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ORIGINAL ARTICLE

The challenges of having 3-year Pediatric Residency programs

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Abstract

A meeting was organized by the Brazilian Society of Pediatrics (SBP), the Federal Board of Medicine (CFM), and the National Committee for Medical Residency (CNRM) in June 2018 to discuss the new duration of Pediatrics Residency Programs – three years – set out in Resolution 1/2016 of the CNRM. A questionnaire was emailed to residency program preceptors in an attempt to present a clear picture of the consequences of increasing the length of pediatrics residency programs. The number of respondents per region matched the distribution of pediatricians in Brazil according to the census survey conducted by the CFM. Most of the preceptors (70.1%) cited potential issues with implementation, while 79.6% expected the programs to improve the training provided to pediatricians. The areas associated with greater obstacles to implementation were mental health (60.9%), medical genetics (54.3%), adolescent medicine (42.1%), and trauma (41.1%). The changes to residency programs will encourage the introduction of solutions in areas historically deprived of resources and require a more active involvement of the Brazilian Society of Pediatrics with residency preceptors.

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INTRODUCTION

"Three-Year Medical Residency Programs: Let Us Build It Together" was the title given to the pediatrics meeting organized by the National Committee for Medical Residency (CNRM), the Federal Board of Medicine (CFM), and the Brazilian Society of Pediatrics (SBP) hosted at the CFM headquarters on June 14-15, 2018. The discussions on the implementation of the requirements set out in Resolution 1/2016 of the CNRM comprised primarily presentations delivered by members of the Coordination of Residency and Internship Programs of the SBP. This study aimed to list and compare the obstacles anticipated by pediatrics residency preceptors from socioeconomically and culturally different regions in Brazil associated with changing the length of residency programs. Study findings indicated areas where the requirements might be eased along with potential solutions to existing impediments that might be implemented with the help of the SBP. Responses were assessed to provide a picture of the impact at a national and regional level.

METHOD

The survey sent to pediatrics residency preceptors featured the following seven questions: 1) Where do you work in Brazil? (North/Northeast/Midwest/Southeast/South) 2) What type of institution is your residency program affiliated to? 3) Do you know that pediatrics residency programs will now take three years? 4) Are you familiar with the program contents of the three-year pediatrics residency? 5) Do you foresee any issues with implementing the new program? 6) Which of the areas listed below are potential sources of issues? 7) What are your expectations in relation to the impact on pediatrician training derived from the introduction of the new program?

The questionnaire was designed on Google Forms® and comprised mostly multiple choice questions allowing one answer, with the exception of question 6 (Which of the areas listed below are potential sources of issues?), in which respondents could pick more than one answer. The areas listed in the questions were based on the findings of a previous survey organized by the same group at the start of the discussions two years prior to the submission of the current questionnaire. A hardcopy of the questionnaire was mailed and a link to the survey emailed to pediatrics preceptors listed with the SBP. Responses submitted up to three days prior to the meeting were considered. Google Forms® calculated the proportions shown in this paper.

RESULTS

A total of 197 pediatrics preceptors answered the questionnaire, distributed as follows: 54.1% from the Southeast; 19.9% from the South; 17.9% from the Northeast; 5.1% from the Midwest; and 3.1% from the North region of Brazil.

The proportions matched the distribution of pediatricians in Brazil published in a census survey of the medical population[1], and the study population was considered valid. Figure 1 lists the proportions tied to each possible answer in the questionnaire versus respondent geographic location.

In terms of affiliation, most pediatrics residency programs work with medical schools (32.9%). Respondents could pick more than one answer. State hospitals (17.7%), municipal hospitals (17.3%), federal hospitals under the Ministry of Education (17.2%), and federal hospitals under the Ministry of Health (7%) were also cited. Some (4.5%) declared affiliation to healthcare networks. Questions with no response (7.7%) included options not listed as possible answers, such as residency programs affiliated to private hospitals.

At a national level, 194 of the 197 respondents were aware of the change to three years of pediatrics residency programs. One of the individuals unaware of the change worked at a federal hospital under the Ministry of Education in the North, another at a state hospital affiliated to a medical school in the Northeast, and the third at a municipal hospital in the Southeast.

Most of the respondents (70.1%) anticipated difficulties implementing the new program. Figure 2 shows the breakdown per geographic region. The blank item in the Figure indicates that one of the respondents did not answer the question.

The new program sets out training requirements not contemplated in previous versions of pediatrics residency programs. The survey probed into the areas that might pose obstacles to implementation. Table 1 shows the proportions of answers covering each of the areas individually and combined per geographic region and at a national level.

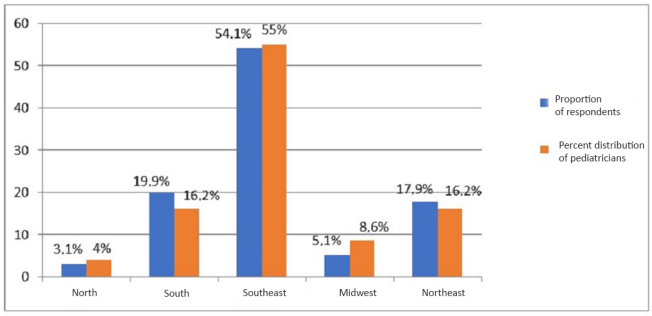

Figure 1. Proportion of respondents and geographic distribution of pediatricians.

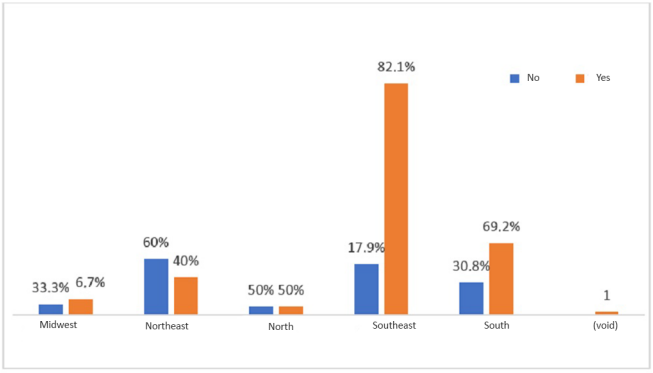

Figure 2. Respondents anticipating issues with the implementation of the new residency program.

Most of the preceptors included in the study (79.1%) believe the new pediatrics residency program will improve the training provided to residents, while 13.7% believe there will be no difference and 6.6% think it will be worse. Figure 3 shows the breakdown for each geographic region in Brazil.

DISCUSSION

The pediatrics meeting organized by CNRM/CFM/SBP in Brasília held discussions on the troubles and challenges associated with the changes proposed to pediatrics residency programs in Brazil. The new program was designed by SBP, submitted to CNRM, and put into effect via Resolution 1/2016. The framework of the program was changed to set clear skill acquisition goals by the end of each year. This and other changes have shifted residency programs from an eminently one-way transmission of knowledge into a two-way shared learning experience.

Many were the topics discussed and questions asked during the meeting. Many were the commonalities concerning the issues faced by the Brazilian healthcare system stemmed from lack of investment and personnel, or the removal of pediatricians from basic healthcare services. One of the solutions discussed at the meeting was the inclusion of pediatricians in the roster of basic healthcare instructors.

The preceptors included in our survey will be involved in the transition to three-year pediatrics residency programs starting in 2019. Most of the respondents worked in southeastern Brazil, a traditionally more populous region with greater numbers of healthcare centers, medical personnel, and pediatricians. This was expected based on the medical community census survey published by the CFM[3]. The higher concentration of respondents in this region might bias implementation if the data were considered only at a national level, since more than half of the answers came from preceptors working in the Brazilian Southeast. In order to mitigate the effects of concentration and compare between regions, geographic areas were considered separately.

The institutions hosting residency programs were categorized as federal hospitals under the Ministry of Education; federal hospitals under the Ministry of Health; state hospitals; or municipal hospitals. We failed to include "private hospitals" as an option. Physicians often work two or more jobs, at public and private institutions, but for purposes of this study respondents could pick only one option. Future studies should look into the matter. Almost a third (31.6%) of the respondents did not answer this question, possibly for the reasons discussed above.

The combined answers on the type of institution residency programs had affiliation with revealed that 32.9% associated with medical schools. This proportion is not directly correlated with the number of medical schools and institutions offering pediatrics residency programs, since one same institution may receive students from more than one medical school. It may also include institutions mistakenly recognized as educational by the respondents. The proportion of institutions affiliated to healthcare networks was low (4.5%). This number will probably grow significantly as a consequence of the requirements introduced by the redesigned residency program, such as trauma training, which is in general provided at regional and municipal healthcare centers. Interconnections between programs is seen as a positive point, as it allows institutions, resident physicians, and preceptors from different programs to interact more closely with each other and be exposed to different service practices and instruction methods. The proportions reported for public hospitals are similar, at approximately 17%. Federal hospitals under the Ministry of Health were the exception, with 7.1%. When the hospitals tied to the ministries of Health and Education are combined, the proportion of federal institutions increases to 24.3%

Table 1. Forecast areas difficulty in implementing the program.

Areas	Southeast	South	Northeast	Midwest	North	Overall
Pediatric outpatient care	34%	23.10%	17.10%	10%	33.30%	27.90%
Pediatric inpatient care	17.9%	17.90%	11.40%	10%	33.30%	17.20%
Mental health	64.2%	56.40%	54.30%	50%	83.30%	59.80%
Trauma	42.5%	41%	25.70%	70%	16.70%	41.70%
Medical Genetics	58.5%	43.60%	60%	50%	16.70%	54.90%
Adolescent Medicine	39.6%	41%	48.60%	50%	50%	42.20%
Basic healthcare training	34.9%	12.80%	22.90%	30%	0%	27.90%

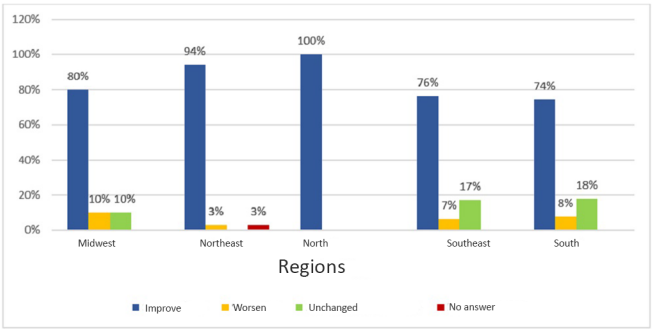

Figure 3. Expectations form changes in residency programs.

Almost all participants were aware of the changes to pediatrics residency programs. The three individuals unaware of the changes were from different regions (North, Northeast, and Southeast).

Most respondents anticipated issues with the implementation of changes to residency programs, with preceptors in the Southeast showing greater concern. The opposite was observed in the answers given by respondents from the Northeast. In the North, the proportions of individuals concerned and unconcerned with the changes were equal. Answers at a national level clearly indicate that preceptors believe the implementation of the changes will not be trouble-free (70.1%). Respondents were also asked to list the areas that might be potential sources of issues in implementation. They could pick more than one answer. The areas listed in the questions were based on the findings of a previous survey organized by the Coordination of Pediatrics Residency and Internship Programs of the SBP. The possibility of choosing more than one area allowed the assessment of potential sources of issues individually (e.g.: medical genetics or adolescent medicine) or as a group (e.g.: trauma and a specific area). At a national level, mental health was the area described as having more significant implementation obstacles (59.8%), followed by medical genetics (54.9%), adolescent medicine (42.2%), and trauma (47.1%). Inpatient care in areas connected to pediatrics had lesser obstacles to implementation (17.2%), a possible indication that the number of specific beds in wards for each medical specialty may have been underestimated in the interpretation of the resolution issued by the CNRM.

Difficulties tied to providing basic healthcare training were surprisingly significant (27.9%). Pediatricians have been historically connected to this area of medicine, although they have been barred from working in it in recent years by force of healthcare policies. Shifts resulting from recent policy changes have removed pediatricians from basic healthcare units altogether and from family health centers in some regions. The ban has been problematic for residency programs not connected to basic healthcare units. Many units cannot train pediatrics residents for not having pediatricians in their staff. In some, management is outsourced. Other units have veered away from residency programs, since residents must be supervised by a specialist preceptor hired as an instructor by the institution[4]. The discussions held at the meeting took the apparent deadlock into consideration and offered individualized solutions in line with the resolution issued by the CNRM.

Table 1 shows the answers and related proportions for each geographic region. Mental health topped the list in every region, with the highest proportion seen in the North (83.3%). A third of the respondents from the North expected implementation difficulties in specialty outpatient and inpatient care. Similar numbers were observed in the Southeast (34%) for specialty outpatient care. This finding is particularly significant in the Southeast, a region with greater numbers of specialized physicians. In the Midwest, respondents expected to have lesser issues with implementing the changes within different medical specialties. Interestingly, in the Brazilian South the proportion of respondents stating they did not anticipate issues with the changes was larger than the proportion observed in the Northeast.

Concerns with medical genetics achieved alarming proportions in the Northeast (60%) and Southeast (58.5%), with slightly lower numbers seen in the Midwest (50%) and South (41%) regions. This finding was not entirely surprising, since the lack of medical genetics services is missed even in the more developed parts of the nation. The concern with medical genetics in the North was unexpectedly low (16.7%).

Trauma training was named an issue by 70% of the preceptors working in the Midwest, a proportion significantly higher than the values seen in other regions. Participants from the Southeast and the South had similar perceptions (42.5% and 41%, respectively). Given the peculiarities of childhood and the lower number of cases of trauma compared with adult populations, trauma was expected to show much higher numbers than the ones found in the study. Trauma training was seen as an issue by just over a quarter of the respondents from the Northeast (25.7%), while in the North fewer shared the same concern (16.7%). The perceptions seen in the two regions were significantly different from the opinion of preceptors in the Brazilian Midwest. Local surveys may help to identify the causes of such extreme differences.

In relation to the other questions, the answers linked to adolescent medicine were more evenly distributed, with proportions within the 40-50% range. Few pediatricians work in this area, and that is probably why we expected it to be described as a potential issue for the implementation of the new residency program design. Perhaps preceptors, given their specific role in new pediatrician training, consider themselves able to treat adolescents and see them as part of the population they provide care to within the realm of general pediatrics, rather than a separate specialty.

To sum up with, cooperation between regional programs will be essential in the implementation of the new pediatrics residency program. The development of

inter-institutional networks, the perception that the quality differences in the training provided to pediatricians should be mitigated, the acknowledgement of regional differences in epidemiological and economic terms, the availability of support to the programs and preceptors in particular in terms of technical support and teaching materials, in addition to the need to provide preceptors and resident physicians with in-class and remote training programs, are the foundations required for this ambitious project to meet the expectations of a significant portion of preceptors (79.19%,) for whom the changes in residency programs will lead to improvements in the formation of pediatricians, a belief expressed by preceptors from all regions, ranging from 74% in the South to 100% in the Northeast. To this end, the SBP has been performing a central role in the development of solutions. General information on residency programs and communication channels for pediatrics preceptors and residents are available on tab "*Espaço Preceptor*" (Preceptor's Corner) (http://www.sbp.com.br/residenciamedica/espaco-preceptor), on the residency program webpage (http://www.sbp.com.br/residenciamedica), and at the SBP website (http://www.sbp.com.br).

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