Neonatal and pediatric intensive care in Brazil: the ideal, the real, and the possible

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Neonatal and pediatric intensive care in Brazil has undergone a great deal of development during the last 20 years. To a certain extent this has been in line with the worldwide tendency. Nevertheless, what can be observed today is that this growth has taken place, and continues to take place, without adequate strategic planning. The result of this, which has for a long time been perceived by the users of the system, but for which evidence is only now being produced, is that there is no equality in terms of the distribution of beds with inequality on both national and regional levels. Access is limited and it is almost always the most deprived section of the population that is penalized and there is an extreme contrast in the quality of the services on offer, varying from extremely sophisticated units to others where the most basic minimum infrastructure is absent.

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A number of different factors can be isolated as being responsible for this situation, with emphasis on, by problem group, the following: (1) lack of equality: the large-scale investment that is necessary to open an intensive care unit (ICU), both in terms of material resources and in terms of human resources, has naturally led to a concentration of these units in those regions that are richer and better developed, which phenomenon is observed at the national, State and even municipal levels; (2) limited access: the lack of planning in both the public and private sectors has led to inequality in the supply of universal access beds, generally with an excess in the private sector and a shortage in the public sector; (3) unequal infrastructure: official standardization of this sector has come relatively recently and is confused, with normative standards that allow older units to continue functioning with inadequate infrastructure coexisting with idealized and well-intentioned, but equivocated standards that mean it is not viable to open new services. Add all this to the lack of trustworthy information on the system and inadequate inspections and audits and we have an accurate picture of the current reality.

In this issue of the *Jornal de Pediatria*, Souza et al.[1] offer such a portrait, focusing on the city of São Paulo, the largest in the country. A few years ago we took a similar photograph of the city of Rio de Janeiro, with very similar results.[2] Taking account of the fact that these are the two largest regional health centers in our country, it is very likely that the national level is, at best, similar, and probably worse. Recently, the Brazilian Association of Intensive Care Medicine (*Associação de Medicina Intensiva Brasileira* - AMIB) divulged the results of a second national census of ICUs, in an initial attempt to study this subject at a national level.[3] That census, however, focused exclusively on pediatric units and participation was entirely voluntary. The universe researched was unknown and the sample obtained probably highly biased, making the results of little practical value. Souza et al.[1] point out that 43% of the ICUs in their sample were not registered with the AMIB, the Regional Medical Council (*Conselho Regional de Medicina*), the Municipal Health Department (*Secretaria Municipal de Saude*) or the State Health Department (*Secretaria Estadual de Saude*) and were in fact identified via the telephone directory. It is also interesting that the greatest percentage of units that declined to participate were part of this same group (59% of the ICUs that did not participate in the study). It appears obvious that there is a need for a national ICU registration program that must be both obligatory and trustworthy. It should be pointed out that the Health Ministry, in conjunction with the National Agency for Sanitary Vigilance (*Agência Nacional de Vigilância Sanitária* - ANVISA) – the organ whose responsibility it is to centralize all information collected from the municipal Sanitary Vigilance Authorities (*Secretarias de Vigilância Sanitária*) which in turn have final responsibility for authorizing these ICUs' existence, has already published a directive making registration obligatory.[4] All that remains, therefore, is to correctly execute this directive and make the results available for public consultation on the Internet.

Returning to the subject of inequality, Souza et al.[1] have confirmed that the city of São Paulo is in the same situation that we found in the city of Rio de Janeiro:[2] the global number of beds is within prescribed limits (even in the public sector), but these beds are concentrated in central areas, which in turn have lower population densities. This fact would not be a problem, and could even be desirable since these are the areas where the best services are concentrated, if there was an effective

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system for controlling the availability of beds and for transporting critically ill children and high-risk expectant mothers and if the number of beds that were planned took into account demand from neighboring towns. Many countries provide excellent intensive care in this manner and there are already directives that specify such a system.[5] Indeed, in 6% of the neonatal ICUs in São Paulo and 11% in Rio de Janeiro 11% are within hospitals that are exclusively maternity units, far from certain resources that can nowadays only be found in general hospitals and that are fundamental to modern intensive care. This is another concept to which health policy planners must be alert: high-risk maternity units and neonatal ICUs should only exist within general hospitals.

One further detail that calls the attention in the study undertaken by Souza et al.[1] is the predominance of mixed units (with both neonatal and pediatric beds), accounting for 52% of all units in the city of São Paulo. While we observed just 31% of mixed units in the city of Rio de Janeiro, we observed that 77% of the units in provincial Rio de Janeiro were mixed. These data, taken together, call attention to a number of important facts: (1) in Brazil mixed units are truly the majority; (2) the standards for physical construction and operation should respect this reality; (3) the training given to pediatric intensive care specialists must cover, obligatorily, newborns, children and adolescents; (4) exclusive units are important, but should exist only at centers of excellence.

With respect of access to intensive care beds, Souza et al.[1] confirmed what we already knew in general for the country as a whole: there is an excess of beds in the private sector and a shortage in the public sector. This situation in the public sector can only be corrected by means of serious strategic planning, bringing together municipal and State authorities. It is no longer acceptable that the mayors and local governments of small towns use the inauguration of neonatal and pediatric ICUs for publicity without discussing the matter on a State level and identifying the real needs of regional populations. The absence of planning, control and an effective transport system is probably the reason for the national tendency towards the construction of small units with low numbers of beds; observed both in the study undertaken by Souza et al. and in our own work,[1,2] and in contrast with the situation in many developed countries where attempts are made to concentrate resources and experience at larger units.

On the other hand, in order to guarantee good results and a good standard of care it is not enough to match the supply of intensive beds to the demands of the population. This, without doubt, is the first step: to construct units with adequate infrastructure (material, human and financial resources) which will make possible universal access to these services for the whole population, but it is also very important to perfect the processes of care and this can only be achieved by means of sustained investment in continuous training and education of the entire health team and also in research projects specific to the sector. To this end the role of universities is key as centers for training human resources. Souza et al.[1] have demonstrated that in São Paulo 10% of the ICUs are in universities, while in Rio de Janeiro the situation is very different with no pediatric ICUs yet located at universities (only neonatal ones).[2] It is important that both the Ministry of Education and the Health Ministry are aware of these facts, so that they will adopt policies that make possible and encourage the creation and development of ICUs at Brazilian university hospitals.

Finally, we would be remiss to fail to mention the confusion that currently reigns with respect of standardization of the sector. With respect of the efforts of the Health Ministry and ANVISA, of some of the State Health Authorities, Professional Councils (CRM, COFEN) and Medical Societies (AMIB, SBP), we now have regulations that conflict in many respects, some of which are even very well planned, but inapplicable to our reality. To cite just the most significant distortions, there exists a recent ANVISA resolution (RDC 50, modified to RDC 307),[6,7] that lays down the criteria for constructing new units from 2002 onwards. These resolutions are very similar to what was contained in an earlier directive (*Portaria* MS 1884-94),[8] which, in turn is considered a pre-requisite for ICU Classification (*Portaria* MS 3432-98).[9] We were recently able to demonstrate that not one unit currently in operation in Rio de Janeiro completely fulfills the requirements of this legislation.[10] In contrast these standards do not apply to ICUs constructed before 1994, which are currently in a legal vacuum. How can this situation be changed? The SBP Intensive Care Scientific Department Management Committee and the AMIB Professional Defense Commission have been studying how to revise these criteria with the intention of presenting the relevant authorities with a standardization proposal (Minimum Standards and Classification Standards) that is more in line with reality.

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