The health team and the safety of the mother-baby binomial during labor and birth

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Goal. Describe the performance of the health care team regarding the safety of both mother and baby during labor and birth.

Methodology. Qualitative, descriptive, exploratory study. The subjects were: obstetricians, residents in Obstetrics, pediatricians, nurses, and nursing technicians. The observation technique was used for data collection in a public hospital, between March and July 2010. The data was subjected to thematic content analysis.

Results. Data analysis revealed the themes: empathic support, woman's companion, skin-to-skin contact (SSC), and birth environment. The team promoted safe care through empathic support for women and appreciation and respect for the escort. In relation to SSC and the enabling environment for the reception of the newborn, efforts are still needed for these practices to be configured in secure care circumstances. Conclusion. The Nurse played a differential role in the team for the realization of safe care, because she was predominant in supporting women and promoting CPP.

Key words: safety; patient care; maternal and child health; humanizing delivery; attitude of health personnel

El equipo de salud y la seguridad del binomio madre-bebé en el parto y el nacimiento

Objetivo. Describir la actuación del equipo de salud con respecto a la seguridad del binomio madre-bebé en el parto y el nacimiento.

Metodología. Estudio cualitativo descriptivo y exploratorio. Los sujetos fueron: obstetras, residentes de Obstetricia, pediatras, enfermeras y técnicas de Enfermería. La técnica de observación fue utilizada para la recolección de los datos en una maternidad pública. Los datos fueron sometidos a análisis temático de contenido. Resultados. Del análisis de los datos, las siguientes categorías emergieron: apoyo empático, acompañante de la mujer, contacto piel a piel (CPP) e ambiente de nacimiento. Conclusión. El equipo promovió el cuidado seguro por medio de apoyo empático a la mujer y de la valoración y respeto al acompañante.

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El equipo de salud y la seguridad del binomio madre-bebé en el parto y el nacimiento

Objetivo. Describir la actuación del equipo de salud en torno a la seguridad del binomio madre-bebé en el parto y el nacimiento. Metodología. Estudio cualitativo, descriptivo-exploratorio. Los sujetos fueron: obstetras, residentes de Obstetricia, pediatras, enfermeras y técnicas de Enfermería. A técnica da observación foi utilizada para coleta dos dados numa maternidade pública, no período entre março e julho de 2010. Os dados foram submetidos à análise temática de conteúdo. CEP-GHC (nº 10/001). Resultados. A análise dos dados evidenciou as categorías temáticas: apoio empático, acompañante da mujer, contacto pele a pele (CPP) e ambiente do nascimento. A equipe promoveu el cuidado seguro por meio do apoio empático à mulher e da valorização e respeito ao acompanhante. En relação ao CPP e ao ambiente propicio para a recepção do recém-nascido, ainda são necessários esforços para que estas práticas se configurem em circunstâncias seguras de cuidado. Conclusão. A Enfermeira exerceu papel diferencial na equipe para a efetivação de uma assistência segura, pois foi preponderante no apoio à mulher e na promoção do CPP.

Palavras chave: segurança; assistência ao paciente; saúde materno-infantil; parto humanizado; atitude do pessoal de saúde.
debate about the best assistance to the delivery process. Thus, its objective is to describe the performance of the health care team in ensuring the safety of both mother and baby during labor and birth. Taking into account the many elements that underlie this process, as well as the scarcity of studies or rules establishing a concept of their security, this study - based on WHO guidelines- considers as Safe Care in Labor and Childbirth all actions adopted by health professionals and the institution which promote the individuality of the woman, with empathetic support; information about and encouragement of their participation; the presence of the companion; late cord clamping; a proper environment with pleasant lighting, sound, and temperature; early and prolonged skin-to-skin contact between mother and baby; and encouragement of breastfeeding.

Methodology

A qualitative, descriptive, exploratory study, conducted at the Obstetrics Center (OC) of a general hospital located in the municipality of Porto Alegre, Rio Grande do Sul, a reference center for high-risk pregnancies in that state. This establishment caters exclusively to users of Brazil’s Unified Health System (SUS), and on average it deals with 450 births/month. The physical structure of the OC consists of two offices, one antepartum room with 13 beds, a room for uterine curettage, two rooms for cesarean delivery, and three rooms for vaginal delivery. The organization of care to women in the delivery process follows a certain flow: consultation with the obstetrician in the admission room, routing for the pre-delivery room, followed by transfer to the delivery room immediately prior to the labor period. Regarding the health care team, each shift (morning, afternoon, evening, night I and night II) has two obstetric nurses and twelve nursing technicians. Obstetrician and pediatrician doctors take turns in 12-hour shifts, with four and two respectively per shift. In addition, the team also includes two anesthesiologists, two resident physicians of Obstetrics, and one resident physician of Pediatrics. To collect data we used the technique of naturalistic observation, and the subjects were five professionals who routinely cater to the mother-baby binomial: an obstetrics physician (OP), a pediatrics physician (PF), a resident in Obstetrics (RO), an obstetrics nurse (ON) and a nursing technician (NT). Because the other professionals participate only sporadically in the process of childbirth, we decided not to include them in the comments.

An observation sheet was developed based on the concept of Safety in Labor and Childbirth that is established in this study, and one of the researchers performed the data collection. The main items of focused observation were: verbal and nonverbal communication between the professionals and the woman and her companion; interpersonal communication; and reception of the newborn (NB), which included the environment, skin-to-skin contact, and breastfeeding encouragement. Insofar as during the second stage the woman is transferred to the delivery room and the birth occurs in this location, this environment was selected for observations. Twenty scenes of childbirth were observed, five in each work shift, between March and July 2010. The time of each observation varied from thirty minutes to two hours, covering the period between the entry and exit of the woman in the labor room. The sample was purposeful and defined by information saturation.

As inclusion criterion, we defined that vaginal births would be observed, with or without analgesia, where the gestational age corresponded to ≥ 37 weeks and the fetus did not present evidence of need for neonatal resuscitation. Women could be accompanied or not. Excluded from the observations were cesarean deliveries and those of infants born premature or with congenital malformations. Data from observations was subjected to thematic content analysis. An exhaustive reading of the collected material was primarily conducted, identifying the units of record, or pre-categories. These, on being sorted and grouped by similarities and differences, were analyzed and further developed in the light of the
theoretical framework, thereby originating the themes for discussion of the performance of the health team in ensuring the safety of both mother and baby during labor and birth. Bioethical principles laid out in Resolution 196/96 of the National Health Council were respected. The project was submitted to the Ethics Committee in Research of the Conceição Hospital Group (CEP-GHC), and was approved by the Opinion No. 10/001. All professionals of the OC were invited to participate in the study and signed an informed consent.

Outcomes

After analyzing the data, the study found the themes which are presented below:

Empathic support

The observed scenes of childbirth allowed the identification of modes of action in many healthcare members which demonstrate the development of empathic support. This was expressed by calling the women by name, using the calm tone of voice suggested in the guidelines and information, as well as affective touch. In seventeen observations, exemplified below, it was noted that the health team called the mother by name: ON and NT – with calm voice call laboring woman by her name [O3]; RO – calls laboring woman by name and explains that he will sanitize the perineum and perform episiorrhaphy [O13]. Similarly, it was found in several scenes of childbirth that at least one staff member acted empathetically to understand the anguish of the woman and to communicate effectively, i.e. spoke words, in a way, that she needed to hear. Fragments of observations exemplify the quality of the interaction between professionals and women: OP – explains to the woman in labor that the contraction is a little short and so the birth is taking longer (…) encourages the woman to make a last effort with greater intensity [O10]; EN – guides the laboring woman to stay quiet and praises her effort [O11]; RO – performs vaginal touch in the laboring woman and explains that dilatation is not complete, reports that they will listen to the baby’s heart (…) encourages the woman to push and says that in the next contraction the baby will be born, calling him by name [O12].

Another behavior observed in some team members was affective touch, which would be more a communication strategy for the establishment of empathic relationship. It is possible to identify it in the following instances: ON – holds the hand of the woman in labor with tenderness, who corresponds by holding the obstetrics nurse’s hand with her two hands, demonstrating happiness with the result of childbirth [O8]; NT – fondly touches the parturient [O18]. As opposed to empathic support, it was noted that some professionals preferred to keep themselves outside the woman’s feelings and needs. Acting with impartiality, they gave the impression of being little interested, insensitive, and mechanical, focused on completing the “birth” procedure. The snippets below illustrate this position: RO – performs handling the placenta without talking to the mother, while she moans in pain [O5]; OP – enters the room with no comments, palpates the abdomen of the woman and asks the RO about the situation (…) asks for the forceps. The laboring woman has no idea what is happening (…) OP withdraws from the room once the baby is born [O16]; PF – does not ever speak to the woman or her companion, only assists the NB. Leaves the room and lets the trainee in Medicine accompany the baby, who is on the mother’s lap [O17].

Woman’s companion

In general, it was noticed that the staff was welcoming to the companion. Professionals often asked his name, favoring his proximity to the woman and leaving him free to interact with her and the baby, whether talking, petting, or simply staying beside her. The following excerpts exemplify such attitudes: NT – looks at companion with a smile and invites him to get closer to the parturient [O2]; ON – asks companion’s name and motions for him to go near her [O3]; PF – encourages companion to get closer to the woman [O19].
**Skin-to-skin contact**

It was observed that in the institution under study, infants who are born in healthy condition are routinely placed on the mother’s abdomen. The obstetrician or obstetrics resident immediately aspirates the upper airway with a suction pear and clamps and cuts the umbilical cord. This procedure generally takes less than 30 seconds. Then the pediatrician aspirates the airways again, if deemed necessary, while the obstetrics nurse or the nursing technician dries the NB. Wet fields are removed and the infant is placed on the mother’s lap, skin-to-skin (SSC), bundled up in a pre-warmed blanket and headdress. Concomitantly, identification bracelets with the full name of the mother and the sex of the newborn are fixed on both its upper members.

Although SSC was observed at all births, the time enabled was short, between 5 and 25 minutes, with the most frequent interval being about 10 minutes. Next is an excerpt of an observation of respective times of SSC: RO – clamps and cuts the umbilical cord. PF + NT – aspirate NB and dry it in mother’s lap. (...) NB was tranquil in SSC for 10 minutes [O9]. The observation of the behavior and speech of the team members revealed that they are aware of the benefits of this practice, but prioritize individual needs and the fulfillment of institutionalized routines: ON – intercedes for NB to stay longer with its mother before being taken to the admission procedures. PF– seems anxious to take the baby. (...) NB was 25 minutes with SSC, thanks to ON and despite the slight anxiety of the PF [O4]; PF– the woman states that she is feeling a warmth between her and the infant. PF says that this is a reaction of the maternal body that helps keep the baby warm. (...) NB remains for 10 minutes in SSC, then is taken by the PF for admission care [O15]; PF – explains to NT that it is important for newborns to snuggle at their mother’s breast, because it makes it easier for them to smell the breast milk and seek the breast to suck it . (...) NB remains for 15 minutes in SSC, then is taken by the PF for admission care [O14].

Initiatives to promote breastfeeding in the first hour of life were rarely observed in this study. Sporadically, a team member advised the woman about the importance of breastfeeding for the child, as in the following examples: NT – tells laboring women that it is important to breastfeed for six months [O1]; PF – asks if laboring women nursed her previous child and directs that she breastfeeds this one too [O12].

**Birth environment**

The delivery room of the OC under study is typical of a surgical ward. There is no connection with the external environment, the air circulation is artificial, through the air conditioning system, and the rooms are well lit by artificial light. Besides the lighting of the room, an auxiliary light is always directed to the perineal region of women. In only one of the observations were the room lights turned off once the baby was born. This attitude led to discontent in some team members, as reported: PF– After 5 minutes of the baby’s birth, PF asks to turn off the room lights and only the light that is directed to the perineum of the parturient remains connected. (...) Mother and NB are very quiet with little noise and little lighting of the room. (...) The ROs commented among themselves that they did not understand why the lights should be off in the room, since the NB was already born [O7].

Regarding temperature in the delivery room, the protective attire of all the professionals who assist with normal childbirth requires that air conditioning is kept at a lower temperature. It was observed that while the air conditioner is shut down before the baby is born, the environment remains cold. It was also noticed that, once the NB is taken from the room, someone immediately turns the air conditioning back on. And as for the noise in the delivery room that may interfere with mother-infant interaction, the team seemed more committed, maintaining silence or keeping conversations at a low volume after the baby was born. The following excerpts from observations exemplify this behavior: Little noise, everyone talks in a low tone of voice [O20]; several talking at the same time, and guiding the proper efforts of the laboring woman. (...) When the baby is
born, everyone calms down and tries to speak lower [O6].

Discussion

At the OC of the institution under study, the work processes and the physical structure confirm that the biomedical model of care for the delivery process is still quite influential, since the organization of care for women during childbirth requires that she be moved from one room to another according to the stage of labor, assisted by different people at every moment. However, this research also showed that there is a movement on the part of several members of the healthcare team towards modifying some practices to better adapt them to the needs of the mother-infant. The “empathic support” category reflects this finding. It is understood that through empathic support, the professional seeks to affectively understand the feelings and discomforts of the woman in labor, transmitting this recognition so that she feels understood, safe, and self-confident.

In calling the woman by name, and not just “mom”, as is usual in maternities, the practitioners identified and highlighted her as a unique being for the team at that moment of the meeting. In this sense, they also helped her feel important to the birth of her child, by inviting her to attend the event and exercise her starring role as is her right. Concomitantly, the concern of professionals with reassuring the woman was confirmed by the explanations about how the labor was evolving, the procedures that were being performed, in addition to the frequent guidance, with calm voice and low volume, about how to make the adequate effort for the baby to be born. Another point to be noted was the appreciation for the women’s efforts, reinforced with praise and encouragement to continue participating.

Affective touch was also observed in some team members, especially the obstetric nurses and nursing technicians, who relied on this nonverbal manifestation of empathic support to convey the message to the woman that she was not alone. The observation of these moments of professional relationship with the mother corroborate other authors, who state that by means of affective touch the healthcare professional lends comfort to the patient, thereby contributing to the reduction of anxiety. However, empathic support was not a uniform practice across the team members observed. Mainly among some representatives of the medical profession, we identified the prioritization of technical procedures, as they acted with impartiality and did not greatly encourage or value the importance of the woman as the subject of the act of parturition. Apparently, the professionals who have taken this attitude demonstrated their belief that their role is to perform the technique, while support for women during childbirth is a task left to the nurses. In fact, there is a fear on the part of physicians that, if they show empathy, they move away from the prevailing technique and the medical identity, indicating a lack of professionalism. Although the medical profession considers empathy an adjunct to treatment and patient management, technique is paramount in its perception.

Although some inadequate postures have been identified, empathic support was present in most scenes of childbirth observed. Thus, the professionals were considered to promote generally safe conditions of care, insofar as the current scientific evidence attests that women in labor who received this type of emotional support (presence, listening, safety, assertiveness) required fewer interventions and had a positive experience with their labor, a result which also promoted the establishment of the mother-infant bond. Just like the empathic support offered by the health team, the companion is a contributing factor to the development of the woman’s emotional security. Being a person of her choice, he represents a rapprochement with her family atmosphere, in addition to being the person with whom she can share the fear and anxiety, providing the support desired at difficult times. For this practice to be successful, the welcoming of the companion is critical, since the situation of hospitalization is also new for those who are accompanying patients.
Importantly, there was harmony between the team and the companion in supporting the woman. In situations where the escort was present, it was observed that the team did not transfer this task to him, but made room for him to participate. Even when the companion chose to remain silent or refrain from touching the woman in labor, the team knew how to respect his limits and possibilities in this participation. In this sense, in welcoming and respecting this companion as someone important to the woman, the team demonstrated the practice of safe care because, according to some studies, both for the woman and for the companion – regardless of whether he presents an active behavior or a passive presence – his mere presence is enough for the woman to not feel alone or abandoned.9,10,13

Regarding the initial care of the newborn, we identified that it is in full accordance with WHO recommendations, because in situations where the infant is not at risk and presents good condition at birth, it should be aspirated, dried, and offered to the mother.3,17 However, we question the immediate clamping of the umbilical cord, which goes against scientific evidence. The ideal setting for this procedure would be around the third minute of life, as it benefits the NB with a greater intake of blood volume and iron reserves.17 Another important question to be posed is relative to the SSC which, despite being a routine at the OC, is enabled for just a few minutes, not long enough to realize the benefits arising from this contact, such as promoting mother-infant interaction, thermal and cardiorespiratory stability of the NB, and the encouragement of breastfeeding.2,17,18 In view of the particularity of the period shortly after birth, which is considered the precursor of maternal attachment and has an influence on neuronal modeling and the intellectual/emotional development of children,3,18 it is thought that the way the SSC is implemented does not contribute to security in the care of both mother and baby.

The restricted time of the SSC also prevented another benefit of this practice, the behavior of the NB of seeking the maternal breast, showing that no incentive to breastfeeding is offered at this moment. Although this hospital is accredited by the Baby Friendly Hospital Initiative, enabling SSC for just a few minutes confirms that Step 4 of the Initiative is not being fulfilled, according to which the mother should be helped to initiate breastfeeding within half an hour after the infant’s birth. To that end, the professional should place the baby SSC with his mother immediately after birth for at least an hour, and encourage mothers to recognize when the baby is ready to feed, offering aid if necessary.2 The environment, in turn, should also be prioritized as a contributing factor for the safety of both mother and baby. Thus, it is recommended that a quiet, softly lit room, at a comfortable temperature, without much external activity and with few people present, would be ideal for better adaptation of the NB to the extra-uterine environment.17,18

The description of the birth environment in the hospital under study strongly demonstrates that the focus is on the needs of the professionals. It was noted that, for bureaucratic reasons, several roles were filled by each professional involved in the childbirth, requiring good lighting. It is believed that the amount of roles to be played at this time could be reduced with the computerization of care, allowing the team more time to devote to both mother and baby. Another suggestion would be to change to indirect or diffuse room lighting. Also in relation to lighting, it was noticed that the routinization of episiotomy has led to the auxiliary lamp being continuously directed on to the woman’s perineum to facilitate and expedite this procedure. It should be understood that, if an episiotomy is a procedure that should be indicated with caution,6,7 and should no longer be part of routine care in childbirth, there is no need for the spotlight to be placed beforehand. In situations where it is needed, this light can be directed to facilitate episiorrhaphy after the NB is in SSC with his mother.

In this sense, the disapproval of Obstetrics residents of the attitude taken by the pediatrician in one of the scenes of childbirth observed, in which the lights were turned off after birth, explains the complete ignorance and perhaps even disregard toward the needs of adaptation of the baby to
the outside world, where the excess light is an unpleasant visual stimulation and interferes with the quality of interaction with his or her mother.\textsuperscript{17}

The realization that the environment is organized to meet the needs of professionals is also confirmed by the temperature of the room, because although the air conditioning is turned off immediately before birth, the room remained cold for receiving the NB. It is also inferred that the discomfort of the team with the room temperature could be interfering with the time of SSC, since there was a subtle anxiety for the NB to leave quickly and the air conditioning be turned on again.

A cold environment is harmful to infants, and therefore the temperature of the place where they are born should be between 26ºC and 30ºC (78.8º F to 86º F). In situations where this care is not considered, the likely cooling of newborns may require more effort from the body, which often tends to trigger respiratory and metabolic disorders. These circumstances undermine the mother-infant interaction and can occasionally lead to neonatal ICU admission.\textsuperscript{19} As for the concern of the team with noise reduction, the study showed that there was an awareness of the importance of a peaceful environment for the arrival of the NB. Even in situations where some professionals were excited during the delivery period, when the baby was born they all made efforts to keep quiet or speak in softer tones and away from the mother-baby binomial. Considering the immediate needs of infants after birth, it is understood that a safe environment to welcome it should soften the impact of the difference between the intra-uterine and extra-uterine worlds and create conditions to foster interaction with the mother\textsuperscript{17,18} Hence, it was found that the health team and the structure of the OC under study still need to adapt themselves to promote safe conditions of care in this regard, because the NB is received in a cold and extremely bright environment.

**Final thoughts**

The analysis of the performance of the health care team regarding the safety of both mother and baby during labor and birth led to the determination that this team, in general, demonstrated commitment to promoting safe care through empathic support to women and acceptance and respect for the companion of their choice. However, in relation to SSC and the appropriate environment for the reception of the NB, more consistent efforts are needed to establish whether these practices are established as safe conditions of care. In considering the role of the professional categories, it was found that the obstetrics nurse exerted a differential role in conducting safe care. In the childbirth scenes where she was present, her preponderance in supporting laboring women was observed, as well as her commitment to a longer permanence of the mother in SSC with the infant. Regarding the physician category, examples of safe conduct appeared to be more associated with personal characteristics than with practices in place. The fact that the obstetrics residents are experiencing, and even reproducing some inadequate attitudes of their medical preceptors with the laboring mother is worrisome because it can mean the perpetuation of unsafe care during the delivery process. Limitations of this study were related to approaching the topic of Patient Safety within the scope of assistance to the labor and birth process, bearing in mind that because it is still new and rarely discussed, much of the scientific production is foreign and quantitative, unlike the qualitative approach proposed here.

The present work hopes to propose a reflection on and perhaps a new way of looking at labor and birth care, promoting discussions by healthcare and education professionals, managers, and other stakeholders in the field of maternal and infant care. It is believed that including discussions on Patient Safety during the education of the professionals may also be a step towards the establishment of a culture that privileges the rights of the mother and baby as citizens. Considering that this study included some aspects of safety in the labor and birth process, it appears that it would be extremely important to conduct quantitative research on interventionist practices and their consequences in the care of both mother
and baby, from the prenatal period to postpartum. Qualitative studies addressing the perception of both women and the health care team regarding the subject.

Referências


