improved by the presence of students.	69.23	30.77	3.84	1.07
12. The whole service health team participates in student training.	63.46	36.54	3.48	1.32
16. The presence of students at the service compromises patient safety.	76.93	23.07	4.0	1.08
28. Student assessment is not my responsibility.	53.85	46.15	3.21	1.52
29. I learn from my students.	92.30	7.7	4.59	0.74
31. The presence of students in the service triggers conflicts within the team.	53.85	46.15	3.44	1.40
33. I receive compensation to work as preceptor.	25	75	1.96	1.48

Source: Modified from Girotto (2016).  
SD, Standard Deviation.

appropriate material and structure for teaching activities. Regarding activities, they also quoted institutional support/acknowledgement. These are relevant data, as it is not infrequent to observe scenarios in which there is inadequate structure, causing concerns in care and relationship challenges.

Preceptors quoted difficulty in obtaining training related to teaching methodologies and instructor development, in addition to other topics. However, the Brazilian Society of Anesthesiologists (SBA), concerned with this gap, has made material to improve teaching available to SBA members at SBAs Teaching and Training Centers (CETs).<sup>2</sup>

Regarding Domain 3 (Planning of the Learning Program), a significant finding was that preceptors declare they prepare learning plans for the MR, to be familiar with the MRP list of competences in anesthesiology (defined by the SBA),<sup>2</sup> and to integrate residents into the hospital team. Another fact that stood out, though negatively, was that overall, the preceptors do not perform research in MR, revealing low interest and possible lack of incentive from health institutions.

Domain 4 (Integration between Teaching and Service) revealed that preceptors seek to accomplish an integrated action, according to the norms of the Brazilian National Health Service (Sistema Único de Saúde – SUS). Thus, preceptors aim training of residents to be focused on an integral view of the patient.

In Domain 5 (Student Presence in the Practice field), preceptors stated that monitoring residents does not compromise the care functions carried out by preceptors. They

considered themselves prepared to settle potential problems with the work team. They also emphasized that the improvements brought about by MR can promote improvements in quality of care, in agreement with a study examining the implementation of MRP in anesthesiology.<sup>5</sup>

Among those surveyed, a minority (25%) received compensation for the preceptorship position, a finding that can be associated with negative consequences, such as discouragement and decline in teaching performance.

As the study methodology was quantitative, verification of some issues may be limited. Thus, topics such as limited educational training and compensation could have been better understood by open questions.

As a consequence of the findings of this study, we suggest the development of regulatory norms for preceptorship, for example, the requirement of educational training for the accreditation of preceptors. Another recommendation would be establishing compensation for preceptorship.

The results of this study reflect the profile and reality of the city of Maceió, capital of Alagoas, a State in the Brazilian Northeast region, and help appreciate in detail a relevant topic such as MR and preceptorship relative to the training of anesthesiologists. However, these data should not be generalized nationwide. In this regard, a more extensive investigation comprising larger cities would be required. However, in addition to serving as a basis for further research focusing on anesthesiology preceptors, this study can also be valuable to other medical specialties.

## Authors' contributions

Aderval de Melo Carvalho Filho: Conception of the study, data acquisition, data analysis, study coordination, manuscript writing and review.

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## Conflicts of interest

The authors declare no conflicts of interest.

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## The overshadowed opioid misuse pandemic



Dear Editor,

Our recent COVID-19 pandemic has overshadowed our long term prescribed opioid misuse pandemic, which is still alive and kicking. This old lethal pandemic should not be ignored and more needs to be done to deal with it. The USA Center for Disease Control and Prevention estimates that the total “economic burden” of prescription opioid misuse in the country is \$78.5 billion per year.<sup>1</sup> Furthermore, more than 100,000 people die each year from drug overdose in the USA.<sup>2</sup>

In the late 1990s, pharmaceutical companies reassured the medical communities that patients would not become addicted to prescription opioid pain medications, but there was widespread misuse of these medications before it became apparent that they are actually highly addictive.<sup>3</sup> For instance, the incidence of opioid-related death in women has increased 5-fold over the past decade. For many women, their initial opioid exposure occurred in the setting of routine medical care. Approximately one in three deliveries in the USA are by cesarean section, and opioids are

commonly prescribed for postoperative pain treatment. A total of 0.36% of 80,127 opioid-naive women became persistent opioid users following their cesarean section.<sup>4</sup> Now more than ever, it is important to identify and implement the most “opioid sparing” management for patients undergoing cesarean section.

At our institution, for over twenty years, we have provided epidural-PCA fentanyl with ropivacaine analgesia for 48 hours post-cesarean section pain management. In our retrospective study, we determined whether Epidural-PCA was necessary for an additional day, up to 72 hours post-cesarean section. One group of patients preferred to continue epidural-PCA fentanyl with ropivacaine analgesia for a total of 72 hours, while the second group of patients preferred having only epidural-PCA fentanyl with ropivacaine analgesia for 48 hours. Patients in both groups had the option to receive oxycodone 5 mg with acetaminophen 326 mg tablet, and ibuprofen 400 mg tablet every 4 hours as needed in addition. Patients in the group that received epidural-PCA for 72 hours post cesarean section did not require any oral opioids and evaluated their pain treatment satisfaction as 9.3 out of 10. In the group that received epidural-PCA for only 48 hours, 60% of the patients