ISSN: 1676-4285

OBJN Online Brazilian Journal of Nursing
ENGLISH
Federal Fluminense University
AURORA DE AFONSO COSTA NURSING SCHOOL
uff
Original Articles

Quality assessment of mother and child intensive healthcare services

Amanda de Figueirôa Silva Carmo[1], Fernando Antônio Ribeiro de Gusmão Filho[2], Suely Arruda Vidal[1], Rosana Dourado Loula Salum[1], Richardson Augusto Rosendo da Silva[3], Ana Dulce Batista dos Santos[1]

[1]Federal University of Vale do São Francisco
[2]Institute of Integral Medicine Professor Fernando Figueira
[3]Federal University of Rio Grande do Norte

ABSTRACT
Aim: To assess the adequacy of mother and child intensive healthcare public facilities in the city of Petrolina, PE.
Methods: A normative assessment was conducted between January and June 2011 of the mixed obstetric and pediatric ICUs of a public hospital. A logical model of the functioning of services and an assessment matrix were both submitted to the consensus technique. Data were collected from institutional documents and records, from interviews with 19 key informants and from the verification in loco of the structure and inputs.
Result: The two intensive care units were classified as inadequate, since they obtained a score of 28% for suitability for obstetrics and 38% for mixed pediatrics.
Conclusion: based on the experts' consensus, the implementation and weighted analysis of the results obtained from the instrument suggest its applicability to other intensive care units nationally.
Descriptors: Health Services Evaluation; Quality of Health Care; Intensive Care Units.

INTRODUCTION

The attention paid to patients in a critical condition has been the subject of reflection, especially in the context of the Unified Health System (UHS), due to changes in the outlook with regard to healthcare in Brazil over the last three decades. With regard to mother and child health, attention to pregnancy, childbirth and newborn care and its impact on perinatal, neonatal and maternal mortality has also become more evident in recent years[1]. In this sense, several situations have been responsible for the increase in the demand for intensive care in this population, leading to essential investment in mother and child intensive care.

Thus, the Intensive Care Units (ICU), which are intended to deal with patients in critical condition requiring constant observation, must have appropriate infrastructure, skilled human resources and specific material resources, in addition to a team of professionals with experience and knowledge. All these aspects are necessary for the planning and organizing of this sector based on the needs of patients, and the regulatory norms that guide the process of structuring ICUs.

For the planning and organization of the ICUs in the context of UHS, several legal devices alongside national policies of evaluation, of continuing education and humanization have been published since the 1990s. These devices establish classification criteria for ICUs and guide the physical projects of institutions.

In 2005, the Ministry of Health (MOH) outlined the proposal for a National Policy on Critical Patient Care (NPCPC), opening its draft to public consultation without, however, publishing it[2].In the same year, it published an ordinance setting forth provisions on common requirements for Neonatal and Pediatrics Intensive Care Units[3]. In 2010, the minimum requirements for running an ICU were established[4].

It is understandable, therefore, the importance of the need for the planning and the organization of health services to be linked to assessment procedures, making it possible for interested parties to firstly, identify the need for interventions that modify certain

health scenarios, and, secondly, to determine the difficulties faced by such practices in decreasing morbidity and mortality indicators, among other aspects[5].

Moreover, the growing concern about the quality of the services provided emphasizes the importance of evaluation. From this perspective, Donabedian has developed a three-dimensional systemic model: "structure", which corresponds to the relatively stable characteristics of its providers, instruments and resources, as well as the physical and organizational conditions; "process," the set of activities developed in the relationship between professionals and patients and; "Results", corresponding to changes in the health status of patients that may be caused by the intervention or by previous care[6].

The importance of the quality of health services and the contribution of the assessment in this regard is noteworthy, and yet it is important to emphasize the lack of evaluation studies in this area, even in the face of its expansion as part of the national scene.

In view of this reality and the importance of these services for the region, this study aimed to assess the adequacy of mother and child health intensive care public facilities in macro-region Petrolina-PE.

METHODS

A normative evaluation was carried out in the mixed pediatric and obstetric ICUs of a mother and child hospital, located in the city of Petrolina, Pernambuco. The hospital is a reference institution for the region in terms of mother and child health, and it serves the entire population of Petrolina macro-region, which comprises 28 municipalities, with a population of 818,235 inhabitants. These intensive care units are the only mother-and-child high complexity units, located in the northeastern states.

Data collection, conducted between January and June 2011, occurred in two phases. In the first phase, we developed a logical model of operation of the service, and a matrix of judgment whose evaluation criteria, values or scores, quality standards, descriptions of values and parameters of judgment for the classification of units, were based on the Collegiate Board Resolution (CBR) of the National Health Surveillance Agency (ANVISA, in Portuguese), nº 7/2010[4].

Still at this stage, a consensus technique[7] involving six experts, was held in two stages. Two of these experts were from the assessment area and four were from the intensive care area. They were selected based on their working experience in ICUs for more than six years, their experience in the areas of management and evaluation, as well as their scientific production in that area[8.9].

In the first stage, the experts received the original proposal of the logic model and the matrix of judgment by email, and were asked to suggest adjustments[7]. In the second stage, after the adjustments were made, the model and the matrix were returned to the experts for further examination, and a consensus was reached in terms of the process of identification and the selection of important criteria for evaluation[8,9]. In the second phase, the judgment matrix was applied, allowing reflection on, and classification of, the ICUs under consideration.

This phase of the study involved 19 key informants who performed management functions or administration in the ICUs or at the hospital, and had a direct connection with the ICUs. In order to take part in the survey they should have a minimum of six months of experience in the position, and should not be on vacation, medical leave or maternity leave during the period of data collection. These key informants were interviewed and granted access to information, documents, institutional protocols, record books, computer data, censuses and inventories and/or patrimony, human resources schedule and physical plant. Thus, this study employed, as methodological resources, documentary analysis, interviews and on-site verification of the structure and inputs of the units.

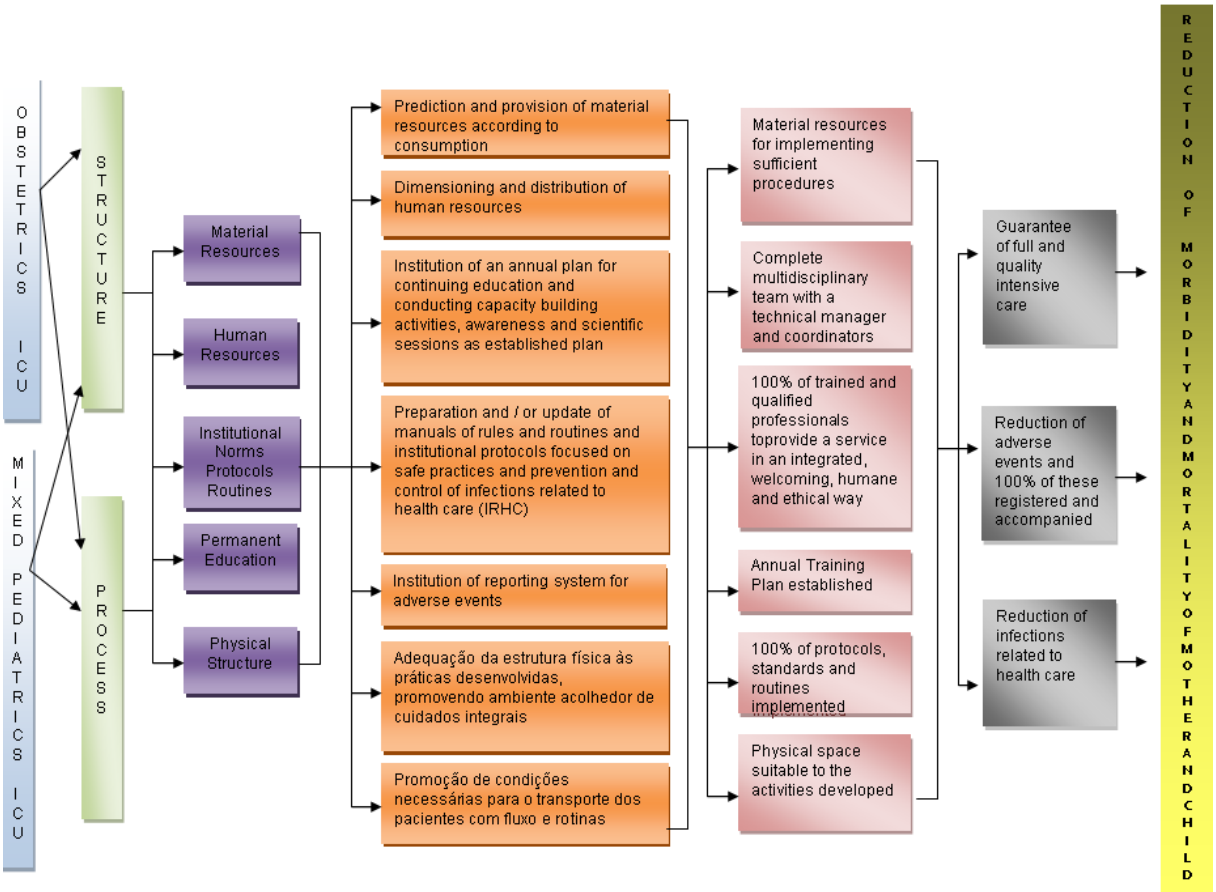
The matrix of judgment designed included the structure and dimension process, which were assigned possible scores of 40 and 60, respectively. In terms of judgment and classification of adequacy, according to the score assigned, four strata were considered: 100 to 76% - adequate service; 75 to 51% - partially adequate service; 50 to 26% - inadequate service and; less than or equal to 25% - totally inadequate service[9].

This study has complied with Resolution 196/96, which relates to research involving human beings [10] and was approved by the Ethics Committee of the Federal University of Vale do São Francisco (UNIVASF), in December 2010, under Protocol 0001/201110.

RESULTS

The logical model outlined in this study is displayed in Figure 1. The judgment matrix demonstrates the evaluation criteria, related scores with a description, the situation observed and the scores awarded (by feature, by size and in general) and the classification of each unit as shown in Table 1. The units were classified as inadequate, in that the obstetric ICU obtained a score of 28% in terms of adequacy and the mixed pediatric a score of 38%.

Picture 01: Logical model of obstetric and pediatric intensive care units. Petrolina, Pernambuco, Brazil, 2012.



Source: Author's data

Picture 01: Matrix of judgment of mixed obstetric and pediatric intensive care units. Petrolina, Pernambuco, Brazil, 2012.

DIMENSION	CRITERIA/ INDICATOR	PATTERN	MAXIMUM VALUE EXPECTED (=100)	VALUE DESCRIPTION	OBSERVED		ASSIGNED VALUE FROM OBSERVED		JUDGEMENT ACCORDING TO ASSIGNED VALUE	
					COMPONENTS		COMPONENTS		COMPONENTS	
					OBSTETRICS ICU	MIX PED. ICU	OBSTETRICS ICU	MIX ICU	OBSTETRICS ICU	MIX PED. ICU
	Permit issued by the Health Surveillance	Being present	1	Yes=1; No=0	No	No	0	0		
	Record in the National Registry of Health Care Facilities	Being present	1	Yes=1; No=0	Yes	Yes	1	1		
	Multi-professional team complete and proportional to the number of beds	Being present	3	3 points if you have a complete multiprofessional team with enough quantity for the number of beds 1 point if you have a complete multiprofessional team in insufficient quantity to the number of beds 0 point if you do not have a complete multiprofessional team in any quantity	The multiprofessional team is not complete, lacking: psychologist and dentist	The multiprofessional team is not complete, lacking: psychologist and dentist	0	0		
	Support Team	Being present	3	3 points if you have a complete support staff in a quantitative defined by law 1 point if you have a complete support team in an insufficient quantitative as defined by law 0 point if you do not have a complete support team in any quantity	The support team has no administrative assistant	It has a complete support team in a quantitative in line with the law	0	3		
	Technician in charge	Being present	2	2 points if you have a Technical Manager with titration in intensive therapy 1 point if you have a Technical Manager with no titration in Intensive therapy 0 point if you do not have a Technical Manager	To have a Technical Manager specialized in ICU	To have a Technical Manager specialized in ICU	2	2		
	Proportion of professional experts	At least 90%	2	2 points if = or > than 90 % 1 point if >50 % and < 90 % 0 point if < or =50%	(total of two professionals) < than 50%	(total of two professionals) < than 50%	0	0		

CONTINUED

ESTRUCTURE	Nursing Coordinator	Being present	2	2 points if you have a nursing coordinator with titration in Intensive Care 1 point if you have a nursing coordinator with no titration in Intensive Care 0 point if you do not have a nursing coordinator	To have a nursing coordinator with no titration in ICU	To have a nursing coordinator with no titration in ICU	1	1	TOTAL POINTS ASSIGNED (28) / MAXIMUM EXPECTED SCORE (100) X 100 = 28/100 X 100 = 28% = incipient or inappropriate service TOTAL POINTS ASSIGNED (38) / MAXIMUM EXPECTED SCORE (100) X 100 38/100 X 100 = 38% = incipient or inappropriate service
	Physiotherapy Coordinator	Being present	2	2 points if you have a physiotherapy coordinator with titration in Intensive Care 1 points if you have a physiotherapy coordinator with no titration in Intensive Care 0 points if you do not have a physiotherapy coordinator	To have a physiotherapy coordinator with no titration in Intensive Care	To have a physiotherapy coordinator with no titration in Intensive Care	1	1	
	Equipment	100% of the required equipment according to the number of beds	3	3 points if you have all the necessary equipment in sufficient quantity for the number of beds 1 point if you have all the necessary equipment in insufficient quantity for the number of beds 0 point if you do not have all the necessary equipment in any quantity	To have all the necessary equipment in insufficient quantity for the number of beds	To have all the necessary equipment in sufficient quantity for the number of beds	1	3	
	Material	100% of the required material according to the number of beds	3	3 points if you have all the necessary material in sufficient quantity for the number of beds 1 point if you have all the necessary material in insufficient quantity for the number of beds 0 point if you do not have all the necessary material in any quantity	To have all the necessary material in sufficient quantity for the number of beds	To have all the necessary material in sufficient quantity for the number of beds	3	3	
	Physical structure/ installation	To have adequate physical structure regarding the dimensions and separations	3	Yes=3; No=0	No	No	0	0	
	Assistance resources	Ensure, by ones own means or outsourced, diagnostic and therapeutic support services	3	Yes=3; No=0	No	No	0	0	

CONTINUED

	Assistance protocols	Being present	2	Yes=2; No=0	No	No	0	0
	Fluxes and routines of examinations and transport	Being present	2	Yes=2; No=0	No	No	0	0
	Continuing education service with a current plan	Being present/ implanted	2	Yes=2; No=0	Yes	Yes	2	2
	System of control, prevention and notification of adverse events	Being present/ implanted	2	Yes=2; No=0	No	No	0	0
	Waste Control Commission	Being present/ implanted	2	Yes=2; No=0	No	No	0	0
	Commission for the control of acute respiratory infections	Being present/ implanted	2	Yes=2; No=0	Yes	Yes	2	2
SUB TOTAL (BY SIZE): STRUCTURE							**13**	**18**
PROCESS	Proportion of professionals who know and use the protocols	At least 90%	15	15 points if = or > 90 % 5 points if >50 % and < 90 % 0 points if < or =50%	<50	Between 50 and 90%	0	5
	Actions of continuing education developed	Presence of records	5	Yes=5; No=0	Yes	Yes	5	5
	Control, prevention and notification of adverse events	Presence of records	10	Yes=10; No=0	No	No	0	0
	Control of acute respiratory infections	Presence of records	10	Yes=10; No=0	Yes	No	10	10
	Waste management	Presence of records	10	Yes=10; No=0	No	No	0	0
	Realization of evolution of the clinical state, complications and care	Presence of medical records	10	Yes=10; No=0	No There are only medical and nursing records	No There are only medical and nursing records	0	0
SUB TOTAL (BY SIZE) : PROCESS							**15**	**20**

Source: Author's data

In relation to structure, the obstetric ICU earned 13 points (32.5%) and the mixed pediatric ICU, 18 points (45%). In terms of process, 15 points (25%) were assigned to the obstetric ICU and 20 (33.3%) to the pediatric ICU.As for structure, among the criteria evaluated, the most important were the lack of a business license, incomplete professional teams (no dentists and psychologists) and incomplete support (in the case of the obstetric ICU), a proportion of intensive care specialists lower than 50% (only two intensive care professionals in each ICU were identified), nursing and physiotherapy coordinators without intensive care qualifications and a lack of equipment (in the case of the obstetric ICU). It is worth noting that, since obstetrics and pediatrics are specific areas of nursing, it could be that nursing coordinators, in addition to specialization in ICU, should also have qualifications in obstetric nursing, which is a course that was being attended by the coordinator of this study, while the professionals in the mixed pediatric ICU should have neonatal and pediatric qualifications, titles that did not include the coordination of this unit.

Furthermore, the units had inadequate physical infrastructure and facilities (without beds being visible from the nursing stations, without prescription and support areas such as waiting rooms, rooms for interviews, utilities, hygiene, administration, toilets for visitors, laundry, cleaning supplies-DML depot, and pantry, the latter being absent only in the obstetric ICU); space for beds (except for the isolation beds) and areas of common use, in that the ones available were smaller than recommended; the distance between beds was respected, but there were no separation devices between them, compromising patient's privacy.

With regard to the availability of assistance resources for diagnosis and treatment, the units did not provide certain services as part of their own structure or used outsourced services such as vascular clinical care, orthopedics, urology, gastroenterology, hematotherapy, ophthalmology, otolaryngology, infectology, surgeries such as vascular, orthopedic, urological, maxillofacial, pathological anatomy, in addition to echocardiography, endoscopy and bronchoscopy.

Regarding care protocols, the units only had standardized nursing procedures. Concerning the flow and routines for exams and transport, the ICUs were not directly responsible for any of these activities. At the hospital there was a central department for the regulation/scheduling of examinations that suited the technical and bureaucratic issues for conducting tests and procedures for patients, and a transportation center responsible for providing the type of vehicle appropriate for each removal. However, there were no established routines or flows for scheduling or transportation. In relation to committees, the units had no control committee to deal with adverse events or the commission of waste management.

In relation to the medical staff, there were not enough professionals in any of the units. In the mixed pediatric ICU, the number of physicians sometimes jeopardized the coverage of the shifts, whereas, at the obstetric ICU, the number of physicians allowed a full coverage of monthly shifts. However, with regard to the distribution per number of beds and per shift, the medical teams of the two units were distributed appropriately.

The number of nurses and nursing technicians, considering the high occupancy rate in the study period, the degree of dependence of the intensive care clients, and the lowest level of technical security to cover planned and unplanned absences of 15%, were below necessary levels. With respect to the distribution of these professionals by category, there was a ratio of only 37.5% of nurses in the mixed pediatric ICU and 37.7% in the obstetric ICU. This was not incompliance with the recommendation of a nurse for every eight beds in the two units. The nursing technicians were in the proportion of one for every three beds in the obstetric ICU, also not in compliance with norms.

The physiotherapy shifts relied on two professionals who would alternate between daytime and nighttime, Monday through Friday, so that the night shifts, weekends and holidays were not covered. Furthermore, since there was only one physical therapist per shift, this professional was responsible for patient care of both units, indicating a ratio of 20/1 beds/professional, per shift.

The obstetric ICU lacked administrative assistants; however, at the pediatric ICU there was a nurse technician exclusively for administrative activities. The cleaning service

relied on one employee per shift for each of the ICUs. This employee was not the only one in the sector and he would do the cleaning of other hospital areas. The ward orderlies were also not exclusive to the ICUs. There was only one per shift for all the hospital departments.

Concerning the assessed criteria with regard to the process dimension, the highlights were the percentage of professionals who knew the protocols of the unit - below 50% for the obstetric ICU and 72% for the pediatric ICU; the lack of adverse event controls and of residues, the lack of commissions and monitoring or management plans set up for the year 2011; the lack of medical records of care provided by the multi-professional team. Rather, there were only the records of the medical and nursing staff.

DISCUSSION

This study aimed to assess the adequacy of the obstetric and mixed pediatric ICUs. Specifically, several discrepancies between its structure and functioning and current regulations were identified. For this purpose, a logical model of operation of the ICU was outlined, from which an evaluation matrix was proposed, that allowed the evaluation of services.

It is believed that this logical model may be used for other ICUs, since these units should have the same structure and have been developed using the same process. As for the evaluation matrix, as in the case of the logical model, it should be possible to apply this tool to other ICUs in Brazil, since the criteria used in the model will apply to other units in the form of norm derivatives.

Thus, the overall assessment of the units allows the classification of both as inadequate, since the obstetric ICU obtained a 28% adequacy score and the mixed pediatric, 38%.

The assessment per dimension demonstrated that, although the units operated under the same logic and under the same management, the variation in scores is due to differences in the managerial conduction of the units.

The obstetric ICU had a lower adequacy score than the mixed pediatric unit in terms of evaluation per dimensions and in general. This may be associated with the time of operation of the units, since the obstetric ICU had been in operation for only two years, whereas the mixed pediatric ICU had existed for four years. In relation to the structure, the five points difference was due to the criteria "full support team" and "equipment". In the process dimension, the difference was also one of five points, and was related to the "proportion of professionals who knew and used the protocols."

The study proved that the investigated units presented a better proportional adequacy in the structure dimension than in the process dimension. The obstetric ICU received, proportionally, scores of 32.5% and 25% for the structure and process dimensions, respectively, while the mixed pediatric ICU obtained 45% and 33.3%. This evidence indicates impairment in terms of quality, since the process dimension is closer to the results than the structure dimension is and the greater this approximation is between cause and effect, the greater can be the impact[9].

Among the criteria evaluated in this study, the multi-professional teams, which were identified as insufficient both from a quantitative standpoint, as the composition, have called our attention. It should be noted that the improvement in the health of the patient in the ICU is only possible in the face of significant interaction between professionals, in order to manage the promotion of care in an interdisciplinary manner and with quality [11]. From this fact and, in an attempt to provide comprehensive care, a multidisciplinary team of health professionals should be constituted in the ICU as an interventionist strategy, focused on knowledge integrated to health actions, and focused on the care provided by the various professionals involved[11].

Alongside this situation, the incomplete and non-exclusive support team which existed in the units, as evidenced in this study, may precipitate the transfer of their duties to other professionals, including those intended to provide patient care. Nonetheless, the study conducted in ICUs to assess the adequacy of human resources called attention to the fact that such a situation can generate excessive workload due to the accumulation of

functions and the reduction of time spent on care, compromising the quality of the assistance provided[12].

Regarding the qualifications of the higher level healthcare professionals, the study found that only two professionals in each of the ICUs had been awarded the title of specialist in intensive care. Despite this, it is emphasized that participation in specialized courses is essential, especially in the context of an intensive care unit. This is particularly important in view of the progressive and rapid advancement of new knowledge in the area, as well as for the using the technical apparatus present in these units. Also in this sense, the study showed that the nursing and physiotherapy managers with responsibility for the leadership of their teams also lacked expertise in intensive care.

Regarding the equipment, the obstetric ICU demonstrated weaknesses as to the amount of these in relation to the number of beds. Nevertheless, a study conducted in order to identify the availability of equipment in ICUs in Brazil revealed a similar situation to that evidenced in this study, and stated that the care process in specialized units such as the ICU largely depends on the use of rational and safe life support equipment, revealing the importance of the prevision and control of such equipment[13].

As for the physical structure of the units, this study revealed several nonconformities, which was also identified in a study conducted in 2000, which considered the physical structure of the ICU investigated inadequate, and concluded that such a situation could undermine the effective and safe development of the activities of health care professionals[13].

Still from a structural viewpoint, another important issue is the guarantee of therapeutic and diagnostic resources through its own means or from third parties. It was noted that some tests and procedures are not performed by the units, and are not accessible on an outsourced network. Furthermore, there was no definition with regard to the flow of the transportation of patients. These situations undermine the guarantee of the principle of completeness regarding access to any and all therapeutic and/or diagnostic means offered by UHS that might be necessary, regardless of the level of complexity. Other studies on completeness have shown that health care, in terms of levels of expertise,

diagnostic and therapeutic support, medium and high complexity, are still a limiting factor with regard to healthcare services[14].

Another issue concerning structure identified by this study refers to low and insufficient standardization of behaviors and clinical practices. The standardization instruments aim to standardize practices, minimizing the occurrence of deviations in their implementation. Therefore, the lack of standardized procedures consists in not the use of care methodologies, but may also indicate a lack of service organization[15].

Also, with respect to the structure of the ICUs investigated, with regard to hospital committees, it is believed that these are directly related to the organization of healthcare services. Studies indicate the contribution of hospital committees, since they try to minimize or seek solutions to the problems in their remit[16].

Thus, for example, the lack of a waste management committee as identified in this study is a question that goes beyond, but does not exclude the discussion about public health, and anticipates the debate about sustainability and environmental politics. In Brazil, equitable rules were defined for the treatment of solid waste in order to guide the health services that generate this waste, in the implementation of a management plan[17].

Therefore, we have also identified the lack of a board for the control and notification of adverse events that are considered essential to ensure patient safety. The lack of such a committee may compromise the implementation of safe practices. In addition, it does not contribute to the planning of continuing education, defining adverse events as undesirable occurrences, though preventable, of a detrimental or prejudicial nature that compromise patient safety while under the care of healthcare professionals[18].

Therefore, these commissions would reduce deviations in care, ensuring users a high level of excellence of care through the measuring and evaluation of structural components, goals, processes and results, followed by the necessary changes to improve the service[18].

Given some of our findings in this study, in relation to the process dimension, with regard to the protocols, since the units have only the nursing protocols and considering the proportion of these professionals who, when entering the service, receive training in the

use of these instruments, we found that between 50% and 70% of the teams knew and used the protocols.

Still from the point of view of this perspective, it was identified that the lack of committees dealing with solid waste management in health, and reporting and preventing adverse events made it impossible to promote measures for the selection and disposal of medical waste, and for the control of the safety of patients. This situation also explains the low evaluation of ICUs in the process dimension.

The study also identified the lack of medical records by professionals making up the multi-professional team, except for the medical and nursing staff. The medical records are intended for the support of the patients and, more specifically, the monitoring of their status. They should be used by professionals as the guarantee of the work performed, the research undertaken, the health institution and its management [19].

The absence of records involves ethical and legal issues and also interferes with the process of communication between professionals, which, therefore, could adversely affect the quality of healthcare services[19]. In this sense, we may consider the importance of investing in the improvement of hospital records and periodic evaluations, which can be indispensable measures to improve the quality of healthcare[19].

In this study, we identified limiting aspects in the assessed services that allowed us to identify the functioning classification as being inadequate, thus highlighting a local situation. However, the concern about the reality of other services that have not yet been evaluated may emerge. From this perspective, evaluative research results should be incorporated into the management of health systems and services, as they can contribute to improving the process of decision-making, and the planning, programming and organization of services, and to identifying political and organizational weaknesses and gaps in knowledge with regard to the problems that arise at several levels of reality of UHS[20].

CONCLUSION

This study presents a possible path for the evaluation of intensive care units and emphasizes the importance of incorporating assessment practices in the routine of healthcare institutions. Their findings confirm the weighting of the process dimension, in comparison to the structure dimension, since the services classified as inadequate showed higher proportional suitability compared with the structure dimension. Moreover, it became clear that the structural criteria perceived as nonexistent, were echoed directly in terms of procedural criteria that were also nonexistent. Thus, the lack of commissions undermines the promotion of certain actions permeated by the work processes, as well as the physical structure that compromises the proper execution of these processes.

It was also concluded that the adequacy of a service is more strongly linked to human resources than to materials. The two investigated units received maximum scores with regard to the criterion "materials" and scored on the criterion "equipment". However, the availability of materials and equipment did not ensure the adequacy of the services provided, which suggests that most investments should be directed to Human Resources, which, notedly, presented a weakness related to qualifications in intensive care, especially with regard to the management of the units.

Finally, the insufficient organization of the units was pointed out, as evidenced by the lack of standardization of procedures, the absence of adequate transportation and the lack of medical examinations, not to mention the difficulty in ensuring access to diagnostic and therapeutic resources.

The consensus of experts, the implementation and thoughtful analysis of the results obtained from the proposed instrument used in this study, suggests that it can be applied in other intensive care units on a national basis, as well as being reproduced safely in other ICUs, since the evaluation criteria, defined therein, were based on the Brazilian regulations, and must, therefore, be present in all units of this type.

REFERENCES

1. Ministério da Saúde (Brasil). Secretaria de Atenção à Saúde. Departamento de Ações Programáticas. Saúde da Criança e Aleitamento Materno. Brasília: Editora do Ministério da Saúde; 2009.
2. Ministério da saúde (Brasil). Portaria nº 1071, de 04 de Julho de 2005. Estabelece a Política Nacional de Atenção ao Paciente Crítico. Diário oficial da União 08 jul 2005.
3. Ministério da Saúde (Brasil). Portaria n°. 11, de 05 de janeiro de 2005. Dispõe sobre os requisitos comuns para habilitação das Unidades de Terapia Intensiva Neonatal e Pediátrica. Diário Oficial da União 06 Jan 2005.
4. Agência Nacional de Vigilância Sanitária (Brasil). Resolução nº. 7, de 24 de fevereiro de 2010. Dispõe sobre os requisitos mínimos para funcionamento de Unidades de Terapia Intensiva e dá outras providências. Diário Oficial da União 25 Fev 2010; Seção 1.
5. Serrapione M. Avaliação da qualidade em saúde: a contribuição da sociologia da saúde para a superação da polarização entre a visão dos usuários e a perspectiva dos profissionais de saúde. Saúde debate. 1999; 23(53): 81-92.
6. Donabedian A. Qualidades na assistência à saúde. São Paulo: FGV;1992.
7. Souza LEPF, Silva LMV, Hartz ZMA. Conferência de consenso sobre a imagem-objetivo da descentralização da atenção à saúde no Brasil. In: Hartz ZMA, Silva LMV [organizadores]. Avaliação em saúde - dos modelos teóricos à prática na avaliação de programas e sistemas de saúde. Rio de Janeiro: Fiocruz; 2005. p. 65-91.
8. Felisberto E, Freese E, Bezerra LCA, Alves CKA, Samico I. Análise da Sustentabilidade de uma política de avaliação: o caso da atenção básica do Brasil. Cad Saúde Pública. 2010; 20(6):1079-95.
9. Samico I, Felisberto E, Figueiro AC, Frias PG [organizadores]. Avaliação em Saúde: Bases Conceituais e Operacionais. Rio de Janeiro: MedBook; 2010.
10. Ministério da Saúde [BR]. Resolução nº 196, de 10 de outubro de 1996. Diretrizes e normas regulamentadoras de pesquisa envolvendo seres humanos.Diario Oficial da União 16 out 1996; seção 1.
11. Franco TB, Magalhães Júnior HM. Integralidade na assistência à saúde: a organização das linhas do cuidado. In: Merhy EE, Magalhães Júnior HM, Rimoli J, Franco TB, Bueno WS. O Trabalho em Saúde: olhando e experienciando o SUS no cotidiano; 2ª ed. São Paulo: Hucitec; 2004.
12. Sallun RDL. Avaliação de dimensionamento e distribuição do pessoal de enfermagem em unidades de terapia intensiva [Trabalho de Conclusão de Curso]. Petrolina (PE): Universidade Federal do Vale do São Francisco; 2010.

13. Madureira CR, Veiga K, Sant'ana AFM. Gerenciamento de tecnologia em terapia intensiva. Rev Latino-Am Enfermagem**.** 2000; 8(6): 68-75.
14. Haddad MCL. Qualidade da assistência de enfermagem: processo de avaliação em hospital universitário público. [Tese de Doutorado]. Londrina (PR): Escola de Enfermagem de Ribeirão Preto/USP; 2004.
15. Guerreiro PG, Beccaria LM, Trevizan MA. Procedimento operacional padrão: utilização na assistência de enfermagem em serviços hospitalares. Rev Latino-Am Enfermagem. 2008 [cited 2010 May 02];16(6):26-32. Available from: http://www.scielo.br/pdf/rlae/v16n6/pt_05.pdf
16. Silva MFI, Santos BMO. Estudo histórico - organizacional da comissão de controle de infecção hospitalar de um hospital universitário. Rev med. 2001 [Cited 2012 Feb 12] ; 34: 170-6. Available from: http://www.fmrp.usp.br/revista/2001/vol34n2/estudo_historicoorganizacional.pdf
17. Ministério da Saúde (Brasil). Agência Nacional de Vigilância Sanitária. Manual de gerenciamento de resíduos de serviços de saúde. Brasília: Ministério da Saúde; 2006.
18. Padilha KG. Ocorrências iatrogênicas na prática de enfermagem. In: CASSIANE SHB, UETA J. A segurança do paciente na utilização da medicação. São Paulo: Artes Médicas; 2004. p. 111-21.
19. Mendes ACG. Delicadeza esquecida: avaliação da qualidade das emergências. Recife: UFPE; 2010.
20. Vedootto D, Silva R. Humanization with the family in an intensive care unit: a descriptive study. Online Brazilian Journal of Nursing [Internet]. 2011 [Cited 2012 Aug 3]; 9(3). Available from: http://www. Objnursing.uff.br/index.php/nursing/article/view/3135

Received: 07/08/2012
Approved: 26/02/2013

Participation of the authors:

Amanda de Figueirôa Silva Carmo - Conception and design, data collection, analysis and interpretation of data, writing and final approval of the article.
Fernando Antônio Ribeiro de Gusmão Filho - Conception and design, critical revision and final approval of the article.
Suely Arruda Vidal - critical revision and final approval of the article.
Rosana Dourado Loula Salum - Data collection, analysis, interpretation and writing of the article.
Richardson Augusto Rosendo da Silva - Critical revision and final approval of the article.
Ana Dulce Batista dos Santos - Design, interpretation and writing of the article, critical revision and final approval of the article.