https://doi.org/10.46551/epp2024v12n0210

Economia e Políticas Públicas
Revista Eletrônica de Economia

Vol.12, n.2, jul./dez.2024
ISSN: 2318-647X (online)

https://www.periodicos.unimontes.br/index.php/economiaepoliticaspublicas

Descriminalização do aborto no Brasil: custos estimados para o Sistema Único de Saúde (SUS)

Decriminalization of abortion in Brazil: estimated costs for the Unified Health System (SUS)

Despenalización del aborto en Brasil: costos estimados para el Sistema Único de Salud (SUS)

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Resumo: No Brasil, o aborto a pedido da mulher é considerado crime, sendo permitido apenas em casos de estupro, risco de morte materna ou feto anencéfalo. No entanto, estimativas do Ministério da Saúde apontam para cerca de um milhão de procedimentos ilegais por ano no Brasil, o que demonstra a ineficácia de sua criminalização. Diante da possibilidade de o Supremo Tribunal Federal (STF) revogar os artigos que criminalizam o aborto no Código Penal, este trabalho estimou em US$ 102,8 milhões por ano os gastos que o Sistema Único de Saúde (SUS) teria caso o aborto fosse descriminalizado e oferecido gratuitamente. Esse valor representa uma redução de aproximadamente US$ 90 milhões por ano na perda monetária de manter o aborto ilegal no país.

Palavras-chave: aborto, custo do aborto, saúde pública, Sistema Único de Saúde (SUS).

Abstract: In Brazil, abortion on demand of the woman is a crime, and the procedure is only allowed in cases of rape, risk of maternal death or anencephalic fetus. However, estimates by the Ministry of Health account for around one million illegal procedures per year in Brazil, which demonstrates the ineffectiveness of its criminalization. Faced with the possibility of the Brazilian Supreme Court (STF) to revoke the articles that criminalize abortion in the Penal

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Code, this work estimated at US$ 102.8 million per year the expenses that the Unified Health System (SUS) would have if abortion were decriminalized and offered free of charge. This value represents a reduction of approximately US$ 90 million per year in the monetary loss of keeping abortion illegal in the country.

Keywords: abortion, abortion cost, public health, Brazilian Unified Health System.

Resumen: Este artículo tiene como objetivo profundizar en las contribuciones de Michal Kalecki al desarrollo económico a través de su modelo seminal Departamental. Básicamente, busca responder a la siguiente pregunta: ¿Cómo la perspectiva teórica de Kalecki sobre el desarrollo económico mejora nuestra comprensión de la heterogeneidad estructural tal como la define la Comisión Económica para América Latina y el Caribe (CEPAL)? Además, argumentamos que las contribuciones de Kalecki al desarrollo económico, al mejorar nuestra comprensión de dicha heterogeneidad, identifican formas de superarla.

Palabras clave: aborto, costo del aborto, salud pública, Sistema Único de Salud (SUS).

Introduction

Defined by the World Health Organization (WHO, 2021) as “a common health intervention”, abortion is the process of interrupting the pregnancy of fetuses up to 20 weeks old, which can be spontaneous, when it happens naturally during pregnancy, or induced, when there is an externally intervention in order to terminate the pregnancy. Estimates indicate that 73 million abortions are induced annually in the world and 60% of unwanted pregnancies end in abortion, with almost half of the procedures (47%) being performed in an unsafe way, that is, representing a risk of maternal deaths and morbidities. (Bearak et al, 2020; Ganatra et al, 2017).

Among the total number of unsafe procedures, almost all of them (97%) are performed in developing countries, where the practice is generally considered illegal. In Latin America, 3 out of 4 abortions are unsafe (Ganatra et al, 2017). The consequences of this are physical and mental health losses for women and a greater workload and expenses for health systems, which are usually already overloaded, and must deal with helping victims of unsuccessful procedures. In the face of this reality, the WHO points out that safe and affordable abortion is a critical public health issue, in addition to being a basic human rights issue, especially in developing countries.

The WHO estimates that about 70,000 pregnancy-related deaths annually are caused by complications from infection, bleeding or intoxication by substances used to induce abortion.

It is also estimated that 5 million women suffer from physical and/or mental disorders because of complications resulting from the procedure (WHO, 2011; 2013). Studies mentioned by the WHO show that complications from unsafe abortions overwhelm healthcare systems, consuming a significant part of resources such as hospital beds, healthcare professionals, blood bags, medicines, and often surgical centers. In developing countries, where resources are limited for public services, this can compromise the provision of other health actions and services (WHO, 2011). The Organization estimates that, in developing countries, these hospitalizations reach about 7 million each year, with a cost of approximately US$ 553 million (WHO, 2021). In addition to health system costs, one must consider the economic costs of lost productivity due to morbidity related to unsafe procedures and the private cost of the abortion for women. Babigumira et al (2011) compared women who were discharged after post-abortion complications with other groups of women regarding economic and health outcomes and estimated these costs at US$ 92.4 and US$ 61.7 per abortion, respectively.

The regions of the world that have the most permissive laws regarding abortion are those that concentrate the most developed countries, such as Europe and North America, where seven out of ten countries authorize abortion at the request of the woman (Guillaume and Rossier, 2018). Those are the regions with the lowest incidence of unsafe abortion and abortion in general (Ganatra et al, 2017). Guttmacher Institute data show that, in the United States, the age group with the highest abortion rate right after its legalization in 1973 was the 18-19 age group, with about 33 abortions per 1000 women. In 2017, this rate was 13 (Maddow-Zimet and Kost, 2021). The same institute also showed that annual investments of US$ 10.60 per capita in low- and middle-income countries can prevent 76 million unwanted pregnancies, 26 million unsafe abortions and prevent the deaths of 186 thousand women and 1.7 million newborns (Sully et al., 2020). In France, the French Institute of Demographic Studies (INED) indicates that in 1976, one year after legalization, the rate of abortions performed per 1,000 women between 15 and 49 years old was 19.6. In 2017 the same rate was 14.4. INED also provides data on the parallel policy of family planning assistance. In 1973, 20.1% of French women aged between 18 and 44 did not use any type of contraceptive. This number dropped to 7.1% in 1978, three years after the new policies were implemented, and reached 2.3% in 2013.

According to the WHO, abortion itself is not a risk factor for women's lives, as it is a procedure of low technical complexity, meaning that the possibility of maternal death because of a safe abortion is rare. The procedure becomes a risk when performed by people without the necessary skills and/or in an environment without minimum medical standards (WHO, 1992). Such unsafe conditions are a consequence of the criminalization of abortion in several countries,

a practice that has already proven ineffective as rates of clandestine abortion remain high in these countries, with negative consequences for women's lives and health systems. On the other hand, it is possible to observe that in countries where the procedure is allowed by law and where there are policies that determine that the health system also provides professional follow-up that helps in family planning to prevent recurrences, the rate of unsafe abortions is drastically reduced, as well the rate of terminations of pregnancy in general. Although it seems a contradiction, the most effective way to reduce the abortion rate is to make it part of family planning public policies.

In agreement with the WHO, which defends safe and accessible abortion as a critical public health issue, in addition to being a basic human rights issue, this paper proposes to calculate the expenses of the Unified Health System (SUS) if abortion is decriminalized in Brazil and becomes part of the public health policy. It is important to emphasize that, as public policy, abortion is used as a last resort within a family planning policy, being distinct from contraceptive methods that, if used correctly, avoid the need for the procedure.

This document is divided as follows: the Brazilian situation will be presented in the next section, number 1. In section 2, the recommendations of the World Health Organization are presented as a reference, as well as Brazilian rules for the cases permitted by law. In chapter 3, calculations of public expenses are presented if abortion were legalized, considering the different types of procedure and material used. Estimates of societal spending on illegal abortion are also presented for comparison. The 4th and last part is dedicated to the final considerations, followed by the bibliography used.

Overview of abortion in Brazil

In Brazil, abortion is a crime by the Penal Code, Law nº 2.848 of December 7, 1940 (Brasil, 1940), with a penalty of one to three years in prison, for the woman, and one to four years in prison for anyone who assists her in the procedure. When the aforementioned Law was passed, 81 years ago, it determined that only in two situations the doctor who performed the procedure would be exempt from guilt: when the pregnancy endangered the life of the pregnant woman or in cases where the pregnancy was the result of rape.

In 2012, the Brazilian Supreme Court (STF) approved the therapeutic interruption of anencephalic fetus pregnancy (Brasil, 2012a). The matter was the result of a lawsuit presented to the STF by the National Confederation of Health Workers (CNTS) almost 10 years earlier, in 2004, and was stimulated by the fact that in Brazil there was no defined interpretation of

what to do in the event of being detected during prenatal care that the brain was not formed in the fetus, making the final decision up to each judge. The STF decision, however, did not decriminalize abortion or create exceptions to the Brazilian Penal Code, but included pregnancy with an anencephalic fetus in the list of cases when the doctor is not punished for performing the procedure in accordance with the Penal Code of 1940.

Thus, currently in Brazil the law guarantees the right to abortion in 3 cases:

1. risk to the pregnant woman's life;
2. pregnancy resulting from rape and
3. fetal anencephaly.

In the rest of the cases, the practice of abortion continues to be considered illegal and punishable. In the three cases permitted by law, the procedure must be offered free of charge by the Unified Health System (SUS), a public body linked to the Ministry of Health. However, it is known that even in these cases, women find it difficult to have access to the procedure (Madeiro and Diniz, 2016). In addition, except for cases in which the life of the pregnant woman is at risk, doctors may refuse to perform the abortion under the allegation that the practice would cause them deep emotional distress.

In the Brazilian political scenario, notably conservative on issues related to private life, the issue of legalizing abortion did not advance even during the presidential terms of the Workers' Party [Partido dos Trabalhadores (PT)], a self-declared left-wing party that is receptive to issues related to female reproductive rights. Former President Dilma Rousseff herself, who, in 2009, declared to the press that she was in favor of legalizing abortion (Gullo and Neves, 2009), went back on the subject during her presidential election campaign in 2010 (Trajano, 2010). Recently, a similar fact happened with Luiz Inácio Lula da Silva, when he was candidate for the presidency again for the Workers' Party, in 2022 (Globo, 2022). After negative repercussions when treating abortion as a public health issue and stating that "everyone should have the right to do it", the candidate went back and officially spoke out against the legalization of the procedure (Bertoni, 2022).

In this way, the path explored to advance the debate on the subject at the national level has been through the Brazilian Supreme Court (STF). Given the difficulty of including on the National Congress agenda bills favorable to the legalization of abortion, the Socialism and Freedom Party [Partido Socialismo e Liberdade (PSOL)] filed a lawsuit with the STF in 2017 for the repeal of the articles that make abortion illegal in the Brazilian Penal Code (Brasil, 2017). During the matter, in 2018, a public hearing was convened to discuss the topic, in which representatives of various health bodies, academic researchers linked to universities,

representatives of research institutes as well as organized civil society were present, both in favor or against the legalization. The matter is still pending in the STF, but since 2018 it has not re-entered the discussion agenda. Some of the documents presented at the public hearing and attached to the matter are used in this work.

The National Abortion Survey 2016 (Diniz; Medeiros and Madeiro, 2017), funded by the Ministry of Health and conducted by the University of Brasília, shows that, even though prohibited, the practice is common in Brazil. If, on the one hand, abortion rates are higher among women with low education and income, black and indigenous women, on the other hand, it is possible to affirm that abortion is performed by Brazilian women of all ages, social classes, marital status, religion, ethnicity, with children or not and in all regions of the country. The household survey, carried out in June 2016, was applied using the ballot-box technique, in which the confidentiality of responses is ensured, which tends to increase the rate of true responses. The results show that 13% of women between 18 and 39 years old have had at least one abortion in their lives, totaling about 4.7 million Brazilians. The study infers that for the year 2016, in the group of women aged 40 years, the rate of performing the procedure was 1 in 5.4 Brazilian women. Also, according to the authors' estimate, in 2015 there were approximately 503,000 abortions in Brazil.

In the study, the age group with the highest incidence of positive responses was 38 and 39 years old, age at which 19% of the women said they had already had an abortion. Considering the total number of responses, 48% of the procedures were performed through the ingestion of abortifacient drugs and about half of the women required hospitalization to complete the abortion, which indicates a serious public health problem in Brazil. The magnitude of the results also makes it clear that criminalization is ineffective in inhibiting the practice.

With the data from the aforementioned survey, the Ministry of Health estimated that in 2008 there were 953,787 voluntary interruptions of pregnancy in the female population aged 10 to 49 years. This value was 1,192,234 for the year 2017. For this estimate, the method proposed by the Alan Guttmacher Institute (AGI), which developed an estimate of the number of clandestine abortions in Latin America, was applied. The data were presented by the Ministry of Health (MS) in a report requested by the STF and attached to the judicial process to decriminalize abortion, currently in progress (Brasil, 2018).

In the MS document, corrections were also made in the estimates of hospital admissions resulting from unsafe abortion, considering the population that uses the Unified Health System (SUS) and Private Supplementary Health. Thus, 285,000 and 278,000 hospitalizations were estimated for the years 2008 and 2017, respectively, indicating a drop in the number of

hospitalizations in the period. According to the Ministry, this reduction was due to the increase in the supply of modern contraceptives and the wider use of abortifacient medication such as misoprostol, largely from the illegal market. Also, according to the report, of the total of 1,613,903 hospitalizations for voluntary interruption of pregnancy estimated between 2008 and 2017 in the SUS, 40,348 women had at least one serious complication. These serious complications, which represented a risk to the lives of these women, corresponded to a proportion of 2.5% of hospitalizations for abortion in the SUS in the period.

In Brazil, unsafe abortion is among the main causes of direct maternal death, ranking fourth, preceded by hypertension, hemorrhage and sepsis. The fact that the procedure is illegal in the country also discourages women from seeking medical assistance in case of emergencies and inhibits statements about the procedure during medical care, making diagnosis difficult and favoring health complications that can lead to death. Data from the Ministry of Health show that in 2016 one woman died every day as a result of unsafe abortion, mostly young black women with low education. In Uruguay, where abortion was decriminalized 10 years ago, the death rate related to clandestine abortions dropped from 40% in the early 2000s to 8% in 2015 (Briozzo et al, 2016). In Brazil, the Ministry of Health estimates that in 2017 more than 200,000 women were hospitalized in the SUS, at a cost of approximately US$10.2 million[2]. The total spent in the analyzed period, between 2008 and 2017, was US$97.2 million (Brasil, 2018). The document does not describe the methodology used, but it informs that the average cost of hospitalizations for termination of pregnancy with complications (near miss) for the entire period was 317% higher in relation to the cost of those that did not complicate.

Abortion as a public health policy

According to the WHO, abortion is a safe and non-complex intervention that can be effectively managed with medication or a surgical procedure, with rare complications when its safety guidelines are followed (WHO, 2013). Modern methods of abortion consist of surgical or medical procedures. Surgical methods are based on dilation of the cervix and evacuation of the uterine cavity by curettage or aspiration, usually performed using local or general anesthesia. However, dilation and curettage (D&C) is considered “obsolete” by the WHO, which recommends its replacement by aspiration and/or medical abortion (WHO, 2013). In

[2] For all prices, considering US$ 1,00 = R$ 5,00.

addition to surgical procedures, it is possible to induce abortion using only drugs, a method referred to as “medical abortion” (WHO, 2013).

For medical abortion, the medications recommended by the WHO are misoprostol, a prostaglandin (hormone) sold under the trade name Cytotec, and mifepristone, an antiprogestogen, known under the trade name RU486 (Guillaume and Rossier, 2018). These drugs can be safely and effectively administered in a health care facility or self-administered at home, with the proper information received from a trained health professional. This type of procedure, with minimal medical supervision, can significantly improve access, privacy, convenience, and acceptability of abortion without compromising safety or efficacy (Guillaume and Rossier, 2018).

The medical abortion with the use of misoprostol has expanded considerably since the late 1980s, particularly in countries where access to abortion is restricted. The drug was originally indicated for the treatment and prevention of gastric ulcer, but it is useful in obstetrics because it has a uterine tonic action and softens the cervix. Particularly in Brazil, misoprostol became popular due to its abortifacient properties after its arrival on the market in 1986, with sales tripling in two years (Costa, 1998). Faced with the fact that misoprostol started to be used more for abortion than to treat ulcers, the Brazilian government limited its sale from 1991, with restrictions of varying severity in different states – requirement of a medical prescription for sale in pharmacies or use restricted to hospitals or authorized places (Guillaume and Rossier, 2018). This reduced official sales of the drug, but also created a parallel market with inflated prices, keeping it as the main method of abortion in Brazil (Diniz and Medeiros, 2012).

The medicine also gained space in countries where abortion is legal. In those contexts where abortion is legal, medical abortion is replacing aspiration-based methods and is now the main method used. In some countries, such as France, medical abortion is under strict control by health professionals, requiring two medical consultations to obtain the medication, while in other countries the practice is less regulated (Guillaume and Rossier, 2018). Where abortion is legal and performed at the woman's request, they follow the WHO guidelines (WHO, 2022), which will be described at the end of this chapter and will serve as the basis for calculating costs for the Brazilian SUS. In the case of Brazil, although the procedure is not available at the woman's request, there are regulations and pricing for the procedure in the cases permitted by law. In these cases, WHO guidelines are also followed.

Legal abortion in Brazil: current norms

In a Technical Note entitled "Humanized care for abortion" published in 2011, the Ministry of Health determines the methods used for the procedure in Brazil, in cases permitted by law:

"During the first trimester of pregnancy, intrauterine aspiration (manual or electric), medical abortion and uterine curettage are considered acceptable methods. The order of choice for the different methods depends on the conditions of each service and the woman's preference, in addition to the necessary assessment of the risk-benefit of each procedure. In the second trimester, medical abortion is the method of choice, and may be complemented, after fetal expulsion, with uterine curettage or aspiration, according to the woman's clinical conditions" (Brasil, 2011, p. 34).

In the case of manual vacuum aspiration (MVA), the Technical Note determines that it should only be used in pregnancies of less than 12 weeks due to the uterine size, as there is a need for the uterine cervix to be close to the cannula so that the vacuum is transferred from the syringe into the uterine cavity. The document also points out that the method is recommended by the World Health Organization and the International Federation of Gynecology and Obstetrics (FIGO). About curettage, the Ministry of Health reports that the procedure is still used in Brazil but warns of the risk of accidents due to being an outdated method. Therefore, it should only be used in pregnancies greater than 12 weeks after fetal expulsion induced by misoprostol.

Regarding medical abortion, in 2012 the Ministry of Health published the Protocol for the Use of Misoprostol in Obstetrics "in technical language, aimed at health professionals in specialized services, to streamline procedures and care, which will certainly result in benefits women's health" (Brasil, 2012b, p. 2). Specifically in the case of abortion, the dosage indicated by the Protocol is as follows:

Uterine emptying in the 1st gestational trimester (legal abortion or missed abortion)

Misoprostol – 4 pills of 200 mcg (800 mcg), vaginally, every 12 hours (3 doses - 0, 12 and 24 hours), totaling 12 pills.

Uterine emptying in the 2nd gestational trimester (legal abortion or stillbirth)

From 13 to 17 weeks – Misoprostol 1 pill of 200 mcg, vaginally, every 6 hours (4 doses), totaling 4 pills.

From 18 to 26 weeks – Misoprostol 1 pill of 100 mcg, vaginally, every 6 hours (4 doses), totaling 4 pills.

Legal abortion in Brazil: current costs

In Brazil, the government standardizes the amounts paid for procedures with the SUS Procedures Table, available online through the SUS Procedures, Medications and OPM Table Management System (SIGTAP). The table details all outpatient and hospital services contracted from private and philanthropic providers with their respective amount paid by the Union. The value can be complemented by states and municipalities. The table stipulates the individual amount paid for two abortion-related procedures, both used in the case of incomplete abortion:

Post-abortion uterine evacuation by manual vacuum aspiration (MVA)

It consists of uterine emptying by intrauterine manual aspiration through a vacuum aspirator (double valve syringe) coupled to semi-flexible plastic cannulas of different thicknesses. Hospital Total: US$ 28,57.

Post-abortion/puerperal curettage

Surgical procedure for emptying the uterine cavity by means of a curette for the removal of placental remains after normal delivery or of ovular remains in case of retained or infected abortion or embryo less egg. Hospital Total: US$ 35,92.

Currently the SIGTAP table does not determine the amount paid for abortion. However, this value was already officially determined in an Ordinance that was revoked. On May 21, 2014, the Department of Health Care of the Ministry of Health published Ordinance No. 415 which "includes the procedure interruption of pregnancy/therapeutic anticipation of childbirth provided for by law and all its attributes in the Table of Procedures, Medications, Orthoses/Prostheses and Special Materials of the SUS". The Ordinance also described the full procedure:

> "It consists of a procedure aimed at women in which the termination of pregnancy is provided for by law, because it is due to rape, because it poses a risk to the woman's life or because it is an anencephalic pregnancy. The termination of pregnancy must be carried out in accordance with the Technical Standards of the Ministry of Health. Encompasses: reception; anamnesis; performance of necessary prophylaxis and exams, including anatomo-pathological exams (when applicable); notification of sexual violence and other forms of violence (when applicable); *termination of pregnancy by methods: medication, curettage and manual vacuum aspiration (MVA);* offer of post-procedure contraception, referrals, return appointments according to the case, and storage of genetic material (when applicable)" (Brasil, 2014, p. 1), **(highlights are mine**).

The Ordinance, which was revoked a week after its publication, set the amount paid for abortion at US$ 88,68 per women, for the procedures as described in the previous paragraph. How it is possible to perceive by mine highlights, the Ordinance makes no distinction between types of procedures in determining the amount to be paid. However, the value was the same as paid by SUS for a normal delivery. There has been no readjustment to list prices since then.

Regarding medical abortion, the calculation of the value of misoprostol can be done from the price list of medications, available online and published by the Executive Secretariat of the Chamber for Regulation of the Medication Market (CMED) from the Health Security Agency (ANVISA) of the Federal Government (Brasil – CMED). The table determines the factory values of each medicine as well as the various additions that can be made to the price, according to specific taxes. The value presented below refers to the value of the closed box, with 50 pills. As for abortion the right number of pills is given by the doctor, the fractional calculation for each procedure will be presented in Section III of this paper. Considering the presentation of the medicine as specified by the Protocol for use in obstetrics of the Ministry of Health, the values are as follows:

Misoprostol - 100 mcg box of 50 pills

Factory price: US$ 161,19

Maximum consumer price: US$ 227,48

Misoprostol - 200 mcg box of 50 pills

Factory price: US$ 313,65

Maximum consumer price: US$ 620,24

Abortion Care Guideline – World Health Organization (WHO)

In 2022, WHO updated its Abortion Care Guideline with the organization's recommendations for the construction of public policies for abortion (WHO, 2022). Table 1 summarizes the procedure and medication recommendations that will be used as a reference for the calculation of the estimated costs for Brazil.

Table 1: WHO recommendations

	Recommended Procedure	**Recommended Medication**
Surgical abortion	Vaccum Aspiration	appropriate prophylactic antibiotics pre- or perioperatively
		pain medication should be offered routinely

		cervical priming: Mifepristone or Misoprostol
Medical Abortion	Medication administered vaginally, sublingually or buccally	pain medication should be offered routinely
		Mifepristone combined with Misoprostol or Misoprostol alone

Fonte: Elaboração própria.

Estimating costs for the unified health system (SUS)

Based on the recommendations of the World Health Organization and on the practices that are already used in the cases permitted by Brazilian law, the calculation of the estimated costs of the Unified Health System (SUS) if abortion is decriminalized in Brazil will be done using 4 different procedures, considering the frequency of each method presented in the "Legal abortion services in Brazil – a national study" (Madeiro and Diniz, 2016): Manual Vacuum Aspiration (50%), Medical Abortion (36%), Curettage (11%) and Medical Abortion followed by Curettage (3%).

In Brazil, mifepristone is not available, only misoprostol, which is used both for medical abortion and as cervical priming for surgical abortion. The list of other drugs was made based on the recommendations for gynecological procedures by Brazilian Federation of Gynecology and Obstetrics Associations (FEBRASGO, 2022), Partners for Reproductive Justice guidelines (IPAS, 2021) and the Department of Health of the state of Santa Catarina (Santa Catarina, 2007). The list of disposable materials used in surgical procedures was built based on the recent work by Sanchez-Morales et al (2022).

All prices are presented in the Table 2, with the average of unit price and the maximum and minimum. Regarding other non-disposable materials, it is considered that the hospitals already have them and therefore were not included in the calculations.

Table 2: List of medications and supplies

	Price US$	**(min – max)**
Antibiotics		
Cephalothin	1.20	1.05 – 1.34
Analgesics		

Ibuprofen	1.10	0.77 – 1.44
Anesthetic - paracervical block		
Lidocaine 1%	3.02	2.74 – 3.53
Other medications		
Misoprostol 100 mcg (unit)	3.89	3.22 – 4.55
Misoprostol 200 mcg (unit)	9.34	6.27 – 12.40
Consumables and other supplies		
Disposable surgical gown	0.58	0.38 – 0.78
Povidone-Iodine	2.61	2.02 – 3.20
Surgical drapes	0.54	0.30 – 0.78
Sodium chloride injectable solution	1.08	0.95 – 1.22
Surgical masks	0.09	0.08 – 0.11
Venoclysis equipment	0.85	0.10 – 1.60
Gauze	0.11	0.08 – 0.14
Gloves for surgery	0.12	0.09 – 0.14
Surgical hat	0.04	0.03 – 0.05
Syringe	0.10	0.06 – 0.14
Cotton	0.06	0.05 – 0.07

Considering abortion as a final product, the calculations were made for each method separately. The results are presented in tables 3 to 6 below.

Table 3: Manual Vacuum Aspiration (MVA)

	Price US$	(min - max)
Medical appointment	22.22	11.76 – 32.68
Medication		
Analgesic	1.10	0.77 – 1.44
Anesthetic	3.02	2.74 – 3.53
Antibiotic	1.20	1.05 – 1.34
Misoprostol	18,67	12.54 – 24.80
Procedure	36.62	32.71 – 40.54
TOTAL	82.83	61.57 – 104.33

Table 4: Medical Abortion

	Price US$	**(min - max)**
Medical appointment	22.22	11.76 – 32.68
Medication		
Analgesic	1.10	0.77 – 1.44
Misoprostol	65.32	15.56 – 112.08
TOTAL	88.64	28.09 – 146.20

Table 5: Curettage

	Price US$	**(min - max)**
Medical appointment	22.22	11.76 – 32.68
Medication		
Analgesic	1.10	0.77 – 1.44
Anesthetic	3.02	2.74 – 3.53
Antibiotic	1.20	1.05 – 1.34
Misoprostol	18,67	12.54 – 24.80
Procedure	43.97	40.06 – 47.89
TOTAL	90.18	68.92 – 111.68

Table 6: Medical Abortion + Curettage

	Price US$	**(min - max)**
Medical appointment	22.22	11.76 – 32.68
Medication		
Analgesic	1.10	0.77 – 1.44
Anesthetic	3.02	2.74 – 3.53
Antibiotic	1.20	1.05 – 1.34
Misoprostol	26.46	15.56 – 37.36
Procedure	43.97	40.06 – 47.89
TOTAL	97.97	71.94 – 124.24

The method with the lowest cost is Manual Vacuum Aspiration (MVA) with an average value of US$ 82.83, while the highest average value is that of Medical Abortion followed by Curettage, US$ 97.97. Curettage is not recommended by the WHO, however, as it is still done in considerable quantities in Brazil, it was decided to include it in the calculations to obtain a

final value closer to what would be the actual expense of the SUS in the case of the abortion being currently decriminalized.

To estimate the total expenditure per year by the Unified Health System (SUS) if abortion was decriminalized in Brazil, the calculations use the value of 1,192,234 as the annual number of abortions, the most recent estimate by the Ministry of Health for the year 2017. Table 7 presents the results considering the different proportions of procedures performed in cases permitted by law in Brazil, as described by Madeiro and Diniz (2016). By way of comparison, Table 7 also presents the societal cost of keeping abortion prohibited in Brazil, defined as the costs of SUS with the care of women who underwent unsuccessful clandestine procedures (estimated by the Ministry of Health), added to the costs of the loss of economic productivity of these women and their personal expenses with clandestine abortion. The calculations considered the same estimate of 1,192,234 abortions per year in Brazil and the work by Babigumira et al (2011) who estimated the economic costs of lost productivity due to morbidity related to unsafe procedures at US$ 92.4 and the private cost of abortion for women $61.7. Both values are per procedure.

ESTIMATED COSTS - LEGAL ABORTION		**SOCIETAL COSTS - ILLEGAL ABORTION**	
	US$ (million)		US$ (million)
Manual Vacuum Aspiration (50%)	49.4	Public (Health System)	10.2
Medical Abortion (36%)	38.1	Private (women)	73.6
Curettage (11%)	11.8	Economic (lost in productivity)	110.2
Medical Abortion + Curettage (3%)	3.5		
TOTAL	**102.8**	**TOTAL**	**194.0**

On the left side of the table, the value of US$ 102.8 million is the main result of this paper and represents the estimate of how much the SUS would currently spend if abortion were legalized in Brazil and offered free of charge, considering an annual average of 1,192,234 abortions, as estimated by the Ministry of Health for the year 2017. This paper considers that the provision of abortion would be made free of charge by the Unified Health System (SUS), therefore, this amount would be public expenditure if abortion were legalized. Considering the amount of US$ 88.68 currently paid by the SUS per woman for procedures permitted by law, the total expenditure per year would be US$ 105.7 million, a value close to that estimated by this work.

On the right side of the table is represented the societal cost of keeping abortion illegal in Brazil. In this case, expenditures are divided into three groups: public health system

expenditures on care for women who have undergone unsuccessful procedures, women's private expenditures to pay for illegal abortion and its complications, and the general economy's expenditures on the loss of productivity caused by the morbidity of these women. In this case, the expenses are US$ 10.2, US$ 73.6, and US$ 110.2, respectively, adding up to a total of US$ 194 million per year.

Comparing the values, it is possible to notice that in the scenario of illegal abortion, only the economic expenses with the loss of productivity of the women already exceed the public expenses in the case of the procedure being legalized. This loss of productivity for women also impacts on the loss of government revenue. The comparison between these results shows that the societal cost of keeping abortion criminalized in Brazil exceeds US$ 90 million public costs if the procedure were allowed by women's demand and offered free of charge by the Unified Health System.

Final remarks

In Brazil, abortion is only allowed in cases of rape, risk of maternal death or anencephalic fetus. In the remaining cases, the procedure is considered a crime, subject to punishment for the woman and everyone involved. However, the legal status of abortion makes no difference to a woman's need for an abortion, but it dramatically affects her access to safe abortion, which represents a serious public health problem in Brazil for a significant portion of the population. Estimates by the Ministry of Health account for around one million illegal procedures per year in the country, which demonstrates the ineffectiveness of its criminalization.

If, on the one hand, the penalty provided for by law does not inhibit the demand for the procedure, on the other hand, it represents an aggravating factor in the woman's medical conditions, which delays or prevents the search for medical care in the case of complications after an unsuccessful procedure, imposing a greater risk of complications and preventable maternal death, in a context of great social inequality. The poorest and most vulnerable women are most affected by the criminalization of abortion, as they often lack the resources to pay for a safe abortion at a private clinic and resort to procedures that put their lives at risk.

In addition to the serious consequences for women's lives, the criminalization of abortion also represents a loss for the State, since complications from unsafe abortion result in increased health costs with hospitalizations and allocation of hospital supplies and human resources, in a context of an already overburdened public health system. Added to this are the economic costs

of these women's lost productivity and their private costs with clandestine abortions. The present work estimated these expenditures for Brazil at US$ 194 million per year. Considering the estimated public spending if abortion were legalized at US$ 102.8, the amount lost by keeping abortion illegal is predicted at US$ 90 million per year.

This work estimated the unitary cost of legal abortion between US$ 82.83 and US$ 97.97, with an average of US$ 90.40 per procedure. In an estimate for Mexico, Sanchez-Morales et al. (2022) found an average value of US$ 210 per procedure, varying between US$ 85 and US$ 336. Another study by Rodriguez et al. (2015) found an average value of US$ 394 for Colombia, with a variation between US$ 132 and US$ 657. The two studies present higher values and higher variations between the minimum and maximum value than this paper. In addition to differences among the countries' health systems, this discrepancy between estimated values for abortion can also be explained by the exchange rate, with the Brazilian currency being the one that had the greatest devaluation against the dollar during the Covid-19 pandemic and remains devalued (Mota, 2020).

Currently, the Brazilian Supreme Court (STF) is evaluating the possibility of repealing the articles that make abortion illegal in the Brazilian Penal Code, making the procedure permitted in the country on women request. Faced with the possibility of this being successful, this work estimated what the costs for the Unified Health System (SUS) would be and found the value of US$ 102.8 million per year. This calculation took into account the proportion of methods that are already used in the country in cases permitted by law and the isolated procedure. However, spending on legal abortion could be lower if, with the decriminalization, the SUS followed the international guidelines for expanding medical abortion with low professional intervention and implemented a public policy on family planning that increased the use of contraception and its effectiveness, which would avoid recurrences.

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