## Challenges for medical residency in hematology and transfusion medicine in Brazil

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Hematology and transfusion medicine cover a wide range of knowledge and skills including hematological neoplasms, the hematological consequences of systemic diseases, anemia, hemostatic disorders, bone marrow transplantation, transfusion medicine and cell therapy. Despite the scientific and clinical relevance, our specialty is relatively little known and also little divulged among future physicians on medicine courses. This issue is not only being discussed in Brazil; it was the theme of a recent editorial in the journal Haematologica, the official organ of the European Haematology Association, with the evocative title "The importance of calling yourself a hematologist". The authors reported that hematology in Europe is a specialty that is unknown to the public at large which results in negative repercussions on the development of the specialty.

For years now, too few physicians have been trained in Brazil to meet the needs of transfusion medicine, bone marrow transplantation and cell therapy services.

From the observation that a substantial number of positions for residents in hematology and transfusion medicine remain unfilled and aiming to improve medical residency programs in hematology in Brazil, the *Associação Brasileira de Hematologia*, *Hemoterapia e Terapia Celular* (ABHH) held the "I Forum of Medical Residency in Hematology and Transfusion Medicine" in Campinas on May 29, 2012.

The meeting brought together representatives of 14 institutions that have residency programs in hematology and transfusion therapy and benefited from the presence of Professor Maria do Patrocínio Tenório Nunes, associate professor in the *Disciplina de Clínica Geral e Propedêutica do Departamento de Clínica Médica da Universidade de São Paulo*, and Executive Secretary of the *Comissão Nacional de Residência Médica*.

In a study kindly prepared by Prof. Maria do Patrocínio, a list of 47 accredited medical residency programs in hematology and transfusion medicine in Brazil, distributed over 12 States was presented, with 130 vacancies for the first and second years. For the optional third year in bone marrow transplantation, there are 12 accredited programs, with 20 places in five States (Rio Grande do Sul, Paraná, São Paulo, Rio de Janeiro and Minas Gerais).

Despite the significant number of programs, the official figures confirm the impression in respect to unfilled places. The vacancy rate is 52% for hematology and transfusion therapy residency programs, 50% for bone marrow transplantation fellowship programs and 60% in pediatric hematology residency.

## Preliminary evaluation and debate

In preparation for the forum, a questionnaire was sent to several institutions that have medical residency programs - 14 were represented at the meeting (Table 1).

The collected data confirmed difficulties in attracting residents and that these difficulties began before the prerequisite of completing a medical residency in internal medicine, although the situation worsened after this measure was introduced in federal universities and blood centers.

One of the possible factors that contributed to this situation is the current fragile situation of federal university hospitals, which may discourage students and reduce the demand for positions in medical residency programs. The very long duration of training, competition of oncology fellowships and, above all, the other professional areas that are today more attractive to young trainees were also considered factors that make our specialty less popular.

The advantages and disadvantages of the prerequisite of a clinical medicine residence were also discussed. Most of the meeting participants believe that the initial training in clinical medicine provides more mature individuals in the hematology residency program who are more able to care for patients with serious diseases. The inevitable disadvantage is the prolonged length of training.

Table 1 - Positions in residency in the fields of hematology and transfusion therapy offered and filled in some accredited programs in the country

Institution	Positions offered	Filled
Universidade de São Paulo – São Paulo	12	12
Universidade de São Paulo - Ribeirão Preto	6	6
Universidade Estadual de Campinas	4	4
Instituto Nacional de Cancer	4	4
Irmandade da Santa Casa de São Paulo	3	3
Universidade Federal do Paraná	2	2
Universidade Federal de Minas Gerais	4	4
Universidade Federal do Ceará	2	2
Universidade Federal do Rio de Janeiro	3	1
Universidade Federal do Rio Grande do Sul	3	1
Universidade Federal da Bahia	2	1
HEMORIO	10	1
НЕМОРЕ	2	0
HEMOAM	4	2
Total	61	43

The distribution of the total number of hours in medical residency was also discussed; most programs today split residency in 80% for hematology and 20% for transfusion medicine. The directors of the ABHH has been discussing the possibility of proposing to the *Comissão Nacional de Residência Médica* (CNRM) an increase in the length of residency in hematology/transfusion medicine from two to three years, with two years for hematology (66%) and one for transfusion medicine (33%). However, further discussions on the subject will be needed. Moreover, several of the participants in the meeting highlighted that there seems to be much effort spent on training physicians to treat patients with hematologic malignancies and a relative lack of training in the care of prevalent conditions such as anemia and changes in hemostasis.

Finally, a notable heterogeneity was observed in the current status quo of medical residency programs in hematology and transfusion medicine in the country, with some programs plain sailing and others facing severe difficulties in attracting and training future physicians.

## **Proposed measures**

Given the above, the need of a clear picture of the current status of medical residency in hematology and transfusion medicine in Brazil is evident. According to Prof. Maria do Patrocínio, this need exists in almost all areas of specialist training.

As a first step, it was decided that the ABHH would make "on the spot" evaluations of hematology and transfusion medicine residency programs accredited by the CNRM. Evaluation teams would be made up of representatives appointed by the directors of the ABHH and the CNRM. From this overview it will be possible to more clearly assess the curriculum implemented by programs and the real structural conditions and existing human resources involved in the training of future hematologists.

The expectation is to develop a minimum curriculum that covers all the essential aspects needed to train young hematologists and blood transfusion specialists so that they are able to meet the demands and challenges of modern medicine, whether in the public or private sectors. In order to put this curriculum into practice, the exchange of residents complementary training between institutions with accredited programs would be implemented when appropriate.

In relation to increasing the filling of the available positions, many participants stressed the need to develop stimulation strategies among fellows of internal medicine residency programs, to better divulge hematology and transfusion medicine, with all the possibilities these specialties can offer. Thus, it was proposed that the ABHH should create a workgroup to develop measures and appropriate teaching materials to promote motivational events in medicine schools.

These actions, although they will not quickly resolve the difficult problems identified by the forum, are the first step for coping with these problems and for involving all hematology residency programs in the country in the quest for its improvement.