CESAREAN SECTION RATES IN A UNIVERSITY HOSPITAL BASED ON THE ROBSON CLASSIFICATION

Agnes Maria Reis*
Renata Cristina Teixeira Beltrame**
Rayssa Basílio Santos Arantes***
Auréa Cristina de Paula Correia****
Debora Pereira Martins*****

ABSTRACT

Objective: to describe the cesarean section rates in a university hospital using the Robson Classification.

Method: descriptive and cross-sectional, based on data from the Live Birth Information System of deliveries happened in a university hospital, between 2015 and 2017. Results: there was a progressive increase in the route of cesarean delivery and the consequent maintenance of the high general rate of cesarean sections. A considerable number of parturient women had favorable obstetric conditions for vaginal delivery and, if nurse midwives had accompanied them, their chances of having a vaginal delivery could have increased. The greatest group in the Robson Classification was the multiparous group, with previous cesarean section and full-term pregnancy (group 5), which is probably related to the high number of cesarean sections identified in primiparous women (group 1) and the limitations of the labor induction methods. Conclusion: the use of the Robson Classification has enabled us to know, with more specificity, the profile of women submitted to cesarean section in the service, which may subsidize the preparation of more effective strategies and consistent with the reality in coping with high rates of cesarean section.

Keywords: Cesarean Section. Obstetrics. Delivery. Obstetric. Nurse Midwives.

INTRODUCTION

The constant and unprecedented increase in cesarean rates around the world raises concerns in the health sector due to the short and long-term risks and additional costs associated with them. Although there is a difference between countries with more and less resources, the need for global and regional policies and strategies to optimize the use of Cesarean Section (CS) is emerging(1).

According to the World Health Organization (WHO), when indiscriminately performed and without clinical indications, CS does not bring any benefit to the mother-child binomial and can entail immediate and/or subsequent complications. However, when performed under specific medical indications, it is an essential surgery for health and for the reduction of maternal and child mortality(2).

In the last few decades, Brazil has experienced a change in the pattern of birth and CS has become the most common route of delivery, characterizing 85% of the deliveries performed in private health services and 40% of those performed in the public system(3). According to a study that sought to reflect on the excessive number of CS in the country, through a critical and propositional perspective, based on data from the national survey called “Being Born in Brazil” (Nascer no Brasil), the national scenario shows an epidemic clinical picture of unnecessary and unwanted cesarean sections, marked by medicalization and counter productivity, whose effect is to increase maternal and neonatal morbidity and mortality(4).

Research that analyzed the cost-effectiveness of spontaneous vaginal delivery compared to elective cesarean section in pregnant women at usual risk in the Brazilian Unified Health System (SUS, as per its

---

**Nurse. Graduated from the Federal University of Mato Grosso (UFMT). Cuiabá, Mato Grosso, Brazil. E-mail: agnesa.lucachouki@gmail.com. Orcid: https://orcid.org/0000-0001-8364-5812
***Nurse Obstetric. Master. Professor. Faculty of Nursing. UFMT. Cuiabá, Mato Grosso, Brazil. E-mail: renata_teixeira22@hotmail.com. Orcid: https://orcid.org/0000-0001-5571-8819
****Nurse. Master of the Epidemiological Surveillance Nucleus of Hospital Universitário Júlio Muller (HUJM). Cuiabá, Mato Grosso, Brazil. E-mail: rayssasabinio@gmail.com. Orcid: https://orcid.org/0000-0002-5381-6332.
*****Nurse. Obstetric. Head of Gynecology and Obstetrics at the University Hospital Júlio Muller (HUJM). Cuiabá, Mato Grosso, Brazil. E-mail: deboyneca@hotmail.com. Orcid: https://orcid.org/0000-0002-0077-9574.
Portuguese acronym) added that, when compared to vaginal delivery, cesarean section is related to greater maternal morbidity due to exposure and need for various interventions, which generate a longer hospital stay for the mother-child binomial and, consequently, the increased risk of maternal and neonatal complications\(^5\).

An important aspect for the reduction of cesarean sections in Brazil, pointed out in a research that described the results of initiatives that sought to enhance obstetric care in the public and private sectors in the country, is the need to enhance the care for labor and birth, in such a way as to promote women’s autonomy, empowerment and well-being. Moreover, authors highlighted, as an expression of quality in this context, the reduction of unnecessary interventions and the appropriate use of beneficial technologies, such as the offer of non-pharmacological and pharmacological methods for pain relief and the insertion of nurse midwives\(^6\).

Given this problem, the WHO claims that one should not seek to achieve a specific rate of cesarean sections and that our efforts should focus on ensuring the accomplishment of cesarean sections in necessary cases. To this end, it indicates that a reliable and internationally accepted classification system should be prepared, providing data in a standardized way, so that the rates of cesarean sections in different populations can be compared, as well as investigating the factors involved in their indication/ accomplishment. The alternative proposed by the WHO is the use of a standard instrument worldwide, the “Robson Classification” (RC), which groups pregnant women according to obstetric characteristics and allows for the standardized comparison, follow-up and evaluation of cesarean rates, in addition to offering subsidies for the analysis of the clinical indications used\(^2\).

In the international scenario, investigations have pointed out the relevance of the use of RC in coping with the progression of cesarean rates, considering that it enables the identification of target groups for interventions and for the guidance of public policies aimed at reducing CS without clinical indication. Nulliparous and multiparous women with previous cesarean section are identified as the ones that most contribute to the progression of cesarean section rates\(^7,8\).

In Brazil, a study that evaluated the differences in cesarean rates according to the payment source (public or private) in 266 maternity hospitals, using RC, meets international results and highlighted the need to create public policies aimed at reducing elective cesarean sections, particularly in nulliparous women, besides the encouragement of vaginal delivery after cesarean section in multiparous women, with a view to reducing the problem of repeatability of surgical deliveries\(^9\).

Accordingly, Stork Network (Rede Cegonha), a public policy aimed at the obstetric area in force in the country, advocates the guarantee of good practices and safety in caring for labor and birth, with an emphasis on following-up the types of delivery, including the number of cesarean sections in primiparous women\(^10\). Moreover, there is the Ápice On Project – Improvement and Innovation in the Care and Education in Obstetrics and Neonatology, implemented by the Brazilian Ministry of Health (MS, as per its Portuguese acronym) in 2017, with the objective of enhancing obstetric and neonatal care in teaching hospitals, which shows the need to rethink the context of the route of delivery in the country and to follow-up the CS rates through the use of RC\(^11\).

Thus, considering that the reduction in cesarean section rates is a public health problem and that RC is a strategy with the potential to foster the development of actions to reduce CS in the specific groups of women that contribute most to the overall rate of this route of delivery in the service, the objective of this study is to describe the CS rates of a university hospital based on the Robson Classification.

**METHOD**

This is a descriptive and cross-sectional study, performed in a university hospital in the capital of the State of Mato Grosso, which exclusively serves the Brazilian Unified Health System (SUS), linked to the Rede Cegonha and the Ápice On Project, which cares for prenatal,
birth and postnatal of usual risk and high risk and has a delivery and birth care team composed of physicians (obstetricians and pediatricians) and obstetric nurses on all work shifts.

The total population of the study was composed of women who had their deliveries in the aforementioned hospital between the years 2015 and 2017. The year 2015 was considered a time frame from the WHO proposal to adopt RC to know the obstetric profile of women submitted to cesarean sections in health services. The selection of all deliveries is a prerequisite to operationalize RC.

In order to collect data, we used data from the Declaration of Live Births (DNV, as per its Portuguese acronym) provided by the Department of Gynecology and Obstetrics of the studied university hospital. From DNV, we extracted information regarding the variables: number of pregnancies; number of deliveries; number of live births; information regarding the previous cesarean section; number of gestational weeks at delivery; type of pregnancy (single or multiple); fetal presentation; labor induction, type of delivery and if the cesarean section happened before or after labor.

Out of a total of 3,168 DNV, we excluded those related to multiple pregnancies (91), considering only one and the declarations that did not have variable related to the type of delivery (3), totaling a population of 3,074. The data were consolidated using the Excel program (Microsoft Office 2010) and analyzed using the Epi Info program.

After consolidating the data, we performed the RC procedure, which groups women into ten groups, as displayed in Table 1, based on six variables, which are: parity (nulliparous or multiparous); if she has a previous cesarean section (yes or no); the beginning of birth (spontaneous, induced or cesarean before the beginning of labor); gestational age (preterm or term); the fetal presentation/situation (cephalic, pelvic or transverse) and the number of fetuses (single or multiple). In addition, we used a new RC group (group “11”), which includes women who could not be classified in any of the ten groups due to the lack or incompleteness of any obstetric data in DNV. Groups are mutually exclusive and fully inclusive.

<table>
<thead>
<tr>
<th>Group</th>
<th>GA</th>
<th>Nº. of fetuses</th>
<th>Presentation</th>
<th>Parity</th>
<th>Previous cesarean section</th>
<th>Beginning of labor</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Term</td>
<td>Single</td>
<td>Cephalic</td>
<td>Nulliparous</td>
<td>No</td>
<td>Spontaneous,</td>
</tr>
<tr>
<td>2</td>
<td>Term</td>
<td>Single</td>
<td>Cephalic</td>
<td>Nulliparous</td>
<td>No</td>
<td>Induced or elective CS</td>
</tr>
<tr>
<td>3</td>
<td>Term</td>
<td>Single</td>
<td>Cephalic</td>
<td>Multiparous</td>
<td>No</td>
<td>Spontaneous,</td>
</tr>
<tr>
<td>4</td>
<td>Term</td>
<td>Single</td>
<td>Cephalic</td>
<td>Multiparous</td>
<td>No</td>
<td>Induced or elective CS</td>
</tr>
<tr>
<td>5</td>
<td>Term</td>
<td>Single</td>
<td>Cephalic</td>
<td>Multiparous</td>
<td>Yes</td>
<td>Independent</td>
</tr>
<tr>
<td>6</td>
<td>Independent</td>
<td>Single</td>
<td>Pelvic</td>
<td>Nulliparous</td>
<td>No</td>
<td>Independent</td>
</tr>
<tr>
<td>7</td>
<td>Independent</td>
<td>Single</td>
<td>Pelvic</td>
<td>Multiparous</td>
<td>Independent</td>
<td>Independent</td>
</tr>
<tr>
<td>8</td>
<td>Independent</td>
<td>Multiple</td>
<td>Independent</td>
<td>Independent</td>
<td>Independent</td>
<td>Independent</td>
</tr>
<tr>
<td>9</td>
<td>Independent</td>
<td>Single</td>
<td>Transverse</td>
<td>Independent</td>
<td>Independent</td>
<td>Independent</td>
</tr>
<tr>
<td>10</td>
<td>Independent</td>
<td>Single</td>
<td>Cephalic</td>
<td>Independent</td>
<td>Independent</td>
<td>Independent</td>
</tr>
</tbody>
</table>

Caption: Term ≥ 37 weeks; GA – gestational age; CS – cesarean section.

The objective of RC is to identify the groups that are clinically relevant to work on strategies to reduce cesarean sections over the years, as well as to investigate the factors involved in their indication/accomplishment. Obstetric characteristics are highlighted from the employed variables, where cesarean section is considered very avoidable in women classified in the groups 1 to 4 and little avoidable for those who constitute the other groups.

The data obtained from the classification are standardized and include the number of cesarean sections and deliveries in each group, the proportional size of each group (number of deliveries in the group divided by the total number of deliveries), the percentage of

Cesarean section rates in a university hospital based on the Robson classification

Cienc Cuid Saude 2020;19:e47196
cesarean sections in each group, the absolute contribution (%) of each group to the cesarean section rate (number of cesarean sections in each group divided by the total number of deliveries X 100) and the relative contribution (%) of each group to the cesarean section rate (number of cesarean sections in each group divided by the total number of cesarean sections X 100)\(^{(13)}\).

We performed a descriptive statistical analysis with absolute and relative frequencies of cesarean section rates, RC birth groups, CS in the RC group and the absolute and relative contributions of CS according to RC. The project was approved by the Research Ethics Committee (CEP, as per its Portuguese acronym) with human beings according to Resolution 510/2016 of the National Health Council, according to CEP Opinion: 2.510.397.

**RESULTS**

Of the total number of analyzed births, 1,584 (51.5%) were cesarean deliveries and 1,490 (48.5%) were vaginal deliveries. As for the cesarean section rate, in 2015 (47.8%), 2016 (50.5%) and 2017 (55.8%), there was an increase of 8% between 2015 and 2017, thus demonstrating the progressive increase of this route of delivery in the service.

With regard to RC, table 2 displays the absolute and relative distributions of all births (3,074) in the 11 groups. Most parturient women (54.2%) were classified in the first four groups of RC, which include women with favorable obstetric characteristics to undergo the route of vaginal delivery, especially those in the groups 1 and 3, who do not have a previous cesarean section. Knowing the size of each group is important to characterize the obstetric population cared for in the service, as well as to evaluate profile changes over time and compare them with the reality of other locations. Moreover, we observed that 22 (0.7%) parturient women were classified in the group 11, showing limitations in the quality of the information filled out of DNV in the service, a situation that interferes with the reliable knowledge of cesarean section rates in the other groups.

<table>
<thead>
<tr>
<th>Group</th>
<th>Number of CS in the group</th>
<th>Number of births in the group</th>
<th>Group size (%)</th>
<th>Group CS rate (%)</th>
<th>Absolute contribution to CS rate (%)</th>
<th>Relative contribution to the CS rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>122</td>
<td>404</td>
<td>13.1</td>
<td>30.2</td>
<td>4.0</td>
<td>7.7</td>
</tr>
<tr>
<td>2</td>
<td>281</td>
<td>493</td>
<td>16.0</td>
<td>57.0</td>
<td>9.1</td>
<td>17.7</td>
</tr>
<tr>
<td>3</td>
<td>38</td>
<td>468</td>
<td>15.2</td>
<td>8.1</td>
<td>1.2</td>
<td>2.4</td>
</tr>
<tr>
<td>4</td>
<td>95</td>
<td>304</td>
<td>9.9</td>
<td>31.3</td>
<td>3.1</td>
<td>6.0</td>
</tr>
<tr>
<td>5</td>
<td>535</td>
<td>687</td>
<td>22.3</td>
<td>77.9</td>
<td>17.4</td>
<td>33.8</td>
</tr>
<tr>
<td>6</td>
<td>33</td>
<td>42</td>
<td>1.4</td>
<td>78.6</td>
<td>1.1</td>
<td>2.1</td>
</tr>
<tr>
<td>7</td>
<td>73</td>
<td>84</td>
<td>2.7</td>
<td>86.9</td>
<td>2.4</td>
<td>4.6</td>
</tr>
<tr>
<td>8</td>
<td>87</td>
<td>99</td>
<td>3.2</td>
<td>87.9</td>
<td>2.8</td>
<td>5.5</td>
</tr>
<tr>
<td>9</td>
<td>10</td>
<td>10</td>
<td>0.3</td>
<td>100.0</td>
<td>0.3</td>
<td>0.6</td>
</tr>
<tr>
<td>10</td>
<td>297</td>
<td>461</td>
<td>15.0</td>
<td>64.4</td>
<td>9.7</td>
<td>18.8</td>
</tr>
<tr>
<td>11</td>
<td>13</td>
<td>22</td>
<td>0.7</td>
<td>59.1</td>
<td>0.4</td>
<td>0.8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1584</strong></td>
<td><strong>3074</strong></td>
<td><strong>100.0</strong></td>
<td><strong>51.5</strong></td>
<td><strong>51.5</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Caption: CS: cesarean section.

It also presents the contribution of each group to the total rate of cesarean sections, considering all deliveries (3,074) that happened in the period, as well as their relative contribution to the CS rate in relation to the total number of surgical deliveries (1,583). This distribution enables us to identify the obstetric profile of the parturient women who had the greatest number of surgical deliveries and, therefore, should be the target of promotion strategies for vaginal delivery. The group 5 was the one that presented the greatest relative and absolute contribution to the cesarean section rates of the service.
DISCUSSION

The high cesarean section rate (51.5%) and its progressive growth during the study period in the service demonstrate the worsening of the issue of accomplishing/repeating the elective cesarean section. A similar situation was pointed out in a study that described births via cesarean and vaginal births and identified their associations with temporal and sociodemographic variables, thus identifying an increase of approximately 40% in cesarean sections in the country from 2000 to 2010\(^1\). We should underline that, as recommended by the WHO, the tolerable would be between 10-15% of CS in obstetric care services\(^2\).

In other South American countries, such as Uruguay, we can also observe a progressive growth in the CS rate in 2009 (35.5%) and 2013 (43.7%), with many health services showing values above 55% and with higher rates in the private sector than in the public sector\(^3\). Nevertheless, this is not a global reality, since some countries on the European continent, such as the Netherlands, maintain relatively low CS rates, with small increases in the last decade (15.1% in 2004 and 17% in 2010) and satisfactory maternal and perinatal results\(^4\).

According to research that sought to identify factors associated with good CS rates in the Netherlands, obstetric patterns, such as full-term pregnancies, single fetus with cephalic presentation, spontaneous beginning of labor, low rate of labor induction, high rate of attempted labor after previous cesarean section and the use of vacuum and forceps are key elements that may have maintained the CS rate at low levels. Moreover, the high proportion of women being cared for by nurse midwives may also be an important contributing factor\(^5\).

These patterns are related to the obstetric characteristics of the groups 1 to 5 of RC, which, in this study, represented 76.5% of the investigated women. The RC method predicts that the expected population composition for the first five groups will be approximately 80 to 90% of the parturient women in obstetric services\(^6\), considering that the vast majority of women have physiological conditions consistent with the route of vaginal delivery.

In the investigated service, we observed a number of women with obstetric characteristics that favor vaginal delivery slightly below expectations (76.5%), a fact that alone does not justify the high CS rate, i.e., the considerable amount of the parturient women in this study has a profile related to the most appropriate obstetric conditions for vaginal delivery and with an indication for the accomplishment of care to be conducted by obstetric nurses, provided that there are no other associated clinical risks/conditions.

The role of obstetric (OB) nurses and nurse midwives is recommended for the conduction of the care of women in the reproductive process of usual risk, from admission to discharge, in line with ministerial\(^7\,10\) and international proposals. Based on a study that analyzed the experience and satisfaction of women assisted by this professional during vaginal delivery, we identified that their practices are directed to a more humanized and less interventionist care, showing satisfactory maternal and perinatal outcomes\(^8\).

Another study performed in a university hospital in the capital of Mato Grosso, which intended to analyze the assistance provided in a Pre-birth/Birth/Post-birth (PPP, as per its Portuguese acronym) unit after the insertion of OB, showed, in addition to a more humanized assistance, the reduction in the rate of cesarean sections (10%) and low rates of episiotomy (8.8%)\(^9\), demonstrating that, as pointed out by the WHO, this professional enhanced the care, thus reducing the interventions considered unnecessary.

However, a literature review survey, which described the trajectory of Obstetric Nursing in Brazil over the decades, pointed out that, despite the progress fostered by changes, in the formulation and implementation of public policies aimed at the obstetric context, in practice, there are still important limitations for the insertion and operation of OB, which are linked to the historical competition between nurses and physicians, as well as the conditions for the training of these specialists in the country\(^10\).

The full and autonomous professional exercise of OB in the country still requires important changes, which need to involve the training and improvement of this specialty, the
management of obstetric services and the work processes among peers and among the other professionals that constitute the multidisciplinary teams in the context of health care.

Specifically with respect to the RC groups, it was observed that the highest cesarean rates were in the groups 5, 2, 4 and 1, and were selected as central elements for this discussion because they group women with obstetric characteristics consistent with the route of vaginal delivery and that, therefore, are eligible for labor, especially those that constitute the groups 1, 2 and 4. A similar result was found in the study performed in the Federal District, where the groups 1, 2 and 5 of RC were the main contributing factors to the high rates of cesarean sections in the investigated services.(21)

The group 5, which represents the profile of parturient women, multiparous, with previous cesarean section and full-term pregnancy, which requires obstetric care shared by physicians and obstetric nurses, was the greatest group individually analyzed in this research, with 22.3%. This finding may be related to a high number of CS in primiparous women, in previous years, and to the possible inefficiency of the use of labor induction methods in the service.

The expected population composition for this group is approximately 15% of the total number of pregnant women in the services.(13) In this study, we observed that the number of women with this profile is above expectations, thus corroborating the high number of elective CS performed in primiparous women and its repetition in multiparous women.

A systematic review on the impact of multiple cesarean deliveries on maternal morbidity, held with more than two million deliveries in 2010, pointed out that the increase in severe maternal morbidity is equally proportional to the increase in the number of previous cesarean deliveries and with significant statistical risk of increase in complications such as placenta previa and accreta and hysterectomy.(22)

Another relevant aspect for the reflection of the high population composition found in the group 5 of this study is the use of labor induction methods in the service. A study performed with 137 women, in a university hospital in the Southern Brazil, with the objective of identifying the induction indications, the employed practices and their outcomes, demonstrated that the induction method, when used with the correct techniques, is an important strategy for the reduction of high CS rates, responsible for maintaining the high number of women, multiparous, with one or more previous cesarean sections.(23)

The group 5 was the one that had the greatest impact on cesarean section rates for the service in question, with a relative contribution of 33.8%. A similar result was found in a study performed in India, with the objective of identifying cesarean section rates in each RC group, which showed a greater contribution from the group 5, with 42.7%.(24) The accomplishment of the first cesarean section is often a determinant of indication for its reiteration in a subsequent pregnancy, which contributes to the high and rising rate of recurrent cesarean sections worldwide.(25)

Another study, which applied RC to women submitted to CS in two hospitals of the Brazilian private sector, showed that the group with the highest relative rates of cesarean section in the hospital typical of the standard perinatal care model (prenatal and birth care under the responsibility of a single assistant physician paid by the health plan operator) was the group 2. In the atypical hospital with an innovative perinatal care model (prenatal care team different from the birth care team, work shared between obstetric nurses and physicians in birth care and professionals paid by monthly salary regardless of the number of procedures done), the greatest contribution to the cesarean section rate was in the group 5.(26)

In the present study, the group 4 also showed cesarean section rates that significantly contributed to the general rate of cesarean sections, with an absolute contribution of 3.1% and a relative contribution of 6.0%, with the obstetric profile of this group being similar to that of the group 02, but with multiparous women. Another relevant aspect found in this study is the CS rate in the group 1 (30.2%), which is twice that recommended by RC (<15%) and significantly contributes to the
absolute and relative rates of cesarean section. This is the most important group of the obstetric population when it comes to reducing cesarean sections\(^{(13)}\).

We should highlight that nulliparous women submitted to CS, in later years, will correspond to the group 5 of RC and will be more susceptible to repeat cesarean sections. Accordingly, the need to enhance obstetric care based on the follow-up of cesarean section rates in services and the preparation of strategies for their reduction, particularly in the groups 1 to 4 of RC\(^{11}\), should also be highlighted.

This indicates a special attention that should be given to the parturient women that compose the group 1 of RC. Similarly, it is necessary to encourage and prepare them, from the period of prenatal care, for vaginal delivery, providing scientific evidence on the parturition process\(^{(19)}\), thus contributing to the success of vaginal delivery and the reduction of the population of the group 5 in later years.

Although not among those who had the highest rates of CS in the study, the group 3 had a cesarean section rate of 8.1%, a number that is also above that recommended by RC (<5%)\(^{(13)}\), which has an absolute contribution of 1.2% and a relative of 2.4% to the CS rates of the service. Although the contributions, when seen in isolation, seem insignificant, this group, together with the group 1, composes the profile of women with the highest indications of success in vaginal delivery and who, according to MS\(^{(11)}\), when they do not have clinical risk conditions, should have assistance conducted by OB/nurse midwives. The reduction of these numbers affects the quality of the care offered and the reduction of the general rate of cesarean sections.

Moreover, we should reinforce the role of OB/nurse midwives in conducting the usual risk deliveries and the use of good practices in labor and birth care, such as communication, establishment of bonds and encouragement towards the autonomy of the role of parturient women. The adequate use of the partograph should be recommended in the follow-up and monitoring of the labor, the management of non-pharmacological methods and the strict fetal monitoring in the labor as practices that favor vaginal delivery\(^{(19)}\).

The second group that contributed most to the CS rate was the group 10 (cephalic preterm pregnancies), with a relative rate of 18.8% and an absolute rate of 9.7%. This indicates that there is a high number of preterm births in the hospital, a fact that may be related to the service being a state reference for high-risk obstetric and neonatal care.

The WHO considers prematurity as a worldwide problem, with 60% of the preterm births worldwide, and Brazil has the highest rates\(^{2}\). In studies that analyzed the factors associated with prematurity, regarding the type of delivery, CS was more evident and was related to preterm births\(^{(27)}\). Nevertheless, other studies should be performed to analyze, with greater specificity, the causes of prematurity and the indications for the route of delivery for this population.

As for the composition of the group 11, composed of parturients women who did not have all the obstetric information needed in DNV to be included in the first ten groups of RC, we observed that the incompleteness of data was an important limitation in filling out the document and was present in a considerable number of them (with 13 parturient women submitted to CS, with a relative contribution of 0.8%, who were not classified in the ten groups).

DNV data are one of the main sources for the generation of health indicators on prenatal, labor and birth, as well as the assistance provided to the pregnancy-puerperal period, in addition to determining part of the maternal and neonatal mortality rates. Nonetheless, the incompleteness of any of its rates compromises the reliability of the data and the preparation of reliable statistics, which indicates the need for continuous monitoring and quality control in these services\(^{(28)}\).

**CONCLUSION**

We can conclude that the use of RC enables us to know, with more specificity, the profile of pregnant women submitted to cesarean section, thus allowing the analysis and the reflection of the situation, in such a way as to develop strategies that can enhance the assistance and reduce the unnecessary cesarean sections.
The high numbers of CS found in groups of women with obstetric characteristics that indicate viability for vaginal delivery suggest the need for future studies to detect the factors and the clinical indications that are contributing to the progressive maintenance of these numbers.

The obstetric nurses/nurse midwives, who work in the prenatal, labor and birth care, can play a strategic role in reducing the cesarean section rates, because, as they develop their care with quality and safety, guided by scientific evidence, reduce unnecessary interventions, favor the construction of autonomy and the protagonism of women, aspects that favor the evolution of vaginal delivery.

Nevertheless, even with the presence of these professionals in all work shifts in the delivery and birth care sector, with a positive impact in reducing the number of unnecessary interventions and in the quality of the care offered, the persistence of high CS rates in the last three years indicate the urgency of a more in-depth look at the factors that have limited and/or boosted the role of OB in the studied service.

Therefore, it is necessary to review the practices and protocols for labor induction instituted in the hospital, which is probably not correctly performed, since studies show that it is a factor that reduces CS rates. We should also provide continuing education to improve the knowledge of professionals, mainly obstetricians, responsible for this care, with a view to enhancing it to increase its effectiveness and, consequently, the number of vaginal deliveries after its use.

The inadequate and/or incomplete filling out of DNV directly interferes in the quality of the information and in the analysis of the data. This is an important tool for the knowledge of maternal and neonatal outcomes and, consequently, of the quality of the obstetric and neonatal care offered in the country. It is crucial that health services provide awareness and training strategies for the professionals responsible for filling out this document.

The results found suggest the need for other studies that analyze, with greater specificity, each RC group, as well as the sociodemographic and clinical conditions of the parturient women and their relationship with the indicated route of delivery. In this context, multiparous women with previous cesarean section deserve to be highlighted, since the group 5 of RC was the one with the highest rate of CS.

TAXAS DE CESÁREAS EM UM HOSPITAL UNIVERSITÁRIO A PARTIR DA CLASSIFICAÇÃO DE ROBSON

RESUMO

Objetivo: descrever as taxas de cesáreas de um hospital universitário a partir da Classificação de Robson. Método: descritivo e transversal, realizado a partir de dados do Sistema de Informações de Nascidos Vivos dos partos ocorridos em um hospital universitário, entre 2015 e 2017. Resultados: houve aumento progressivo da via de parto cesárea e a consequente manutenção da elevada taxa geral de cesariana. Cantidad considerável das parturientes possuía condições obstétricas favoráveis para o parto vaginal e, caso tivesse sido acompanhada por enfermeiras (os) obstétricas (os), poderia ter aumentado a sua possibilidade de ter um parto vaginal. O maior grupo da Classificação de Robson foi o de multiparas, com cesárea anterior e gestação a termo (grupo 5), que provavelmente está relacionado ao número elevado de cesariana identificado em primíparas (grupo 1) e a limitações dos métodos de indução para o trabalho de parto. Conclusão: o uso da Classificação de Robson permitiu conhecer, com maior especificidade, o perfil das mulheres submetidas à cesárea no serviço, o que pode subsidiar a elaboração de estratégias mais efetivas e condizentes com a realidade no enfrentamento das taxas elevadas de cesariana.


TASAS DE CESÁREAS EN UN HOSPITAL UNIVERSITARIO A PARTIR DE LA CLASIFICACIÓN DE ROBSON

RESUMEN

Objetivo: describir las tasas de cesáreas de un hospital universitario a partir de la Clasificación de Robson. Método: descriptivo y transversal, realizado a partir de datos del Sistema de Informaciones de Nacidos Vivos de los partos ocurridos en un hospital universitario, entre 2015 y 2017. Resultados: hubo aumento progresivo de la vía de parto cesárea y el consecuente mantenimiento de la elevada tasa general de cesárea. Cantidad considerable de las
parturientes poseía condiciones obstétricas favorables para el parto vaginal y, caso hubieran sido acompañadas por enfermeras(os) obstétricas(os), podrían haber aumentado su probabilidad de tener un parto vaginal. El mayor grupo de la Clasificación de Robson fue el de múltiparas, con cesárea anterior y gestación a término (grupo 5), que probablemente está relacionado al número elevado de cesárea identificado en primiparas (grupo 1) y a las limitaciones de los métodos de inducción para el trabajo de parto. **Conclusión**: el uso de la Clasificación de Robson permitió conocer, con mayor especificidad, el perfil de las mujeres sometidas a la cesárea en el servicio, lo que puede ayudar en la elaboración de estrategias más efectivas y acorde a la realidad en el enfrentamiento de las tasas elevadas de cesáreas.

**Palabras clave**: Cesárea, Obstetricia, Parto, Enfermeras Obstétricas.

**REFERENCES**


15. Bolognani CV, Reis LBSM, Dias A, Calderon IMP. Robson 10-groups classification system to access C-section in two public hospitals of the Federal District/Brazil. PLOS ONE. 2018; 13(2): e0192997. DOI: https://doi.org/10.1371/journal.pone.0192997.


Corresponding author: Agnes Maria dos Reis. Endereço: Rua Clarindo E. da Silva, 1222, Residencial Porto do sol B1 apto 103, Despraiado, Cuiabá, Mato Grosso (MT), Brasil. CEP 78048-004. Celular: (65) 99319-0835. E-mail: agnes.lucacheuski@gmail.com

Submitted: 19/03/2019
Accepted: 17/08/2020