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Men in Light of the New Legislation on
Voluntary Sterilization in Brazil**

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Introduction

Voluntary female sterilization had long been a common practice in the private health sector in Brazil as a means of controlling fertility. In the public health sector, however, sterilization was not allowed. That is, the system was not permitted by law to pay for sterilization surgeries. Nevertheless it is common knowledge that such surgeries were in fact regularly performed during childbirth by cesarean section (Barros et al. 1991, Faúndes and Cecatti 1991 and 1993, Berquó 1993, Hopkins 1991, Souza, 2001), and sometimes recorded as other medical procedures (Caetano 2000).

As a result of these practices, female sterilization was the most frequent of all contraceptive methods for many years. According to PNDS data of 1996, 52 percent of all contraceptive procedures consisted of female sterilization, followed, in second place and at a considerable distance, by the pill, used by 27 percent of the female population. Male sterilization, on the other hand, was less commonly practiced (3.4 percent) than traditional methods such as periodic abstinence (4.0 percent) and *coitus interruptus* (4.0 percent) (PNDS, 1997).

Despite the non-existence of any specific law to prohibit the performance of voluntary sterilization, it was nevertheless banned on the basis of the Brazilian Penal Code (enacted in 1940), specifically related to an interpretation of Article 129, Paragraph 2, III, which states that any physical damage of serious nature resulting in permanent weakness of a member, sense, or function of the body is considered a crime. Voluntary sterilization was therefore interpreted as a criminal offense, since it results in loss or incapacity of the reproductive function, and carries with it a penalty of one to eight years' imprisonment.

The Code of Medical Ethics (through Federal Medical Board Resolution No. 1154, of 1984) prohibited voluntary sterilization until 1988, although exceptional cases were considered when there existed precise medical indication attested to by two physicians heard in conference. In 1998 the Code of Medical Ethics was amended, and the previous resolution was revoked by a new version that explicitly required physicians to comply with the general legislation related to transplants of organs or tissues, sterilization, artificial fertilization, and abortion (Article 43).

The illegality and the concurrent high demand for sterilization largely explain why tubal ligations were so frequently performed during cesarean sections in the private sector. This fact has often been cited as one of the causes of the extremely high rate of c-section deliveries in Brazil, and the high association between caesarian sections and female sterilization. According to the 1996 PNDS, more than 50 percent of all sterilizations

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performed in Brazil occurred during c-section births. In the more developed regions of the country, estimates are that this proportion rises to 70 percent of all sterilizations, clearly indicating an abuse of this procedure as a means of sterilization.

In addition to the fact that voluntary sterilization was not mentioned in the legislation, family planning itself had not been regulated in Brazil, and only recently has legislation on reproductive health and rights been approved. In 1997, female and male voluntary surgical sterilization was regulated by Health Ministry Decree 144, in accordance with Law No. 9263, of 1996, within a broader body of legislation on family planning (Brasil 1997a, 1997b). The main clause of the law regarding voluntary sterilization states that⁴:

Art. 10 - Voluntary sterilization is allowed only in the following situations: I - Men or women with full civil capacity and at least twenty-five years of age or with at least two living children; there must also be a minimum waiting period of sixty days between application for the procedure, and the surgery itself, during which time the interested persons shall have access to some fertility regulation service, including interdisciplinary group counseling, with the objective of discouraging precocious sterilization; II - risk to life or health of the woman or her future children, attested to in a written report and signed by two physicians. (Law N 9263, January 12 1996).

The main objective of this present paper is to evaluate the impacts that the recent law on family planning has had on the reproductive health of women and men in Brazil. We will first seek to verify whether the criteria stated in the law have been complied with in the current practices of female and male sterilization in the public health systems and to study how medical personnel perceive the law on family planning, more specifically, their opinions and practices regarding the criteria set forth in the most recent law on voluntary sterilization. Secondly, we propose to estimate the average waiting time between application for sterilization and its performance or refusal, in different contexts in Brazil (six major cities).

The Context of Voluntary Sterilization in Brazil

Female Sterilization

The most recent data indicate that, in 1996, 40 percent of all married Brazilian women in reproductive age had been sterilized. This rate varies from 29 percent in the South to 59 percent in the Central-Western Region. With the exception of the State of Rio de Janeiro, which also has a high percentage of sterilized women, one could say that of all contraceptive methods, female sterilization is in the lead in the less developed regions (Table 1).

Due to the role that female sterilization has taken on among modern contraception methods, other alternatives have been decreasing throughout the country. In 1986 female sterilization represented 49 percent of such methods, and rose to 57 percent by 1996. This concentration was most evident in the Northeastern (70 percent), the Northern (75 percent) and the Central-Western regions (73 percent) (see Table 1).

Educational levels also show a significant correlation with the practice of female sterilization. The percentage of sterilized women in Brazil in 1966 varies from 46 among illiterates to 36 among women with 12 or more years of schooling (Table 1). The situation of illiterate women, usually the poorest, is shocking, since sterilization represents virtually their only access to some modern contraceptive method.

⁴ A translation of the law concerning the part on voluntary sterilization is presented in Appendix I.

Female sterilization is occurring ever earlier in women's lives. Data from the 1997 PNDS show that the median age for sterilization at that time was 28.9 years, whereas ten years earlier, the average age was 31.4. The figures in Table 2 show that most sterilizations are carried out at very young ages, 20 percent of all sterilized women having undergone this procedure before the age of 25, and 57 percent before the age of 29.

Table 1 - Female Sterilization among married women by region, and years of schooling, Brazil, 1996

Characteristics	% of Sterilized Female	Female sterilization in relation to all modern methods (%)
Region		
State of Rio de Janeiro	46.3	60.8
State of São Paulo	33.6	47.0
South	29.0	40.0
Central-East	38.8	54.8
Northeast	43.9	70.5
North	51.3	75.3
Central-West	59.5	73.5
Years of Education		
None	45.7	80.7
1 - 3	44.9	70.5
4	40.4	58.7
5 - 8	36.9	49.5
9 - 11	38.8	51.4
12 or more	35.7	46.8

Source: PNDS 1996.

Table 2 - Distribution of sterilized women by age at surgery, Brazil, 1996

Age at sterilization (in years)	Sterilized women (%)
Less than 25	20.5
25 - 29	36.6
30 - 34	27.9
35 - 39	12.2
40 - 44	2.6
45 - 49	0.1
Total	100.0

Source: PNDS 1996.

Vasectomy

Before the publication in 1997 of the 1996 PNDS, containing results on the reproductive and sexual behavior of the male population aged 15 to 59, the only information on vasectomy available at the national level came from the women's questionnaires of the 1986 and 1996 PNDS, in which all the information was provided by the women. The inclusion of a sample of the male population in the 1996 PNDS then provided more accurate information about male reproductive and sexual behavior.

The results of the PNDS show that almost all men had knowledge about some contraceptive method, either from a spontaneous response or after being prompted by the interviewer. The condom was known by 99.0 percent of the interviewees, the pill by 97.1 percent, female sterilization by 87.7 percent, and male sterilization by 72.3 percent. Among other modern contraceptive methods, 57.8 percent of the men knew about injectables, 48.5 percent made reference to IUD, and only 36.9 percent mentioned vaginal methods. It is interesting to note that the men made more frequent references to tubal ligation than to vasectomy as a contraceptive method.

Concerning the use of any contraceptive method, the prevalence of use was respectively 60.4, 74.0, and 73.3 percent for the entire sample of men, for men in stable unions, and for sexually active men not in stable unions (Table 3).

According to the data (Table 3), the highest percentages of methods used by men in stable unions refer to female contraceptive methods, such as sterilization (40.3) and the pill (18.7 percent). On the other hand, male contraceptive methods correspond to only 5.2 percent of the condom users, 2.4 percent of those with vasectomy, and 5.3 percent of users of traditional methods in this same group. As expected, the condom has a much more important role among the sexually active men not in stable unions being used by 39.8 percent of the men in this group.

The prevalence of men who have been sterilized reaches its peak at the age groups of 30-34 and 35-39, with 5.0 percent and 4.3 percent, respectively, of the men being vasectomized.

As shown in Table 4, contrary to what occurs with female sterilization (Table 1), the prevalence of vasectomy increases with schooling, although presenting very low percentages of use, and it is more frequent in the Southeastern and Southern regions of the country.

Implementation of the Law

As mentioned earlier, the law on family planning, which approved voluntary sterilization, was regulated in mid-1997, and implanted in the public health system only toward the end of that year by creating codes of procedures that permitted and regulated the performance of tubal ligations, thus authorizing the public system to cover the costs of the surgeries. The same governmental decree maintained the existing code for vasectomy, a procedure that had already been performed and paid for by the public health system since 1992.

Table 3 – Percentage of men aged 15-59 using contraception, according to method chosen, Brazil 1996.

Current Method	All Men¹	Men in Stable Union¹	Sexually active men not in stable union¹
Any Method	60.4	74.0	73.3
Modern Methods	56.3	68.6	68.8
Pill	15.1	18.7	23.3
IUD	0.8	1.1	0.7
Injectables	0.9	0.9	2.1
Condoms	14.7	5.2	39.8
Female Sterilization	23.4	40.3	2.9
Male Sterilization	1.4	2.4	0.1
Traditional Methods	4.1	5.3	4.5
Periodic Abstinence ²	2.1	2.8	1.7
Withdrawal	2,0	2.5	2.8
Other ³	0.1	0.1	0.0

¹ Also includes methods used by the sexual partner

² Periodic Abstinence includes *Ogino Knauss*, *billings* and temperature.

³ “Other” includes medicinal teas, etc.

Source: PNDS 1996

Table 4 – Percentage of vasectomized men ages 15 to 59, according to region and years of schooling, Brazil, 1996

Characteristics	% of use of Vasectomy
Region	
State of Rio de Janeiro	0.6
State of São Paulo	3.1
South	2.2
Central-East	1.3
Northeast	0.2
North	0.3
Central-West	1.0
Years of Education	
0-3	0.4
4	0.0
5-8	1.3
9-11	2.9
12 or more	5.2

Source: PNDS 1996

Another important aspect in the implementation of the law regulated in this decree is that it specifies the rules that hospitals must adhere to in order to obtain authorization to perform sterilizations paid for by the Public Health System. Additionally, it provides the means for accrediting physicians and the individual data forms to be filled out to inform the system regarding tubal ligations and vasectomies, including data on patients’ address, sex,

date of birth, number of children, and schooling. This decree remained unchanged for two years and few hospitals were accredited. As a consequence, few sterilizations were reported.

In February of 1999 there was a significant change in the regulations of the law, through Decree No. 48 (Brasil 1999), establishing norms and mechanisms to control and enforce the law. The major modification brought about by this decree was the prohibition of any tubal ligation during delivery or abortion, or within 42 days following either procedure, except in cases of previous successive caesarian sections and other proven health problems. It is interesting to note that, in practice, three successive caesarian sections are required to perform female sterilization during delivery, although the decree does not explicitly state this criterion.

According to data from the administrative records of medical procedures (DATASUS, see Table 5), there has been a great increase in the number of female sterilizations reported in Brazil (from 293 in 1998 to 15,370 in 2001). This increase was seen throughout the country, but the number of cases in the southeast rose more than in the other regions, especially if one considers the figures as of 1999, when the codes regarding tubal ligation during caesarian section were implemented (Table 5).

Table 5 - Number of female and male sterilizations by Large Geographical Region, Brazil, 1992 to 2001

Brazil and Large Regions	Female Sterilization				Male Sterilization			
	1998	1999	2000	2001	1992-98	1999	2000	2001
North	26	231	385	596	109	9	33	11
Northeast	121	914	3 104	3 259	679	98	237	236
Southeast	34	472	2 258	7 050	1 942	127	788	1 751
South	107	668	2 322	3 215	86	88	429	659
Central-West	5	248	1 031	1 259	89	2	186	485
TOTAL	293	2 533	9 100	15 379	2 905	324	1 673	3 142

Source: AI/DATASUS 1992 to 2001.

The number of vasectomies, although far below the figures for female sterilization, showed a very similar increase during these years (from 1999 to 2002). As mentioned above, the Unified Health System (SUS) has been paying for vasectomies since 1992 and, according to the records, many were reported before 1998. The highest increases in vasectomies also occurred in the Southeastern Region. It should be noted that there was a fall in the number of cases in the Northern Region, while few cases were registered and almost no increase was seen in the Northeast during this same period (Table 5). This may be due to the limited number of physicians accredited to perform this surgery, but it might also be the result of a lower demand from males in these regions due to the myth that vasectomy implies a loss of sexual potency, especially among men from lower income brackets.

As mentioned above, the limited use of vasectomy as a contraceptive method is noteworthy. Nevertheless, it should be recalled that the Unified Health System was paying for vasectomies even when tubal ligations were not, due to the illegality of this latter procedure. Both procedures have therapeutic indications besides sterilization. Sterilization can be indicated for men as surgical treatment in “*vesico epididymis refluxe*” in order to avoid infections resulting from surgical complications, especially related to prostate surgery. For women, tubal ligation can be indicated in cases of fallopian tube infections. Nevertheless, the medical indication is to remove the tubes and not merely tie them back, as it used to be done

in tubal ligations. For fallopian tube infection, salpingectomy is the surgery indicated, which consists of the extraction of the infected tubes, a procedure which has long been paid for by SUS.

It cannot be asserted that vasectomy has been performed and paid for by the SUS as contraception. However, infections of the nature mentioned above would more likely occur in older men. As it can be observed in Table 6, which presents the number of vasectomies paid for by SUS since 1992 according to age, the majority of the vasectomies occurred between ages 25 and 44.

The demand for female sterilization, on the other hand, could not be fulfilled by the public health system. It is therefore interesting to note the procedures that were adopted by physicians working under the SUS to satisfy at least part of the demand. On the one hand, as was mentioned before, some tubal ligations were carried out during delivery by cesarean section. On the other hand, unrelated to delivery, physicians performed tubal ligation via SUS using the code for salpingectomy, among other medical procedures, as mentioned in the interviews with some of the health professionals.

Table 6 – Number of vasectomies paid for by SUS, according to age group. Brazil and Large Regions, 1993 to 1997

Region	< 24	25-34	35-39	40-44	45-49	50-54	55 and +	Total
North	9	46	20	4	2	3	1	85
Northeast	30	325	126	39	16	10	10	556
Southeast	39	651	363	189	65	27	42	1376
South	3	28	22	8	5	1	5	72
Central-West	3	47	18	7	4	0	1	80
Total	84	1097	549	247	92	41	59	2169

Source: AIH/DATASUS 1993 to 1997.

It is also worth noting the fact, or the coincidence, that when the code of tubal ligations was issued in 1998, all the sums paid out by SUS, such as surgical and hospital expenses and physicians' fees were exactly the same as those paid for salpingectomy, according to the DATASUS medical procedure tables. Table 7 shows the variations in payments for salpingectomy by SUS since 1992, according to large geographical region.

Table 7 – Number of salpingectomies paid for by SUS according to year of occurrence. Brazil, 1992 to 2001

Region	1 992	1 993	1 994	1 995	1 996	1 997	1 998	1 999	2 000	2 001	Total
North	6 000	6 385	7 210	4 964	5 159	3 592	5 264	5 396	5 305	3 907	53 182
Northeast	9 428	9 423	10 090	7 969	8 203	6 429	8 503	9 335	10 964	7 829	88 173
Southeast	14 595	12 374	13 070	9 705	9 220	8 322	7 871	8 549	9 690	7 770	101 166
South	3 216	2 535	2 483	1 696	1 790	1 341	1 633	1 528	1 789	1 273	19 284
Central-West	3 652	2 391	2 893	1 889	1 879	1 604	2 239	2 157	2 131	1 570	22 405
Total	36 891	33 108	35 746	26 223	26 251	21 288	25 510	26 965	29 879	22 349	284 210

Source: AIH/DATASUS 1992 to 2001.

The distribution of salpingectomies by region prior to the implementation of the law in 1997, according to women's age groups (Table 8), shows that, as is the case for vasectomies,

the absolute majority of cases of salpingectomy were performed on women 39 years of age or under (93 percent of the cases).

Table 8 – Number of salpingectomies paid for by SUS, according to women’s age groups. Brazil and Large Regions, 1993 to 1997

Region	Absolute Values							
	15-24	25-34	35-39	40-44	45-49	50-54	55 and +	Total
North	7923	15516	2606	799	163	64	95	27166
Northeast	12608	22517	4546	1549	399	131	166	41916
Southeast	6396	31309	10245	3549	577	162	249	52487
South	1442	5158	1977	817	236	79	83	9792
Central-West	2438	5931	1440	524	165	53	48	10599
Total	30807	80431	20814	7238	1540	489	641	141960
Region	Percentages							
	15-24	25-34	35-39	40-44	45-49	50-54	55 and +	Total
North	29.17	57.12	9.59	2.94	0.60	0.24	0.35	100.00
Northeast	30.08	53.72	10.85	3.70	0.95	0.31	0.40	100.00
Southeast	12.19	59.65	19.52	6.76	1.10	0.31	0.47	100.00
South	14.73	52.68	20.19	8.34	2.41	0.81	0.85	100.00
Central-West	23.00	55.96	13.59	4.94	1.56	0.50	0.45	100.00
Total	21.70	56.66	14.66	5.10	1.08	0.34	0.45	100.00

Source: AIH/DATASUS 1993 to 1997.

Regulation of voluntary sterilization in the research sites

Although almost all municipalities were part of the unified health system by 1991, even in 2000, when our fieldwork took place, some had not yet been fully integrated into the system. The municipality of São Paulo is an example: it had two different health systems operating, one at the state level and another at the municipal level. The situation is still more heterogeneous among the various cities in terms of the organization of reproductive health care and, especially, concerning the stage of accreditation of the health units to perform voluntary sterilization.

Among the six cities studied, the most organized, in terms of reproductive health care and availability of family planning services, are Curitiba, Belo Horizonte, and São Paulo, where family planning programs have been operating since 1994. The first two, and the municipal health system in São Paulo, have municipal regulations for performing voluntary sterilization. In Recife and Cuiabá the organization of reproductive health care is more recent and not yet fully implemented at all basic health units. Hence, there is no regulation of voluntary sterilization. At the beginning of the survey the reproductive health program in Palmas had not yet been implemented, although it had been planned since 1997. It was finally implemented and a protocol was defined to regulate and address the demand for female sterilization.

It is important to note that where local regulations for voluntary sterilization exist, they are not perfectly aligned with the norms and criteria set forth by the family planning law. Indeed, they restrict access to voluntary sterilization for women and men in the public health system to a greater extent than the law itself. The most common incorrect interpretation of the law applied in some places refers to the criteria of “at least 25 years of age *or* having two living children.” In some places the word “*or*” is replaced by “*and*.” This adaptation is made because physicians explicitly state that very young women are being sterilized and rates of

regret are very high, although the literature does not fully support this hypothesis (Hardy et al. 1996, Vieira and Ford 1996). In other cases, the municipal regulation provides a higher age and a higher number of living children. In addition, some criteria that do not exist in the law are included, such as socio-economic condition and conjugal stability.

The family planning protocol in Curitiba specifically states that female sterilization is permitted for women at least 25 years of age who have two living children. In Curitiba, male sterilization is even more restrictive, as men must be at least 30 years of age, have three or more children, and have had no known genital disease. Additionally, the youngest child, for both women and men, must be at least one year of age. According to some health professionals, the basis for these restrictions is to establish priorities for selecting individuals for sterilization, since the number of surgeries performed monthly is determined by quotas, and are insufficient to address the high demand.

In São Paulo, although local regulation contains no explicit discrepancies with the law, implicit differences can be seen in the norms. The municipal health services in São Paulo use a ranking procedure to select and give priority to approvals for sterilization. Individuals under the age of 30 and who have fewer than three children are unable to acquire the minimum of five points needed for approval. The state services do not follow the same ranking procedure and there is no written protocol in effect but, according to the interviews, the rules of being 30 years old and having three or more children are applied in the state hospitals.

A municipal law has been in effect in Belo Horizonte since 1994, which is stricter than the federal law regarding the minimal age criterion. Men and women must be at least 30 years old in order to obtain approval for voluntary sterilization. The greatest difficulty in Belo Horizonte is the availability of hospital beds, which are needed before surgery can be scheduled.

As mentioned above, Recife, Cuiabá, and Palmas have no municipal regulations for voluntary sterilization, but the criteria followed for performing sterilization, at least in the discourse of health professionals, were those stated in the federal law, although these latter are sometimes misinterpreted and include criteria not found in the law, such as socio-economic status and conjugal stability. Finally, it is important to mention that during the fieldwork in Palmas, the municipal secretary of health had forbidden the practice of voluntary sterilization paid for by the Unified System, alleging that candidates to public office could possibly “trade off” surgeries for votes during election years.

Brief description of data collection and methodology

Strategy for Data Collection

The data used was taken from a survey carried out in collaboration with local, governmental and non-governmental organizations, and public health establishments located in six important cities, all state capitals (Palmas, in the Northern Region, Recife, in the Northeast, Belo Horizonte and São Paulo, in the Southeast, Curitiba, in the South, and Cuiabá, in the Central-West)⁵ during the year of 2000. The survey, detailed below, consisted of a follow-up on women (pregnant and non-pregnant) and men (all called users here) who had applied for sterilization, and interviews with health professionals, all based on structured questionnaires.

⁵ The cities (all state capitals) were selected on the basis of high prevalence rates of female sterilization and with the aim of obtaining municipalities in heterogeneous stages of implementation of the public health system.

The follow-up consisted of a first contact with the users and six monthly contacts with three separate groups⁶, 88 non-pregnant women, 76 pregnant women, and 71 men, who had requested voluntary sterilization at public health facilities. The sample was initially distributed into equal quotas (15 males, 30 females, 15 being pregnant and 15 non-pregnant) in each place studied. However, in some cities, especially Cuiabá and Recife, for males, and Belo Horizonte for pregnant women, the sample could not be completed following the period defined for the interviewees' first contact (four months after the beginning of the survey). In other cases, contact was lost too late to allow for substitution by other cases, especially in São Paulo. An extra difficulty was faced in making the first contact with pregnant women at some locations in Cuiabá. First, because the interviewers witnessed that several women had already been sterilized during c-sections⁷ and, second, because, instead of demanding surgery at outpatient clinics, some women request surgery at physicians' offices at the hospitals (see Table 9 for details about sample size).

Two types of health facilities were defined to serve as the initial local points of contact with users. One type is referred to here as a "hospital outpatient service," defined as a health establishment attached physically to hospital but managed independently. The second type also consists of an outpatient service, but located far from any hospital. One important feature of both these types of clinical services is that neither performs major surgeries. Therefore, women must be referred to a hospital for sterilization. The major difference, however, is that hospital outpatient services usually refer the patients to the hospital to which they are attached, for surgery, possibly thus decreasing bureaucratic difficulties and improving access to surgery. Male sterilization, on the other hand, can be performed in either of these types of clinic, since it can be performed as an outpatient medical procedure or as hospital surgery.

Table 9 - Number of interviews carried out in the research by category of interviewees

City and State	Pregnant Women	Non-Pregnant Women	Men	Outpatient Manager	Hospital Manager	Municipal and State Reproductive Health Coordinator
Palmas-TO	15	15	13	5	3	2
Recife-PE	15	15	9	5	5	2
Belo Horizonte-MG	9	16	14	5	5	2
São Paulo-SP	12	13	11	6	5	2
Curitiba-PR	15	16	15	5	5	2
Cuiabá-MT	10	13	9	5	5	2
Total	76	88	71	31	28	12

Source: Multi-centric Study on the Impact of the new Brazilian Legislation about Family Planning, 2000.

The outpatient clinics were chosen at random, with a total of five in each city, distributed into the two types of clinic described above, according to their availability in the city. The first three female and the first three male applicants for sterilization entering each of these clinics following the beginning of the survey were chosen to be interviewed, based on a structured questionnaire. After the initial contact, these interviewees were contacted monthly (in person or by telephone) for the next six months, to verify whether the sterilization was

⁶ These are the figures for the final sample size.

⁷ Although we excluded the data from this analysis, we have applied the first and last contact questionnaires for four women just after the delivery followed by tubal ligation.

carried out or refused. When one of the former situations had occurred, a final face-to-face interview was scheduled.

Besides the follow-up on users, several interviews were carried out with health professionals, also based on structured questionnaires. After completing the quota for the first contact with the users, the top coordinator or manager of the clinic was interviewed, giving a total of 31 interviews. In addition, five structured interviews with hospital managers were held in each of the cities studied, except Palmas, capital of the State of Tocantins, which has only three hospitals (Table 9).

Data Analysis Methods

The approach used to detect differences that might lead certain patients to have greater likelihood of obtaining sterilization in the public health sector consisted mainly of bivariate distributions on selected variables, due to the small sample size. We also focused on investigating whether any combination of the main criteria stated in the law, i.e., age and number of living children, was or was not a constraint in the occurrence of sterilization.

The waiting period for sterilization was analyzed by survival analysis, based on the life table approach, in order to detect possible characteristics that might differentiate groups in their probability of obtaining sterilization. Censored cases (0) are defined as those in which the individual failed to obtain sterilization after the period of observation or dropped out of the sample, and cases (1) where the individual was sterilized within this period. In this case, the probability of "survival" is assumed as the probability of not obtaining sterilization, and failure is associated with the probability of obtaining it. The model was estimated by using the *lifetest* procedure in SAS (1999-2000).

As for the interviews with the health professionals, in this paper we analyze only those aspects related to their knowledge of the criteria set down by the law in regard to female and male sterilization. Finally, in order to obtain enough cases for the analysis, the data was aggregated, without differentiating tendencies among the cities.

The Sample

The data in Table 10 show that 67.11, 71.9 and 70.4 percent, respectively, of pregnant women, non-pregnant women, and men who requested surgical sterilization did so by first contacting outpatient services affiliated with the Unified Health System (SUS). The rest of the demand was addressed to outpatient services annexed to hospitals.

As can be seen in Table 10, the great majority of pregnant women who were seeking sterilization at the public health system were between ages 25 and 34, married, and Catholic. Regarding skin color, the sample is about half blacks and half not-blacks. They have low schooling levels and low monthly family *per capita* income. Most had not completed 8 years of schooling and were earning less than R\$ 81.00 (US\$ 35.00) per month.

The sample of non-pregnant women was comprised of 53.4 percent Afro-Brazilians, and 55.7 percent were in the 26-34 age bracket; 77.3 percent were married or living in stable unions, 72.7 percent had three or more living children, 62.9 percent declared they were Catholic, and 54.5 percent had not completed the fourth grade of primary school.

The majority of the men were also Afro-Brazilian (52.1 percent), but older, 52.2 percent being age 35 or older. Almost all were married or in stable unions (95.6 percent), 57.7 percent had three or more children, 66.2 percent had completed the fourth grade, and 56.3 percent were Catholic.

It should be noted that the men had a higher *per capita* monthly family income than the women, with 74.6 percent being in the highest bracket of over R\$ 81 (US\$ 35), a level attained by 43.4 percent of the pregnant women and only 32.9 percent of the non-pregnant

women. In addition, and related to the previous observation, the men in the sample of individuals seeking voluntary sterilization in the public health system have more years of education and are older than both pregnant and non-pregnant women.

This particular sample also indicates that about 20 percent of the pregnant women have one child, or no children, very different from the parity between non-pregnant women and men. This fact was to be expected since, as mentioned above, women in Brazil are often sterilized during deliveries by caesarian section. Hence, during the pregnancy of the second child, women usually request for sterilization during delivery, and several times are able to obtain it, even though this is illegal.

Table 10 – Sample composition of females and males demanding sterilization, according to socio-demographic variables

Variables	Pregnant Women (76)	Non-pregnant Women (88)	Male (71)
Age (in years)			
< = 24	18.42	15.91	4.23
25 – 34	69.74	63.64	43.66
35 or older	11.84	20.45	52.11
Total	100.00	100.00	100.00
Race			
White	35.53	37.5	45.1
Black	55.26	53.4	50.7
Other	9.21	9.1	4.2
Total	100.00	100.0	100.0
Years of schooling			
0-3	11.84	12.5	7.0
4-7	48.68	42.0	26.8
8 or more	39.47	45.5	66.2
Total	100.00	100.0	100.0
Marital Status			
Married	92.1	77.3	95.8
Unmarried	7.89	22.7	4.2
Total	100.00	100.0	100.0
Per capita Monthly Family Income (in Reais)			
< = 40	22.37	39.8	9.9
41-80	34.21	27.3	15.5
81 or over	43.42	32.9	74.6
Total	100.00	100.0	100.0
Religion			
Catholic	60.53	62.5	56.3
Other	39.47	37.5	43.7
Total	100.00	100.0	100.0
Number of Live Births			
< = 1	19.74	2.27	9.86
2 or more	80.26	97.73	90.14
Total	100.00	100.00	100.00
Type of Health Service			
Outpatient Service	67.11	71.9	70.4
Hospital Outpatient Service	32.89	28.1	29.6
Total	100.00	100.0	100.0

Some differences can be seen in this composition, by age and by number of children born alive, of the samples of pregnant women, non-pregnant women, and men who requested surgical sterilization, as shown in Tables 11a, 11b, and 11c, respectively. The women between the ages of 25 and 34 with two or more children predominate in the women's samples (59.2% for pregnant and 62.5% for non-pregnant), whereas the most frequent segment of men, corresponding to 46.5% of the total, were age 35 or older and had two or more children. It can also be seen, once again, that more pregnant women seek sterilization than those in the other two groups, regardless of age.

Table 11 – Composition of the individuals who demand sterilization, according to age and number of children, by sex.

11a) Pregnant Women			
Age	No. of Children		
	<= 1	2 or +	Total
Up to 24	5.26	13.16	-
25-34	10.53	59.21	-
35 or more	3.95	7.89	-
Total	--	-	100.0 (76)

11b) Non-pregnant Women				11c) Men			
Age	No. of Children			Age	No. of Children		
	<= 1	2 or +	Total		<= 1	2 or +	Total
Up to 24	0.0	15.9	-	Up to 24	0.0	4.2	-
25-34	1.1	62.5	-	25-34	4.2	39.4	-
35 or more	1.0	19.3	-	35 or more	5.6	46.5	-
Total	--	-	100.0 (88)	Total	-	-	100.0 (71)

Another interesting fact gathered during the first interviews with the applicants referred to their current use of contraceptive methods,⁸ since almost one fourth of all the women did not use any method to avoid conception (Table 12). The pill was being taken by 30.7 percent of the women, followed by condoms used by their partners (25.0 percent). Injectable contraceptives were in third place, with 10.2 percent. The major users of oral contraceptive in this sample were pregnant women (55.3 percent).

The proportion of men who were using no contraceptive method was even higher (36.6 percent), reaching 39.5 percent if one includes two cases of men whose partners had had tubal ligations. The condom is the most frequently used method, with 32.4 percent, followed by the pill used by the men's partners (23.9 percent). It should also be noted that 98.7 percent of the respondents were aware that tubal ligations might be irreversible.

⁸ For pregnant women this data refers to contraceptive method used before the current pregnancy.

Table 12– Use of contraceptives by females and males at first interview

Method	Pregnant Women*	Non-pregnant Women	Men
Oral contraceptive	55.3	30.7	23.9
Condom	6.6	25.0	32.4
Injectable	6.6	10.2	-
IUD	3.9	6.8	-
Ogino Knauss	0.0	2.3	-
Coitus Interruptus	0.0	1.1	4.2
Others	1.3	0.0	-
None	26.3	23.9	39.5
Total	100.0	100.0	100.0

* Method used before current pregnancy

Results

Fulfilled Demands

After a follow-up of approximately six months, only 25.8 percent of the non-pregnant women who applied for sterilization had been successful. Among males this percentage reached 31.0 percent (Table 13). The highest percentage was among pregnant women, 48.7 percent of whom managed to obtain sterilization via SUS. These proportions were higher for those who had entered the Public Health System through hospital outpatient services: 56.0 percent for pregnant, 36.0 percent for non-pregnant, and 38.1 percent for males. One reason for this difference may be the fact that entering through other outpatient services involves more bureaucracy.

Table 13 also shows that the chances of non-pregnant females being sterilized do not vary according to age, race, years of schooling, income, marital status, number of live births, or religion. There are basically no differences in the chances of pregnant women obtaining sterilization in relation these variables, except for whites and married, who have better chances. For males, however, the situation is quite different. The percentage of sterilized men is higher among whites, among unmarried and older men, among those with less schooling, those with higher income, and those with two or more children.

Table 13 – Percentage of sterilized females and males according to socio-demographic variables

Variables	Categories	% of sterilized		
		Pregnant Women	Non-pregnant Women	Men
Age (in years)	< = 24	35.7	21.4	0.0
	25 – 34	49.1	26.8	22.6
	35 or older	66.7	27.8	40.5
Race	White	62.0	21.2	46.9
	Non-White	40.8	29.1	17.9
Years of schooling	0-3	44.4	27.3	38.3
	4-7	48.6	24.3	15.8
	8 or more	50.0	27.5	20.0
Marital Status	Married	51.8	26.5	26.9
	Unmarried	44.2	25.0	33.3
Per capita Monthly Family Income (in Reais)	< = 40	47.1	25.7	0.0
	41-80	50.0	29.2	27.3
	81 or over	48.5	24.1	35.8
Religion	Catholic	45.6	25.5	32.5
	Other	53.3	27.3	29.0
Number of Live Births	< = 1	53.3	-	14.3
	2 or more	47.5	25.6	32.8
Type of Health Service	Outpatient Service	45.1	22.2	28.0
	Hospital Outpatient Service	56.0	36.0	38.1
Total		48.7	26.1	31.0

When age and number of live births are combined, we can observe that having more children and being older gives men and pregnant women better chances of obtaining sterilization, although the demand for sterilization among persons with one or no children is low, even among the oldest. It should be noted that very few users under age 25 were able to access sterilization at SUS. Finally, the best chances of being sterilized occur for pregnant women and for men with two or more children and age 35 or older.

Counseling

Pursuant to Sole Paragraph of Article 14 of Law No. 9263, of January 1996, "only those institutions which offer all options of means and methods of reversible contraception may be authorized to perform surgical sterilization." In this regard, men and women who applied for surgical sterilization were asked if they had participated in counseling sessions which informed all the types of methods available for avoiding pregnancy before the final decision was made to terminate their reproductive cycle. The results (Table 15) show that 73.0 percent of the women and 70.4 percent of the men responded affirmatively. However, only half of the pregnant women had received counseling on contraceptive methods. This may be so because some of the pregnant women entered the system through physicians' offices and not from the outpatient services, as did all males and non-pregnant females.

Table 14 – Demand for sterilization and number (percentage) of individuals sterilized, according to age and number of live births, by sex

14a) Pregnant Women

Age (in years)	N. of Live Births			
	< = 1		2or more	
	Demand	Sterilized	Demand	Sterilized
< = 24	4	2	10	3 (30.0%)
25 – 34	8	4	45	22 (48.9%)
35 e +	3	2	6	4 (66.7%)

14b) – Men

Age (in years)	N. of Live Births			
	< = 1		2or more	
	Demand	Sterilized	Demand	Sterilized
< = 24	0	0	3	0
25 – 34	3	0	28	7(25.0%)
35 e +	4	1	33	14 (42.4%)

14c) – Women

Age (in years)	N. of Live Births			
	< = 1		2or more	
	Demand	Sterilized	Demand	Sterilized
< = 24	0	1	14	3 (21.4%)
25 – 34	1	1	55	15 (27.3%)
35 e +	1	1	17	4 (23.5%)

These findings may be reflecting the fact that the great majority (97.0 percent) of the directors of hospitals and outpatient services, which establishments are the entrance gates to the Unified Health System for requesting surgical sterilization in this study, expressed agreement with this requirement of the law. It should also be stressed that there was no statistical difference between the percentages of who obtained sterilization among those who received counseling and those who did not. In fact, these percentiles for the non-pregnant women were 26.1 percent and 33.3 percent, respectively, of the sterilizations performed. For the men, results were 29.4 percent and 31.2 percent; and for pregnant women they were 52.6 and 46.4 percent.

Table 15 – Exposure to all contraceptive methods (by counseling) to those applying for sterilization, by sex

Counseling	Pregnant Women (76)	Non-pregnant Women (88)	Men (71)
Yes	50.0	73.9	71.8
No	36.8	13.6	22.5
No Answer	13.2	12.5	5.6
Total	100.0	100.0	100.0

Safe sex after sterilization

Respondents already sterilized were asked how they intend to guarantee safe sexual practices that will prevent STD and HIV/AIDS. The answers to this question can be found in Table 16, where six out of ten of the vasectomized men gave replies based on the fidelity of their wives or partners, without describing their own behavior in terms of safe sex in cases of occasional relationships. Women (pregnant and not) are more attentive than men regarding the use of condoms, but in this case as well, there is a high percentage that will trust their partners.

These findings show that family planning services, in association with STD/Aids prevention programs, must take into account the vulnerability of sterilized persons, who receive very limited information and follow-up after surgery.

Table 16 – Sexual behavior among sterilized males and females to prevent STD and HIV/AIDS

Intended behavior	Pregnant Women (37)	Non-pregnant Women (23)	Men (22)
Use condoms	37.8	43.5	31.8
Do nothing because trust stable partner	37.8	39.1	59.1
Do not know	8.1	13.0	0.0
Did not answer	16.2	4.3	9.1
Total	100.0	100.0	100.0

Reproductive rights and compliance with the law

The interviews held with directors of hospitals and clinics as to the suitability or not of the criteria set down by Law 9263 for performing voluntary sterilizations varied according to the requirement being judged (Table 17). For the hospital directors, the criterion of minimum age was considered the most inadequate, followed by the minimum number of children born alive. According to them, people should be older or have had more children.

Especially the clinic directors considered the 60-day waiting period between first application and surgery too long. State and municipal health managers also endorsed the objection to the minimum age of 25.

Table 17 - Percentage of unsuitability expressed by persons responsible for reproductive health at state and municipal level, and directors of hospitals and clinics

Criteria set down by Law 9263 for obtaining voluntary sterilization	State Managers	Municipal Managers	Hospital Directors	Clinic Directors
Age 25	50	67	71	34
Two living children	17	33	46	15
Spouse's consent	50	33	17	18
Court authorization	33	33	18	22
Not simultaneous with child birth /miscarriage/abortion or puerperal period	16	33	39	26
60-day waiting period	17	17	29	42
Counseling service	0	0	3	3
Informed consent	0	0	3	3
Risk of life to mother and fetus	0	0	3	3
Number of cases	6	6	28	31

This fact helps explain the low proportion of surgical sterilizations, especially of non-pregnant women and men, registered in the survey after six months of follow-up. On the one hand, the law brought some standardization in practices and halted abuse, within a legitimate perspective of reproductive rights. On the other hand, the conservative reactions of health professionals, allied to SUS bureaucracy, are making the exercise of this right more difficult.

When one notes that only 66.4 percent of the applicants for sterilization were aware of their right to be sterilized free of charge by the Public Health System, according to the criteria established by law, one can easily imagine the margin of maneuver the health professionals have.

The reasons alleged by women, pregnant and not, and men for not having been sterilized after an average waiting period of 6 months are shown on Table 18, and reinforce the observations made above. In fact, the great majority encountered difficulties in the Public Health System (47.2 percent of pregnant women, 54.8 percent of the non-pregnant women and 41.7 percent of the men).

Those who had applied for sterilization a SUS and had not been successful were asked why this was the case. The most frequent answers given by the pregnant women were:

- Bureaucracy of the system, too many papers to go after and sign
- The user was too young
- Shortage of SUS's financial resources (few surgeries each month)
- Risk of life to undergo surgery

Table 18 – Alleged reasons for not having been sterilized, by sex

Alleged Reasons	Not Sterilized		
	Pregnant Women (36)*	Non-pregnant Women (62)**	Men (48)***
Couldn't get sterilization at SUS	47.2	54.8	41.7
On the waiting list at SUS	19.4	12.9	20.8
Gave up	11.1	14.5	25.0
Got pregnant	0.0	8.1	-
Other reasons	22.2	9.6	12.5
Total	100.0	100.0	100.0

(*) Two of the 38 women not sterilized did not respond the last interview.
 (**) Four of the 66 women not sterilized failed to respond.
 (***) One of the 49 men not sterilized failed to respond.

The difficulties alleged by the non-pregnant women, in which the first two explanations accounted for 76.4 percent of the difficulties mentioned, include:

- Hard to apply for, not enough doctors, ill will
- Bureaucracy of the system causes long waiting periods
- SUS does not respect the criterion of age or number of living children
- Is a single woman, no one to sign for her
- Doctor said she would regret it later
- Doctor at the Health System wanted to charge the patient
- Doctor did not recommend because the patient has high blood pressure or some other health problem

Although only four pregnant women decided not to go through with the surgery, the reasons they gave are illustrative of the problems:

- Delay in getting surgery (waiting to have the baby and the two more months)
- The doctor would perform the tubal ligation only if there was risk at delivery
- Because the woman is breastfeeding and have no one to take care of the baby
- Has diabetes and the husband will get a vasectomy

The reasons the non-pregnant women mentioned for giving up were:

- Fear of regretting it later
- Decided to use an IUD
- Decided she was too young
- Entered menopause
- Husband wouldn't sign the release papers
- Had an accident
- Decided to go to a private hospital

"Other reasons" included are not having an ID Card, not yet having a birth certificate for the last child, separation, lost the baby, the politician who was helping lost the election, lack of documentation during delivery, and having succeeded in getting it somewhere else.

The men who were unable to obtain a vasectomy from the Public Health System gave the following reasons:

- Bureaucracy at the public health center, long lines, etc.
- The Health System does not respect the criterion of age or the number of living children
- Doctor said I might regret it
- SUS doesn't sterilize free of charge
- Doctor did not recommend because I have high cholesterol
- Surgeries were temporarily cancelled

The first two accounted for 80.0 percent of the complaints regarding the service received from the Public Health System.

The main reasons that led men to decide against having a vasectomy were the following:

- Regretting the decision
- Wife got a tubal ligation
- Wife uses other method
- Decided he was too young
- Didn't go on the scheduled date
- Health problems
- Was too old

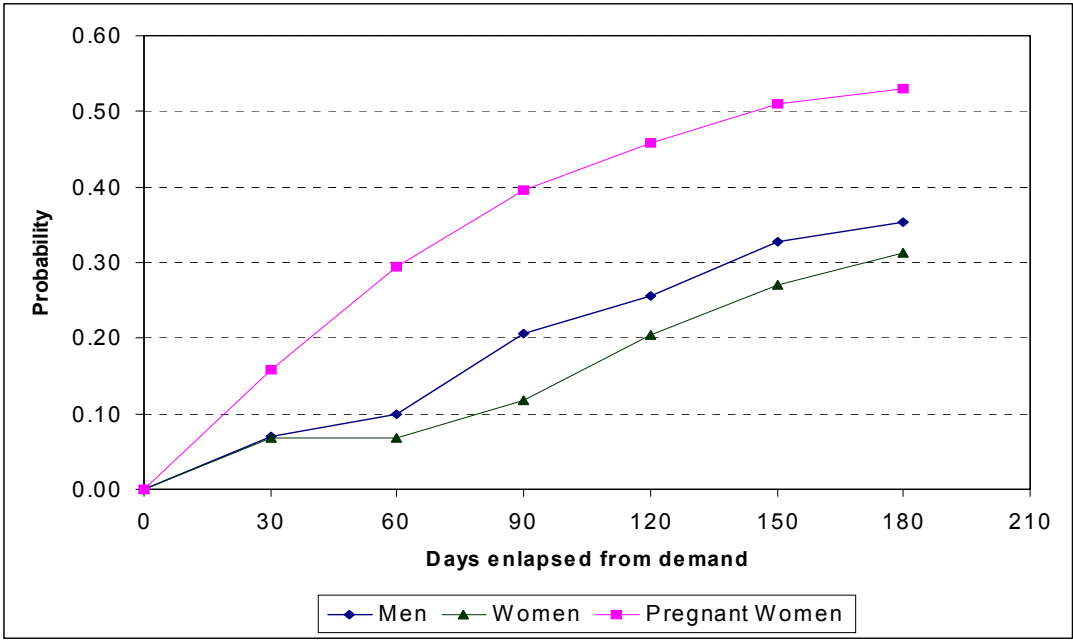
The Waiting Period for Sterilization

Models of life tables of the waiting time for sterilization were compared with all the variables shown in Table 1. The majority shows that there were no significant statistical differences in the waiting period for obtaining sterilization among the categories of these variables. For example, there are no significant differences between whites and blacks on time elapsed between application and surgery. This is true for all age groups, educational levels, marital status, per capita income, religion, and number of live births.

Comparing the three strata of interviewees, there are statistical significance differences in the waiting time for sterilization (Table A in appendix II), although the difference is due to

the very distinct behavior of pregnant women, in contrast to the others (Graph 1). We can observe that pregnant women have better chances of obtaining sterilization along the entire period of observation. Men show higher probabilities of obtaining sterilization than non-pregnant women, although the time elapsed between application and performance of the surgery presents no major variations (not statistically significant) over the six-month period comparing the curve for these two groups.

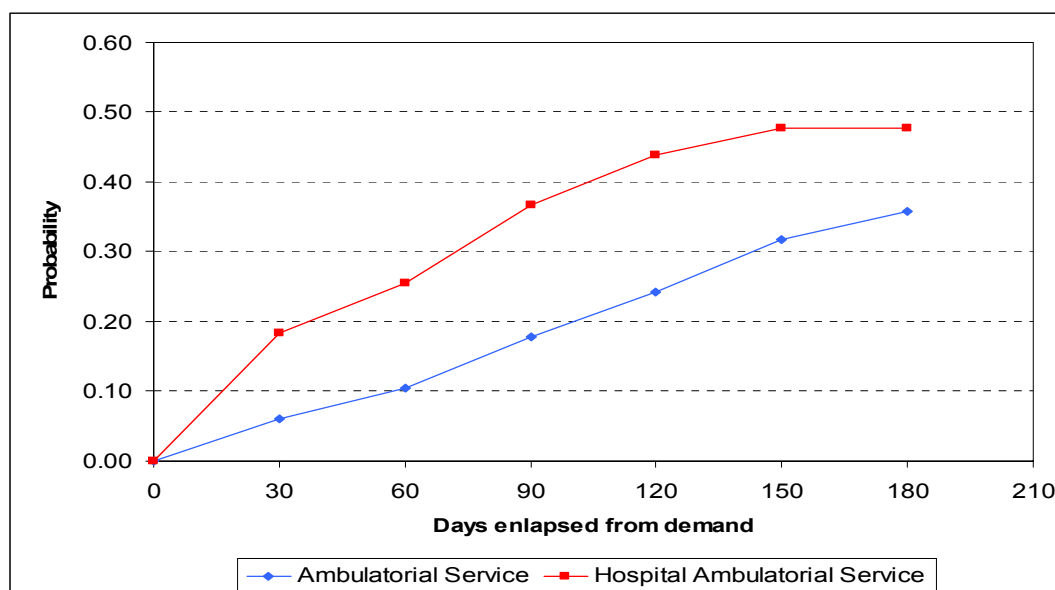
Graph 1 - Probability of obtaining voluntary sterilization in public health facilities (SUS) according to user category - data gathered from a follow-up of approximately six months



It can be seen that that even during the first month after demand there is a probability for all users to obtain sterilization, but it is greater for pregnant women, whereas during the second month, no non-pregnant women obtained sterilization, although some men and several pregnant women were successful. This may illustrate two different aspects of the legislation: one is that the law has not been strictly complied with for all users, some obtaining sterilization very shortly after requesting; secondly, it seems apparent that the law does not apply as strictly to pregnant women as it does to men, and to men less strictly as to non-pregnant women.

Different types of health services showed broad and significant differences in the waiting period for sterilization (at 99 percent level of confidence by the Wilcoxon Test and by the Log-Rank Test: Appendix II Table B). Graph 2 shows that users who applied for sterilization at a hospital-related outpatient service had to wait much less time for their surgery than those who went to an outpatient clinic not located near a hospital. Both types of outpatient clinics sterilized some users before the 60-day waiting period, but this occurred much more frequently at hospital-related outpatient services. As was mentioned at the beginning of this paper, the public health system in some cities is still not organized in the reproductive area. It is therefore more likely that waiting periods of less than 60 days between application and sterilization occur in such places.

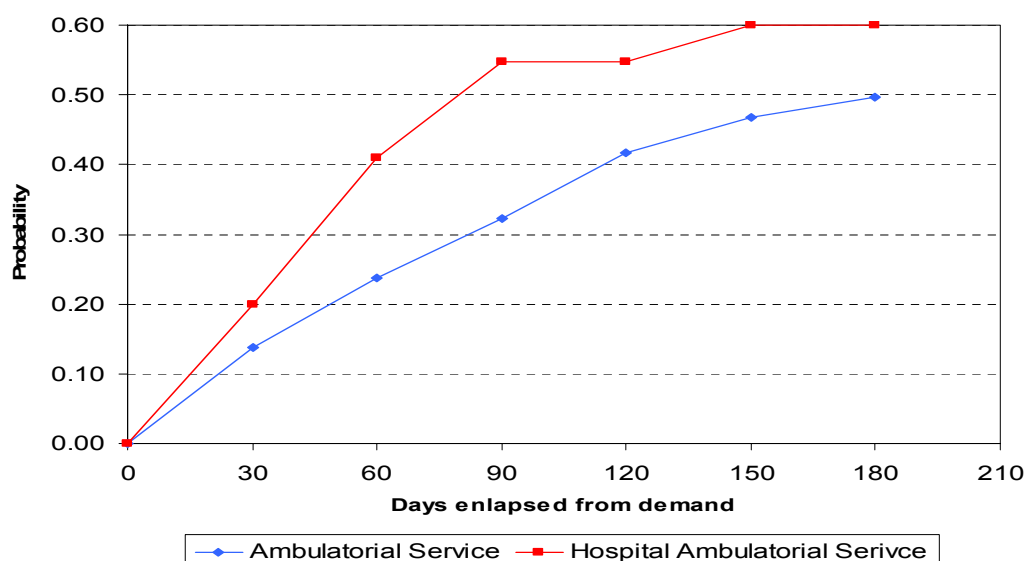
Graph 2 - Probability of obtaining voluntary sterilization at public health facilities (SUS) during a follow-up of approximately six months, according to type of health facility



Another important difference between these two types of service is that, besides waiting much less time than those who go to independent outpatient clinics, individuals who seek sterilization at hospital-related outpatient services also have much better chances of success. This may result in a great disadvantage to persons living in municipalities where no hospitals are available, meaning the majority of the municipalities in the country.

Finally, a very important difference can be seen in the lengths of waiting period to obtain female and male sterilizations in the two types of health services (Graphs 3, 4 and 5) if we observe each interview strata separately. The model for sterilization among non-pregnant women shows a statistically significant difference between the two types of service (at 98 percent level of confidence by the Wilcoxon Test and 94 percent by the Log-Rank Test: Appendix II, Table D, Graph 4), whereas male sterilization and sterilization for pregnant women show no such broad differences. On one hand, this may be because vasectomy is a simpler medical procedure and need not necessarily be performed in a hospital. On the other hand, these results may indicate that distortions in the system still persist where sterilizations are still performed during c-sections, sometimes being an unnecessary surgery.

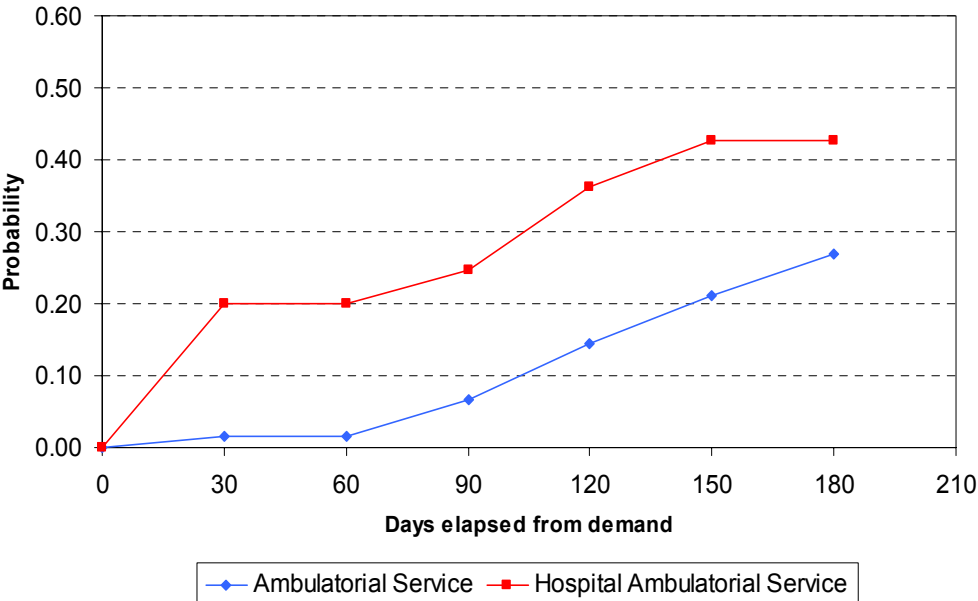
Graph 3 - Probability of obtaining female voluntary sterilization for pregnant women at public health facilities (SUS) during a follow-up of approximately six months, according to type of health facility



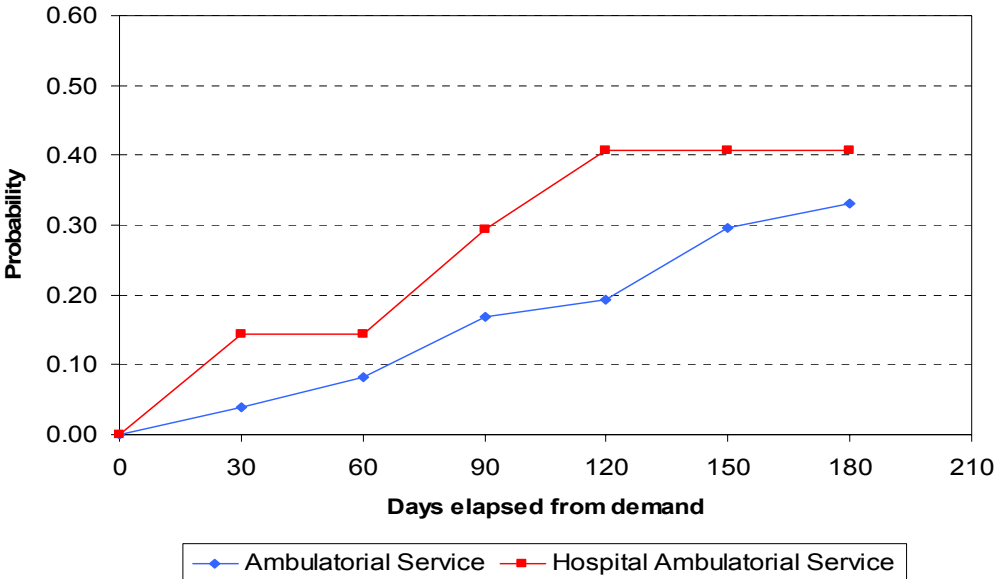
This result indicates once again that there are important gender-related factors regarding voluntary sterilization that must be taken into account when organizing a health system, if better quality and access are to be provided to users.

Additionally, it is important to mention that the long waiting period and the low proportion of non-pregnant women who are successful in obtaining sterilization indicates the high risk of undesired pregnancies (as was the case of five women during this study), in view of the considerable numbers of respondents who were not using any method at all when they applied for sterilization. The virtual daily expectation that applicants will be called in for surgery may be a cause for many of them to constantly postpone the option for some other method, thus making them even more vulnerable to pregnancy than the general population.

Graph 4 - Probability of obtaining female voluntary sterilization for non-pregnant women at public health facilities (SUS) during a follow-up of approximately six months, according to type of health facility



Graph 5 - Probability of obtaining voluntary male sterilization at public health facilities (SUS) during a follow-up of approximately six months, according to type of health facility



Final Remarks

The Legislation and Reproductive Rights

As is clear in the situation described above, female sterilization appeared as the most common means of contraception, prior to Law 9263, a fact that rated Brazil among the world's highest rates of use of this method. Due to legal restrictions, most of such sterilizations took place on the occasion of a cesarean section, a fact that consequently contributed to an astonishing growth of this practice.

In order to have a tubal ligation performed by the public health system, women were required either to undergo an unnecessary caesarean section or to have the procedure recorded under another code, such as salpingectomy. Since both vasectomy and salpingectomy may be recommended for medical indications other than sterilization, there is insufficient information available to indicate in what proportion these cases were used as a means to conceal reality or to deceive the legislation in effect.

The terms of the law resulted from a long and detailed debate between women's movements and public health organs, especially the Brazilian Health Ministry. As a result, the Health Ministry eventually began regulating this procedure and reducing abuses, based on a legitimate perspective of respect for women's and men's reproductive rights. Like any law, its capillarity course down through the public health system to the population in general takes time, and the experience of its future application may lead to alterations that will bring it more closely in line with the population's reproductive needs.

Nonetheless, up to the time of the survey, it was still possible to discern a continuation of the practice of female sterilization during c-sections at some research sites, clearly showing that the common practice carried out for many years is preventing the correct application of the new legislation on family planning, especially, regarding the practice of female sterilization, as the results for the follow-up with pregnant women have shown.

Additionally, most of the other criteria provided by the new legislation, especially concerning age, number of children, and counseling, are not being fully complied with for any of the three groups (men, non-pregnant women, and pregnant women) requesting voluntary sterilization from the public health system.

Gender Asymmetry

The well-known data in Brazil concerning the prevalence of tubal ligation and vasectomy are eloquent regarding the role of the women, especially those in stable unions, on regulating fertility and having final control over reproduction.

The most recent data available (PNDS-96) show that only 2.4 percent of the married men (or those in stable unions) were vasectomized, while 40.3 percent of the women were sterilized. Additionally, the data show that female sterilization was more widely known by the men (87.7 percent) than vasectomy itself (72.3 percent).

Although less frequent, and illegal as a means for sterilization before 1997, vasectomy was already available as a procedure paid for by SUS since 1992. The simple fact of the existence of the code before 1998 indicates the inconsistency of the health system, which paid for male but not female sterilization before legalization.

The present study, whose preliminary results are analyzed here, allow one to note that some gender asymmetry still exists. The following facts are evidence of this assertion:

- ✓ When the decision for sterilization is made, men's demands have better chances of being successful, unless the woman is pregnant.

- ✓ The non-rigorous observance by the public health system of the minimum 60-day waiting period between application and surgery, as provided in the law, favors the men more than the non-pregnant women, since a higher percentage of men were able to be sterilized before the full waiting period was completed.
- ✓ More men than women who gave up waiting for sterilization stated that their motive was the fact that their partner or wife had been sterilized during the period of the study.
- ✓ Among all individuals who were sterilized, more women than men showed concern with safe sex, regarding the prevention of SDT/AIDS.
- ✓ Controlling for a distortion in the system, where women undergo caesarean sections in order to obtain sterilization, the fact that a vasectomy can be an outpatient medical procedure performed at health centers, results in a shorter waiting period between demand and surgery for men than for non-pregnant women, whose tubal ligation must be performed in a hospital.

Federal Decree N. 144 of November 1997 normatized the practice of female and male voluntary sterilization, making it legitimate among reproductive rights. However, this study clearly shows that both the conservative reaction of health professionals and the typical complex bureaucracy of the Public Health System, as a whole, is hindering the exercise of women's and men's reproductive rights.

Acknowledgment

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Appendix I

Art. 10 - Voluntary sterilization is allowed only in the following situations:

I - Men and women with full civil capacity at least of twenty-five years of age or having at least two living children, following observation of at least sixty days between the manifestation of will and the surgical act, during which period the interested person shall be provided with access to a fertility regulation service, including multidisciplinary group advice which shall seek to discourage unduly early sterilization; II – Present or future risk of life or health, stated in a written report and signed by two doctors.

Paragraph 1 Sterilization may only be performed upon presentation of a signed and authenticated document indicating manifestation of will, after information has been provided regarding the risks of the surgery, possible side effects, difficulty of reversion, and the existing reversible contraception options.

Paragraph 2 - Surgical sterilization may not be performed during periods of childbirth or abortion, except in cases of proven need, due to previous successive cesarean sections.

Paragraph 3 - The manifestation of will referred to in Paragraph 1 will be invalid if expressed during alterations in the capacity for discernment due to consumption of psychoactive substances, altered emotional states, or temporary or permanent mental incapacity.

Paragraph 4 - Surgical sterilization as a contraceptive method may only be performed through tubal ligation, vasectomy or some other scientifically accepted method. Hysterectomy or ooforectomy may not be performed.

Paragraph 5 - In the case of married couples, sterilization may only be performed with the spouse's express consent.

Paragraph 6 - Surgical sterilization on totally disabled persons may only be performed upon judicial authorization, regulated pursuant to law.

Art. 11 – The Central Office of the Unified health System must be notified of all surgical sterilizations.

Art. 12 – There may be no individual or collective induction or instigation to the practice of surgical sterilization.

Art. 13 – There may be no demand for a certificate of sterilization or a pregnancy test, for any purpose.

Art. 14 – It is the duty of the Authorities of the Unified Health System to maintain its level of competence and attributions, and to register, inspect, and control the institutions and services that perform activities and research in the area of family planning.

Sole Paragraph - Surgical sterilization may only be performed at those institutions which offer the means and reversible contraception methods.

Appendix II

Test of equality over strata

a) By type of interviewee

Test	Chi	DF	Pr >Chi
Log Rank	127,928	2	0.0017
Wilcoxon	165,056	2	0.0003
-2Log (LR)	115,716	2	0.0031

b) By Type of Health service

Test	Chi	DF	Pr >Chi
Log Rank	57,072	1	0.0169
Wilcoxon	85,430	1	0.0035
-2Log (LR)	55,318	1	0.0187

c) Pregnant Women by Type of Health Service

Test	Chi	DF	Pr >Chi
Log Rank	13,436	1	0.2464
Wilcoxon	18,342	1	0.1756
-2Log (LR)	12,220	1	0.269

d) Women by Type of Health service

Test	Chi	DF	Pr >Chi
Log Rank	3.4131	1	0.0647
Wilcoxon	5.8992	1	0.0151
-2Log (LR)	3.1192	1	0.0774

e) Men by Type of Health Service

Test	Chi	DF	Pr >Chi
Log Rank	0.8824	1	0.3476
Wilcoxon	1.3445	1	0.2462
-2Log (LR)	0.8938	1	0.3445