

Research networks and clinical trials in critical care in Brazil: current status and future perspectives

Redes de pesquisa e estudos clínicos em terapia intensiva no Brasil: situação atual e perspectivas futuras

Throughout the last few decades, the Brazilian government has invested heavily in science and technology, increasing the number of post-graduate students at the doctoral and master levels in all scientific fields. As a result, Brazilian scientific production has increased considerably from 10,521 articles in 2000 to 33,100 in 2009, as recently reviewed in Science.⁽¹⁾ This new scientific scenario has boosted frequent interchanges between Brazilian researchers and foreign peers, including the field of critical care medicine. On the other hand, the average impact factor of Brazilian publications has fallen. In general, post-graduation studies are limited in size and conducted in one to a few centers, meriting a low impact factor. Collaboration between researchers from different institutions is key to increasing the relevance and impact factor of Brazilian studies.⁽²⁾

Brazil is currently among the top three countries in intensive care unit (ICU) bed availability with approximately 30,000 beds. The critical care community in Brazil is increasingly organized and now consists of almost 6000 board-certified physicians, and the number of multidisciplinary teams is also increasing. Certification is awarded by *Associação de Medicina Intensiva Brasileira* - AMIB (www.amib.org.br), which is the sole officially recognized critical care society in Brazil. Brazil hosts initiatives, such as the Latin American Sepsis Institute (ILAS). There are also two research networks in critical care. AMIB-net is a network run by the critical care society that supports and runs studies focusing on education and professional development. The Brazilian Research in Intensive Care Network (BRICNet) is an active and independent organization. Collaboration with international research networks is intense and has allowed many studies to enroll a large number of ICU and patients in Brazil. After almost 8 years since its founding, BRICNET is very pleased to see that critical care in Brazil is acknowledged as a growing and fertile scientific area. Since 2007, we have been able to endorse and run several multicenter observational studies as well as support local and international studies and investigators. Their results have helped us to improve the current knowledge on the epidemiology and organization of critical care in Brazil.⁽³⁻⁶⁾

Recognizing the enormous potential for clinical research, BRICNet has recently been through significant reformulation that will broaden its horizons, not only allowing a larger number of ICU to participate but also to move from strictly observational studies to randomized clinical trials. Two trials are ongoing. One, a cluster-randomized trial coordinated by members of BRICnet's steering committee included more than 7000 patients in 152 ICUs within 20 weeks in Brazil in 2013 (ClinicalTrials.gov Identifier:NCT01785966). The second is a randomized trial that has enrolled more than 370 patients (planned sample size

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is 1,200 patients) with ARDS in 140 sites (ClinicalTrials.gov identifier: NCT01374022).

All of the Brazilian critical care community is invited to join BRICNET and to be a part of the network, proposing new studies and participating in clinical and epidemiological studies. An annual meeting, held in summer, will allow all members to share in high-level scientific discussions that cover the most important topics for critically ill patients. This will be an excellent opportunity for becoming up-to-date on new developments in the research field.

The critical care scenario is changing quickly in Brazil and new challenges are arising, including translating investments in structure, education and research into better health care and reducing the mortality that is still

unacceptably high for many types of severe acute illnesses in our country.^(6,7) In this context, BRICNET has accepted these challenges and invites Brazilian intensivists to join us in future studies to help improve care for the critically ill in Brazil.

Scientific Committee

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