

# Women's Autonomy and Scheduled Cesarean Sections in Brazil: A Cautionary Tale

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**ABSTRACT: Background:** In Brazil, one-fourth of all women deliver in the private sector, where the rate of cesarean deliveries is extremely high (70%). Most (64%) private sector cesareans are scheduled, although many women would have preferred a vaginal delivery. The question this study addresses is whether childbearing women were induced to accept the procedure by their physicians, and if so, how? **Methods:** Three face-to-face structured interviews were conducted with 1,612 women (519 private sector and 1,093 public sector) early in pregnancy, approximately 1 month before their due date, and approximately 1 month postpartum. For all private sector patients having a scheduled cesarean section, women's self-reported reasons given for programming surgical delivery were classified into three groups according to obstetrical justification. **Results:** After loss to follow-up (19.2% of private sector and 34.4% of public sector), our final sample included 1,136 women (419 private sector and 717 public sector). Compared with public sector participants in the final sample, on average, private sector participants were older by 3.4 years (28.7 vs 25.3 yr), had 0.4 fewer previous deliveries (0.6 vs 1.0), and had 3.4 more years of education (11.0 vs 7.6 yr). The final samples also differed slightly with respect to preference for vaginal delivery: 72.3 percent among those in the private sector and 79.6 percent in public sector. The cesarean section rate was 72 percent in the private sector and 31 percent in the public sector. Of the women with reports about the timing of the cesarean decision, 64.4 percent had a scheduled cesarean delivery in the private sector compared with 23.7 percent in the public sector. Many cesarean sections were scheduled for an "unjustified" medical reason, especially among women who, during pregnancy, had declared a preference for a vaginal delivery. Among 96 women in this latter group, the reason reported for the procedure was unjustified in 33 cases. On the other hand, more cesarean deliveries were scheduled for "no medical justification," including physician's or the woman's convenience, among women who preferred to deliver by cesarean (35/65). The incidence of real medical reasons for a scheduled cesarean section diagnosed before the onset of labor among private sector patients who had no previous cesarean birth and who wanted a vaginal delivery was 13 percent (31/243). **Conclusions:** The data suggest that doctors frequently persuaded their patients to accept a scheduled cesarean section for conditions that either did not exist or did not justify this procedure. The problem identified in this paper may extend well beyond Brazil and should be of concern to those with responsibility for ethical behavior in obstetrics. (BIRTH 35:1 March 2008)

**Key words:** cesarean, patient views, patient autonomy, scheduled cesarean, decision making, medical ethics

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Recently, the question of cesarean delivery on maternal request has generated much discussion (1–9). This topic was addressed by a recent report issued by a panel of the United States National Institutes of Health (10). In the debate, considerable attention has been given to new evidence on the relative safety of elective cesareans and planned vaginal births and to the costs of the two procedures.

Underlying the debate are two central assumptions. One is that substantial patient demand exists for elective cesareans with no medical indications, whereas the other is that supporting cesarean delivery on demand would give more weight to women's preferences. However, as the National Institutes of Health report notes, maternal requests for cesareans in the absence of medical indications have only rarely been documented, and the few times women's preferences about type of delivery have actually been measured, the demand for cesareans has turned out to be less than expected (11,12). Moreover, loosening restrictions on performing cesarean sections in the absence of medical indications could reduce rather than increase the chances women have to achieve their preferred type of delivery, which is what appears to have happened in Brazil.

Brazil is well known for its high cesarean delivery rate, especially among the more affluent, and has been cited as "one of the first countries where cesarean delivery on request became popular" (13). In the private sector, which accounts for about one-fourth of all births, the cesarean delivery rate is close to 80 percent. In the public sector, where several controls are now in place, the cesarean section rate (approximately 28%) is much lower (14). Although women's demand is often held responsible for the high rate of cesareans overall and for the sharp differentials in this rate between the public and the private sector, strong economic and convenience incentives exist for doctors to favor scheduled surgical procedures. As a *Lancet* report put it, "they can earn more money by doing several caesareans in the time it takes to do one natural delivery" (15).

In an earlier paper (16), we presented results from a prospective study that undermined the notion that the high cesarean rate and the difference between the private and the public sectors were based on women's preferences. The study showed that when asked both early and late in pregnancy, most women said that they wanted to deliver vaginally. In those results, almost no difference was seen in childbirth preferences between women in the private and public sectors. The proportion wanting to deliver vaginally was more than 80 percent, except in cases where the woman had a previous cesarean delivery, where it was approximately 44 percent. In addition to showing that most cesarean sections in Brazil are unwanted, the study

also indicated that a surprisingly large proportion of them were scheduled in advance: 23 percent in the public sector and 64 percent in the private sector (16). Moreover, many women who declared a preference for a vaginal delivery complied with having a scheduled cesarean section.

That a considerable fraction of women who wanted to deliver vaginally were willing to accept a scheduled cesarean section appears contradictory since a scheduled surgical delivery requires an agreement between physician and client. In this analysis, prompted by the recent debate over cesarean sections on demand, we returned to the data to investigate what led these women to change their minds and agree with their doctors to have a cesarean section on a fixed date and time, instead of waiting for a spontaneous vaginal delivery. The question we address in this analysis is whether women were induced to accept the procedure by their physicians, and if so, how? We also examine the degree to which women's satisfaction after a scheduled cesarean depended on their preferred type of delivery as expressed during the course of pregnancy. The implications of the Brazilian experience in the late 1990s for the contemporary debate on elective cesarean delivery are taken up in the discussion.

## Methods

### *Participants*

The study recruited pregnant women aged 18 to 40 years in four cities in four Brazilian states between April 1998 and June 1999. Participants both lived in and intended to deliver in the metropolitan areas of Porto Alegre, Belo Horizonte, and Natal, and the municipality of Sao Paulo. The four cities are from the three most populous regions of the country and constitute four distinct urban environments. We excluded specialized populations, such as those who were considered high risk, those who sought assisted reproduction, and human immunodeficiency virus (HIV)-positive women. Women were less than 5 months or 22 weeks pregnant and had two or fewer prenatal visits at the time of the first study interview.

The sample was stratified by both sector of care and birth order. It favored by 2 to 1 women who delivered in public hospitals, a fraction smaller than the 3:1 ratio observed in the entire population but which ensured a sufficient number of private sector participants for analysis. In the public sector, we recruited more multiparous women than in the private sector due to the difference in fertility between the two populations. In each city, we selected a representative list of approximately 10 hospitals with maternity services

in either the public or the private sector and recruited women who planned to deliver in these hospitals. The target completed sample size, based on both available funding and power calculations, was 1,200 women. Prospective participants were approached in prenatal care clinics, physician waiting rooms, and other venues. All women signed informed consent forms.

### *Procedures*

Each participant had three in-person interviews: first at the time of recruitment, second at 1 month before her expected due date, and third at 1 month after her expected due date. We usually conducted the first interview in a health care facility, and the second prenatal and postpartum interviews were usually done in the woman's home. Reasons for loss of participants to follow-up included women not at address given, delivery before the second interview, lost pregnancies, and neonatal death.

A standardized questionnaire was used for each interview. The first interview began with demographic information, including where the woman expected to deliver and type of prenatal care. To the question "What type of delivery would you like to have?", the precoded responses were the following: vaginal (normal), cesarean, depends on the doctor's decision, and do not know or undecided. The questionnaire also included women's plans for future childbearing and contraceptive use including sterilization and type of delivery of any previous births.

The second interview included health problems during pregnancy and the continuity, frequency, and content of prenatal care. We requested more detail about conversations she had with her doctor about the type of delivery. If the doctor had recommended or decided on a cesarean delivery, we asked what reasons were given for that recommendation or decision and if the surgery was already scheduled. As in the first interview, we again asked in the interview approximately 1 month before the delivery date about the women's preferred delivery type. In this paper, we classify women's preferred type of delivery based only on the data from this second interview.

The third interview covered what happened during delivery; who attended it and in which hospital; how the delivery was paid for; date and time of admission; and the presence of spontaneous labor, induction, and anesthesia. If a cesarean delivery was performed, we asked if it had been scheduled ahead of time, when, and for what reason. In this interview, we also asked the mother about her satisfaction with the delivery and postpartum experience; for women who delivered

by cesarean section, we asked whether they wished they had had a vaginal birth and also asked about their satisfaction with having had a cesarean section.

### *Data Analysis*

Participants who completed all three interviews were classified as public or private patients, depending on how their delivery was paid for. If the government health insurance program (SUS) paid for the delivery, participants were considered public patients. All others, the vast majority of whom were covered by private insurance, were classified as private patients. We distinguished between primiparous and multiparous women, and among the multiparas by whether the previous birth was by cesarean delivery.

For women whose cesarean section was scheduled in advance, we reviewed all the reasons women reported for this decision to program a surgical delivery and classified them into 13 categories, from less to more justified on medical grounds, which are as follows: declared physician's convenience; woman requested procedure, including for concomitant tubal ligation; transitory problems in previous pregnancy (e.g., no dilatation, cord around the neck of the fetus, low insertion of placenta); no cervical dilatation; anomalies or diseases that do not justify a cesarean; indications of labor induction; breech or shoulder presentations; twins; previous cesarean section; chronic fetal distress or hemorrhage; herpes or HIV infection, or both; pelvic dystocia; and other or unknown.

Based on these classifications, we grouped the reasons for scheduling a cesarean section without waiting for the spontaneous initiation of labor according to the degree to which the indication reported by the women was obstetrically justified. After excluding the cases in which women did not know or could not explain the reason for the cesarean section, we defined three categories, as follows:

- (1) *No medical indication*—including for physician's or the woman's convenience, or both.
- (2) *Unjustified medical reason*—which included problems in previous gestations that were not necessarily present in the current pregnancy or delivery; "anomalies" (e.g., cord around the fetus' neck, preterm, lack of cervical dilatation) or diseases (gonorrhoea), which do not justify scheduling pregnancy interruption before spontaneous labor; and all the conditions that could be an indication of pregnancy interruption but could have been handled through induction of labor (e.g., diabetes, hypertension, urinary/renal problems, prolonged pregnancy).

- (3) *Real medical reasons*—which included all the conditions that are appropriate justification for cesarean delivery (e.g., a narrow pelvis, chronic fetal distress) and other conditions, such as breech presentation, twins, and previous cesarean, where the need for a cesarean section is often decided during, rather than in advance of, labor, but which in some circumstances might motivate scheduling a cesarean section.

In the analysis, after calculating the rate of scheduled cesarean sections by sector, parity, type of previous birth, and delivery preference, we examined the distribution of reasons given for the scheduled procedure according to the delivery preference expressed by the mother during the second interview. Then, we considered the plausibility of the reasons that were reported by the private patients for their scheduled cesarean sections. Finally, we reviewed distributions of responses about satisfaction among women who experienced a scheduled delivery according to preferences for type of delivery expressed in the earlier interviews. We used Stata 9 for the statistical analysis (17).

## Results

As reported in our earlier paper (16), we recruited 1,612 women, 519 private sector patients and 1,093 public sector patients. The final sample included 1,136 women because 476 women were lost to follow-up. Table 1 shows details of the groups and differences between the final sample and those lost to follow-up. As would be expected, given the population's mobility, the greatest loss to follow-up was among public sector patients and was greatest between the first and the second interviews. After loss to follow-up (19.2% of private sector and 34.4% of public sector), our final sample included 1,136 women (419 private sector and 717 public sector). Compared with public sector patients in the final sample, on

**Table 1. Type of Delivery According to Sector**

| Type of Delivery | Hospital Sector    |                   |
|------------------|--------------------|-------------------|
|                  | Private<br>No. (%) | Public<br>No. (%) |
| Vaginal          | 117 (27.9)         | 495 (69.0)        |
| Cesarean         | 302 (72.1)         | 222 (31.0)        |
| Scheduled        | 190 (64.4*)        | 49 (23.7*)        |
| Intrapartum      | 105 (35.6*)        | 158 (76.3*)       |
| Unknown          | 7 (—)              | 15 (—)            |
| Total            | 419                | 717               |

\*Percentage of all women who reported timing of the cesarean decision.

average, private sector patients were older by 3.4 years (28.7 vs 25.3 yr), had 0.4 fewer children (0.6 vs 1.0), and had 3.4 more years of education (11.0 vs 7.6 yr). The final samples also differed slightly with respect to preference for vaginal delivery: 72.3 percent among women in the private sector and 79.6 percent in the public sector.

The cesarean section rate was 72 percent in the private sector and 31 percent in the public sector. Of the women with reports about the timing of the cesarean decision, almost two-thirds had a scheduled cesarean section in the private sector compared with less than one-fourth in the public sector (Table 1). Considering women who declared a preference for vaginal delivery, approximately one-third of those from the private sector and only 4 percent of those from the public sector ended up delivering by scheduled cesarean section (Table 2). These proportions were much higher among women who expressed a preference for cesarean delivery: more than three-fourths of private sector women and 20 percent of those from the public sector were delivered by scheduled cesarean section.

Although the difference among private sector participants in the rate of scheduled procedures according to delivery preference is substantial, it is striking that this rate is still very high among women who said that they wanted and planned to have a vaginal delivery at the second interview. Indeed, this rate is so high that, given the large fraction of women expressing a preference for a vaginal birth, most of the private sector scheduled cesareans (103/176) occurred among women who wanted a vaginal delivery (Table 2). Because a relatively small number of public sector respondents had an "unwanted" scheduled cesarean section ( $n = 23$ ), the remainder of the analysis is restricted to the cases of scheduled cesareans that were performed in private hospitals.

For these private sector scheduled cesarean deliveries, no medical reason was reported for more than one-half of the women who preferred a cesarean delivery and for only one-sixth of the women who wanted a vaginal delivery (Table 3). In contrast, approximately one-third of the women who wanted to deliver vaginally had an unjustified medical reason, and nearly one-half had a real medical reason, whereas the respective proportions were one-sixth and less than one-third for women who preferred a cesarean section. The differences according to delivery preference shown in this table are highly significant ( $p < 0.000$ ; Pearson chi-square test) and remained so after adjusting for parity, type of previous delivery, education, and age (results not shown).

To assess the plausibility of the prevalence of real medical reasons for a scheduled cesarean section among private sector patients who did not want a

vaginal delivery, we need to consider the number of such indications in relation to the total number of women in this category. For this comparison, we include only women who declared that they preferred a vaginal delivery at the second interview and who did not have a previous cesarean delivery and thus were potentially good candidates for a vaginal delivery. These women total 243, excluding 6 for whom we do not know the type of delivery. The proportion of these women who had a scheduled cesarean section for an unjustified medical reason was 7 percent (16/243), and 13 percent (31/243) had one for a real medical reason.

Examining the specific real indications for a scheduled cesarean section, 27 of the 31 cases were malpresentation (14 cases) and fetal distress (13 cases). To assess the total incidence of malpresentation in this subpopulation, to the 14 cases diagnosed before the onset of labor, we added 7 cases that were reportedly diagnosed during labor and given as the reason for an emergency cesarean section, yielding an incidence rate of 8.6 percent (21/243) during the last pregnancy. This number of cases is significantly higher ( $p < 0.001$ ) than would be expected on the basis of a normative probability of 0.04 and a binomial distribution (18,19). The proportion of malpresentations among private sector patients is also greater than that found among the 511 public sector patients meeting the same criteria, 5.1 percent (26/511). This difference in proportions between the two samples is significant ( $p < 0.1$ ), although not strongly so. A standard of comparison for the 5.3 percent (13/243) incidence of reported prelabor diagnoses of fetal distress is harder to come by. No cases occurred among the public sector patients (a significant difference from private sector patients;  $p < 0.000$ ), as would be expected in a sample that included only cases of low-risk pregnancies.

Analyzing the responses in the postpartum interview about women's agreement with the statement that "I would have preferred to have had a vaginal delivery," more than two-thirds of the women who

had declared a preference for a vaginal birth during pregnancy maintained that preference after being delivered by scheduled cesarean section, and an additional 15 percent was uncertain. In contrast, just more than 20 percent of those who, during pregnancy, declared a preference for a cesarean delivery agreed in the postpartum interview that they would have preferred a vaginal delivery (Table 4). However, we found no detectable difference by delivery preference in women's satisfaction with care during delivery and postpartum. Moreover, an almost identical proportion declared that they were happy to have had a cesarean (data not shown).

**Table 3. Reasons for Scheduled Cesarean Section, by Delivery Preference, for Private Sector Patients Only**

| Reason                     | Delivery Preference |                     |
|----------------------------|---------------------|---------------------|
|                            | Vaginal<br>No. (%)  | Cesarean<br>No. (%) |
| No medical justification   | 16 (16.7)           | 35 (53.9)           |
| Unjustified medical reason | 33 (34.4)           | 11 (16.9)           |
| Real medical reason        | 47 (49.0)           | 19 (29.2)           |
| Total scheduled cesareans  | 96 (100.1)          | 65 (100.0)          |

Note: Excludes 29 women who did not report reason for scheduled cesarean.

**Table 4. Regret About Type of Delivery at Postpartum Interview among Women with Scheduled Cesarean Section, for Private Sector Patients Only**

| Regret About Having<br>Cesarean Section | Delivery Preference |                     |
|-----------------------------------------|---------------------|---------------------|
|                                         | Vaginal<br>No. (%)  | Cesarean<br>No. (%) |
| Would have preferred vaginal birth      | 79 (67.5)           | 16 (21.9)           |
| Uncertain                               | 18 (15.4)           | 8 (11.0)            |
| Preferred cesarean delivery             | 20 (17.1)           | 49 (67.1)           |
| Total                                   | 117 (100.0)         | 73 (100.0)          |

**Table 2. Rate of Scheduled Cesarean Section by Sector, Type of Previous Delivery, and Preferred Type of Delivery at Second Interview**

| Preferred<br>Delivery | Hospital Sector       |                       |                       |                       |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
|                       | Private               |                       | Public                |                       |
|                       | Primiparas<br>No. (%) | Multiparas<br>No. (%) | Primiparas<br>No. (%) | Multiparas<br>No. (%) |
| Vaginal               | 59/190 (31.1)         | 44/111 (39.4)         | 5/288 (1.7)           | 18/294 (6.1)          |
| Cesarean              | 16/24 (66.7)          | 57/72 (79.2)          | 2/15 (13.3)           | 23/108 (21.3)         |
| Total                 | 103/301 (34.2)        | 73/96 (76.0)          | 23/582 (4.0)          | 25/123 (20.3)         |

Note: Excludes 34 women who did not state a delivery preference (20), who believe that delivery decision rests with doctor (12), and those with missing type of previous delivery (2).

## Discussion

The Brazilian private sector rate of scheduled cesarean section found in this study is extremely high (190/419, 45%). Moreover, it cannot be explained in terms of patient demand since most procedures occurred among women who would have preferred to have had a vaginal birth. Indeed, as we show in this paper, more than one-third of those who expressed a preference for a vaginal birth ended up acceding to a scheduled cesarean section. These initial findings led us to the question of how could so many women who wanted a vaginal birth have been led to renounce the possibility of having their preferred type of delivery.

One possibility is that the physician had a frank and open conversation with the woman concerning the constraints on her or his time, the difficulty of accompanying a normal but unpredictable labor and delivery, or the physician's belief that a scheduled cesarean delivery is safer than a vaginal delivery. Such conversations appear, however, to have been extremely infrequent since only 1 of every 6 women who wanted a vaginal birth but had a scheduled cesarean section declared a nonmedical reason for the procedure. In the large majority of cases, according to our participants' reports, a medical indication was given for scheduling the cesarean section.

Two potential problems with the reported diagnoses can be raised. The first problem is that about one-third of the diagnoses given to women who declared a preference for a vaginal birth were for reasons that could not be considered real medical reasons. The second problem is that the proportion of women receiving a real indication is too high to be plausible. Among women who were either primiparas or whose previous birth was vaginal and who had been screened at the baseline interview for severe complications of pregnancy and where eventual neonatal deaths were excluded from the sample, it seems highly unlikely that 13 percent would be medically contraindicated for the onset of labor and vaginal delivery. The incidence rate of breech birth and other malpresentations is much higher than in other populations (18,19), or in the public sector patients in our study. In addition, the number of diagnoses of placental fetal distress reportedly given to these women before the onset of labor seems high to us, especially considering that no such diagnoses were given to the public sector patients who had no previous cesarean birth and wanted a vaginal delivery and also the low obstetrical risk of the participants in this study and the exclusion of neonatal deaths.

Only two interpretations seem possible for both the frequency and the content of the diagnoses reported

among private sector patients as the reason for their scheduled cesarean section. The first interpretation is lack of sufficient obstetrics experience added to defensive practice. Physicians uncertain of their capacity to diagnose the fetus' well-being and of conducting a vaginal delivery may feel more secure doing a scheduled cesarean section than waiting for spontaneous labor, considering the prevalent concept that cesarean section is safe and vaginal delivery can be dangerous for the newborn. However, as the study was done in some of the most important urban centers in Brazil and obstetricians in private practice are generally more experienced than those in public practice, we do not find this interpretation credible.

The other interpretation is that the physicians were honestly convinced that the women were wrong in giving a preference for vaginal delivery and offered a medical indication for a cesarean section when, in many cases, none existed as a way to protect women and newborns from what they consider to be the mother's misconceived preferences about type of delivery. At the same time, scheduling the cesarean section on a fixed date and time facilitated their practice. It appears to us that this second alternative accounted for most of the "unwanted" scheduled cesarean procedures in the private sector, suggesting a paternalistic attitude that violates women's autonomy and merits revision.

The conclusion we draw in this study is subject to various limitations. First, our sample of private sector births is relatively small, and the data were collected in the late 1990s. Second, our only basis for knowing the reason for the scheduled cesarean sections in our sample is the women's report given to an interviewer approximately 1 month after delivery. It is possible that the respondent misunderstood her doctor's explanation and gave an inaccurate report of the clinical diagnosis. It seems less likely, however, that the respondent would report a medical indication for the procedure when, in fact, none was given. Second, the substantial difference in the proportion of respondents reporting no medical indication according to their delivery preference is consistent with the hypothesis that medical diagnoses were frequently given to induce women's acquiescence with the proposal to schedule a cesarean section.

Under what circumstances did the practices we have identified in Brazil arise? Current medical practice in the private sector with respect to cesarean delivery evolved over at least three decades. The pronounced increase in the cesarean section rate in Brazil occurred between 1970 and 1980, when the rate went from 15 to 30 percent of deliveries covered by the social security system then in place (20). During that period, the payment received for a cesarean delivery

was much higher than that for a vaginal delivery, providing an economic incentive for cesarean section. The reimbursement policy changed to equal payment in the 1980s, but by then, physicians had discovered that cesarean section, particularly if scheduled in advance, was convenient and safe, independently of the payment received (21). Thus, the cesarean section rate continued to increase until recently when efforts by the government and medical associations have helped limit the rising rate, particularly in the public sector (14).

In the private sector in Brazil, few, if any, social controls exist over medical practice. Busy obstetricians often attend 15 or more deliveries a month and, since group practice is rare, provide personal care to each woman during the entire event of labor and delivery. The unpredictability of spontaneous labor would result in their having to interrupt office hours and academic or social activities almost daily. Moreover, there would simply not be time for doctors to be present during 12 or more hours at each delivery they attend. Scheduling cesarean sections allows them to program the deliveries of several women on the same day and gain some measure of control over their lives. Given the highly unbalanced power relationship between health practitioner and patient, it may be easy for doctors to induce women who have clear reasons for wanting to deliver vaginally to go along with scheduling a cesarean section (21). In our study, we found few if any indications that doctors would seek to influence women's preferences throughout the course of pregnancy. Rather, most doctors appeared to act at the last moment, providing a medical indication only a couple of weeks or a few days before delivery. What is more, doing so seems to have caused little or no suspicion or to have adversely affected women's satisfaction with care. The women seem to have been fully convinced that in accepting a scheduled cesarean section, they were protecting their infant's and their own health.

Although we believe that Brazilian obstetricians regularly offer unwarranted or unjustified medical indications for scheduling cesarean sections, we doubt that they realize the seriousness of the ethical lapse this behavior entails (22). In their minds, the diagnosis may involve just a slight bending of the truth. Besides, many obstetricians, in Brazil and elsewhere, appear to be convinced that a scheduled cesarean section is good for the woman's health, with arguments that go from prevention of perineal lacerations and later urinary or fecal incontinence to protecting sexual function (13,23). Although many risks can occur in both forms of delivery, and it is difficult to judge which risks are paramount for a given woman, recent studies show that the overall risk for the mother and the newborn is not greater and may be lower after vaginal birth than after cesarean section, when no medical indication

exists for surgical delivery (24–26). Likewise, current evidence does not support the routine use of elective cesarean section to prevent incontinence (27–30).

Today, Brazil is no longer the country with the highest cesarean section rate in the world, and no reason exists to believe that Brazil's private sector experience is exceptional among countries with similar or higher rates. The problem identified in this paper may extend well beyond Brazil and may even permeate practice in the U.S., where scheduled cesarean sections are becoming more common (31). For certain, those with responsibility for ethical behavior in obstetrics should seek to ensure women's autonomy. In this endeavor, however, awareness of the possibility of physicians violating this autonomy by way of unwarranted diagnoses may be as important as resolving the plight of obstetricians who have women demanding a procedure for which they have no medical indication.

## Conclusions

The data suggest that doctors frequently persuaded their patients to accept a scheduled cesarean section for conditions that either did not exist or did not justify this procedure. The problem identified in this paper may extend well beyond Brazil and should be of concern to those with responsibility for ethical behavior in obstetrics.

Above all, the Brazilian case should teach us to be skeptical of claims that demand for cesarean section is high or rising. It also shows the possible consequences of such claims if they come to be validated by a growing cesarean section rate. In other settings, to avoid what happened in the Brazilian private sector, it would make sense to assess demand regularly as a preventive practice—but through surveying expectant mothers rather than physicians.

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