

Maternal deaths due to abortion among adolescents in Piauí, Brazil

Mortes maternas por aborto entre adolescentes no Piauí, Brasil

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ABSTRACT This article analyzes maternal deaths of adolescents in Piauí and describes the stories of those who died due to induced abortion between 2008 and 2013. The study was conducted in two stages. The first, quantitative, obtained demographic data and basic causes of deaths from the Mortality Information System. In the second, qualitative, the mothers of the adolescents were interviewed. Adolescents' deaths accounted for 17.2% (50 cases) of total maternal deaths. The majority of the adolescents lived in inner cities (78%) and was black (70%). The causes of death were hypertensive disorders (28%), puerperal infection (16%), hemorrhage (12%), thromboembolism (12%) and abortion (10%). The use of medication occurred in all cases of abortion, with abundant bleeding and pelvic pain being the main reasons for seeking hospital care. There was delay in the diagnosis and appropriate treatment of abortion complications, which may have contributed to the death of the adolescents. Maternal deaths among adolescents were mostly caused by conditions considered preventable. The stories of young women who died of abortion complications have highlighted the need for better-qualified health care, as well as laws and public policies that protect women who decide to terminate their pregnancies.

KEYWORDS Maternal mortality. Abortion. Adolescent.

RESUMO Este artigo analisa as mortes maternas de adolescentes no Piauí e descreve as histórias daquelas que morreram por aborto induzido entre 2008 e 2013. O estudo foi realizado em duas etapas. A primeira, quantitativa, obteve dados demográficos e causas básicas dos óbitos do Sistema de Informações de Mortalidade. Na segunda, qualitativa, foram entrevistadas as mães das adolescentes. As mortes de adolescentes representaram 17,2% (50 casos) do total de óbitos maternos. A maior parte das jovens residia em cidades do interior (78%) e era negra (70%). Destacaram-se como causas dos óbitos transtornos hipertensivos (28%), infecção puerperal (16%), hemorragia (12%), tromboembolismo (12%) e aborto (10%). O uso de medicamento ocorreu em todos os casos de aborto, sendo sangramento abundante e dor pélvica os principais motivos para a busca de atendimento hospitalar. Houve demora no diagnóstico e no tratamento adequado das complicações do aborto, o que pode ter contribuído para a morte das adolescentes. As mortes maternas de adolescentes foram causadas por condições consideradas evitáveis. As histórias das jovens que morreram por complicações do aborto evidenciaram a necessidade de assistência em saúde rápida e disponível, além de leis e políticas públicas que protejam as mulheres que decidem interromper a gravidez.

PALAVRAS-CHAVE Mortalidade materna. Aborto. Adolescente.

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Introduction

Pregnancy during adolescence is an event of significant magnitude and a marker of social vulnerability. Although there has been a reduction in pregnancy rates in the last two decades, about 16 million adolescents aged 15-19 years and 2.5 million of those under 16 years of age give birth in developing countries¹. In Brazil, there was a decrease of 17% in the number of pregnant teenagers between 2003 and 2015, however, 1 in 5 births is still of young people aged 19 or younger^{2,3}. The highest proportions are found among adolescents with low education, black women and residents in rural areas in the North and Northeast regions of the Country⁴⁻⁶.

With often unplanned pregnancies, abortion is a possibility for many adolescents, performed unsafe in most cases^{7,8}. All over the world, although there was a decrease in pregnancy termination rates between 1990 and 2008, about 4.5 million adolescents still have abortions each year, with higher rates in developing countries^{9,10}. There are no specific numbers on abortion among adolescents in Brazil, however, the National Abortion Survey, which, in 2016, interviewed 2,002 urban and literate women, found that 9% of those aged 18 to 19 years old reported having had an abortion. In addition, it was observed that there was a higher frequency of the last abortion among younger women, with 29% of them occurring between 12 and 19 years of age¹¹.

A systematic review published in 2018 with data from 28 countries showed that 23% of hospitalized cases of abortion at all ages progress to severe maternal morbidity/near miss, and 1.5% of them to death. Hemorrhage was the most common reported complication, however, infection was the most frequent reason for death¹². The health system's delay in ensuring adequate treatment for these complications, commonly determined by the stigma related to abortion, increases the chance of progressing to death¹³. Brazilian data show that abortion is among the top five causes of

maternal death, being responsible for 5 to 20% of deaths, however, it is possible that the illegality of the practice in the Country allows the underreporting of cases^{14,15}.

The main causes of maternal mortality among adolescents are similar to those of older women, with an emphasis on hypertensive disorders, hemorrhages and abortion¹⁶. However, when compared to women aged 20-24, adolescents tend to have more serious complications during pregnancy and childbirth¹⁷, which is the most common cause of death among women aged 15 to 19 in the world¹³. Brazilian studies on adolescent death are rarer than in other age groups. An obstacle is the fact that family members refuse to admit that abortion was the cause of the adolescent's death, either due to fear of legal problems and stigma or, still, due to weaknesses in the maternal death notification system^{13,17}. There is little data that characterizes the methods, practices or itineraries that adolescents went through in the face of pregnancy, abortion, its complications and death, especially in regions of great socioeconomic vulnerability and with a lower supply of health services, such as Northeast Brazil. This study aimed to analyze the maternal deaths of adolescents in the state of Piauí, which occurred between 2008 and 2013, and to learn the stories of those who died due to unsafe abortion complications.

Methodology

This is a cross-sectional study, carried out in two stages. In the first, of a quantitative character, there was a survey of maternal deaths in Piauí, from January 2008 to December 2013, with an emphasis on deaths among adolescents. The second stage, of a qualitative nature, consisted of the analysis of adolescent deaths from abortion. The data came from the Mortality Information System (SIM), the Live Birth Information System (Sinasc), which was accessed by the Maternal Death Monitoring Service in Piauí and Teresina. In

addition, interviews were conducted with family members (n=7) and a friend (n=1) of adolescents who died due to abortion.

The variables in the first stage, derived from the Death Certificate (DC) and the research summary form, were as follows: age group (in years: 10 to 13, 14 to 17, 18 and 19); education (complete years of study: none, 1 to 3, 4 to 7, 8 to 12, more than 12 years, ignored); race/skin color (white, black, other, ignored); marital status (single, married, widow, separated, other, ignored); city of occurrence (capital, interior); city of residence (capital, interior); number of previous pregnancies (none, 1, 2 or more, ignored); prenatal care (yes, no, ignored); number of prenatal consultations (none, 1 to 5, 6 or more, ignored); type of pregnancy resolution (vaginal delivery, cesarean delivery, not applicable, ignored); moment of death (during pregnancy or childbirth, after childbirth, after abortion); and basic cause of death (one of the codes of the International Classification of Diseases, version 10 – ICD10).

For the second stage, interviews were conducted with family members or friends of the teenagers killed by abortion. The mother was the participant who was present in all interviews, but sisters, mother-in-law and friends also collaborated. All interviews were recorded, with contact with the adolescents' relatives intermediated by local health workers. The place chosen by the participants for the interview was the residence itself. A semi-structured script served to guide the interviews, with central questions that retrieved information that the adolescent would have shared with family or friends. The questions related to abortion tried to identify the method used (such as medicines, teas or herbs and/or instruments introduced into the womb) and the health care received. The interviews searched for stories not registered in official biomedical documents, such as, for example, the description of the decisions made and the facts that occurred in the trajectories of the adolescents until the illness.

The data were analyzed descriptively, with emphasis on the adolescent's social and family insertion and the causes of deaths. The maternal mortality ratio (number of maternal deaths divided by the number of live births, multiplied by 100.000) was calculated for the period. The interviews were examined using the content analysis technique, with the definition of categories on the practice of abortion, medical care and the reasons that culminated in death. In this way, a detailed history of each adolescent was structured by information from both the interviews and the data contained in the medical records and the investigation forms of maternal deaths.

The research was approved by the Research Ethics Committee of the Camillo Filho Institute (CAAE 21164013.5.0000.5212). The confidentiality of the information was maintained, especially with regard to the confidentiality of the names of women present in the DC, as well as the names of the professionals involved in hospital care and in the other health services covered by the death investigation. All interviewees signed a free and informed consent form.

Result

Maternal deaths of adolescents

Between 2008 and 2013, 290 maternal deaths were recorded in Piauí. Of these, 50 (17.2%) of them occurred among adolescents aged 14 to 19 years. The maternal mortality ratio in the state ranged from 113,9 deaths/100.000 live births (2008) to 94,8 deaths/100.000 live births (2013). Most of the deaths (n = 39; 78%) were from adolescents living in 34 cities in the interior of the state. The highest number of deaths (64%) occurred in Teresina (PI): a concentration due to the displacement of 21 (42%) adolescents from cities whose distances ranged from 52 to 746 km to the capital (*figure 1*).

Figure 1. Map of the distribution of cities with maternal deaths of adolescents. Piauí, 2008-2013

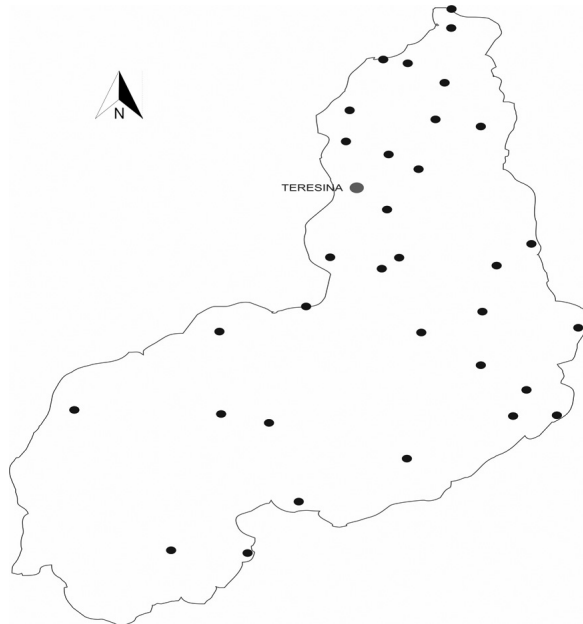


Table 1 shows that almost half (n=24; 48%) of adolescents with maternal death were between 14 and 17 years old. Most of them were characterized, in the DCs, as being black (n=35; 70%), single (n=18; 36%) and with 4 to 12 years of study (n=24; 48%). There was a higher prevalence of adolescents

in their first pregnancy (n=27; 54%) and with more than 06 prenatal consultations (n=28; 56%). 10% (n=5) of the adolescents did not have any prenatal consultation. Most adolescents died after giving birth (n=31; 62%), with cesarean section (n=18; 45%) being the main type of delivery.

Table 1. Characteristics of adolescents with maternal deaths. Piauí, 2008-2013

Variables	n	%
Age range (years)		
14 to 17	24	48.0
18 and 19	26	52.0
Schooling (years of study)¹		
1 to 3	6	12.0
4 to 7	11	22.0
8 to 12	13	26.0
Race/color of the skin²		
Black	35	70.0
White	7	14.0

Table 1. (cont.)

Variables	n	%
Marital status³		
Single	18	36.0
Married	10	20.0
Other	2	4.0
Number of previous pregnancies⁴		
None	27	54.0
1	11	22.0
2 or more	2	4.0
Accomplishment of prenatal⁵		
Yes	28	56.0
No	5	10.0
Number of prenatal consultations		
1 to 5	11	39.3
6 or more		
Type of childbirth⁶		
Cesarean	18	45.0
Vaginal	13	32.5
Not applicable	9	22.5
Moment of death⁷		
Pregnancy or childbirth	10	20.0
After childbirth	31	62.0
After abortion	5	10.0

Source: Own elaboration.

¹Without filling in the death certificate: 20 cases (40.0%); ²Without filling in the death certificate: 8 cases (16.0%); ³Without filling in the death certificate: 20 cases (40.0%); ⁴Without filling in the death certificate: 10 cases (20.0%); ⁵Without filling in the death certificate: 17 cases (34.0%); ⁶Without filling in the death certificate: 10 cases (20.0%); ⁷Without filling in the death certificate: 4 cases (8.0%).

Hypertensive disorders (pre-eclampsia, eclampsia and/or arterial hypertension) were the main causes (n=14; 28%) declared of death among adolescents. Soon after, puerperal infection (n=8; 16%), hemorrhages (n=6; 12%), thromboembolism (n=6; 12%) and abortion (n=5; 10%) were recorded. Non-obstetric causes, such as anesthetic complications (n=2; 4%), mental disorders (n=2; 4%), liver disorders (n=1; 2%) and infectious-parasitic diseases (n=2; 4%) were also among the underlying causes reported.

In addition, there were 3 (6%) deaths designated in the DC as unspecified.

Stories of adolescent deaths due to abortion

Abortion was declared the cause of death of six adolescents in the studied period, however, two cases were excluded. In the first, it was impossible to locate the address declared in the DC. The death, which occurred in 2012, was delayed for more than two years in the

insertion of data in the SIM digital module. The summary sheet recorded the information that the teenager would have used an abortion drug, without further details. The DC, in turn, was filled in as 'obstetric death of unknown cause', however, the investigation was not carried out as provided by the Ministry of Health for death with ill-defined causes¹⁸. In the second case, death was excluded because, in the interview phase, it was found that the age reported in the DC (12 years old) was incorrect (it was, in fact, 24 years old), and, despite the investigation, the error had not been corrected. It was death by abortion, but not the death of a teenager.

Eight interviews were conducted between September 2014 and June 2015, and in 02 cases there was a need for 03 interviews. The families lived in Teresina and in countryside cities, such as Campo Maior, Luzilândia and União. In all cases, prior contact with the families was mediated by the local Family Health team. The adolescents lived with their parents (03) and with their mother-in-law (01). All the mothers of the adolescents agreed to participate in the study, even providing records of their daughters' memories, such as photographs and writings.

First story

At the age of 16 and a student in the 3rd year of high school, the first teenager lived with her parents and a couple of brothers in an urban area near the capital. Her mother and sister were unable to say at what point she discovered the pregnancy, but said there were unsuccessful abortion attempts with medication by the teenager, with persistent use of the drug even with the pregnancy progress. Dose and form of use were not known by the family. For the family, the teenager denied being pregnant until the delivery of a dead fetus.

Still pregnant, she went to two hospitals, with severe abdominal pain and always accompanied by her mother. The mother asked her about the possibility that the symptoms were

due to a possible pregnancy, but the teenager kept the negative. At the first hospital, in her city, she was not examined, but she was given medication with the justification that it was renal colic. Without getting better on the same day, she was referred to the general hospital, located in the capital, 120 kilometers away. In the second hospital, advanced pregnancy was the main hypothesis, and the adolescent was then referred to the local maternity hospital.

Upon admission to the last hospital, they concluded that it was a condition that complicated pregnancy: "*fetal death and maternal infection*". The teenager's mother, lamenting what had happened, explained that she was not aware of the daughter's condition, and informed that there was a high possibility that the teenager had taken medication to abort, since she hid the pregnancy from her family. The mother says that she asked the doctor about the risks to her daughter's health, and the answer would have been the seriousness of the condition, "*because there was a situation of induced abortion*".

The fetus was stillborn, and the teenager died of hemorrhage and generalized infection two days after delivery. The basic cause of death was declared "*retained abortion*", and the existing information records "*vital organ impairment due to sepsis*". There is no data to explain the damage caused by the method used, however, the claim of professionals for the family persisted, according to which the deaths of both the adolescent and the fetus were caused by the induced abortion. There are also no explanations for the inadequate registration of the basic cause of the adolescent's death – the "*missed abortion*".

Second story

The second story was that of an 18-year-old black girl, a high school student, single, with a 3-year-old daughter. She lived with her mother, three sisters, a brother and daughter, 250 km from the capital. A retirement income supported the family. The child's biological father

had another family and took no responsibility for the daughter. The 60-year-old mother did not know her current boyfriend and was concerned about the teenager's "carelessness" in relation to pregnancy prevention, as she "had already failed once".

Severe pain in the lower abdomen started and was accompanied by vaginal bleeding ten days before her death. She had noticed menstrual delay, as well as pregnancy symptoms, and had used medication. It was all that was known. The symptoms were exacerbated and were accompanied by fever on the day of going to the first hospital in the city of residence. The severe pain made the teenager and her mother seek care. The medical care would have prescribed painkillers and sent to the capital hospital, with suspected appendicitis.

The following day, at the referral hospital, an ultrasound scan confirmed the pregnancy and the presence of fetal heartbeat. According to the mother, the professional would have informed that it would be necessary to stay in a maternity hospital to control the bleeding that was increasing. The diagnosis given to the mother of the adolescent was threat of abortion. In the service to which she was referred, the teenager was hospitalized for clinical treatment. The mother, who accompanied her, had to return home and left an aunt as her companion.

On the fourth day, the teenager communicated by phone with her mother, reporting that she was very dissatisfied and uncomfortable with the hospitalization, explaining that the pain remained and she did not feel any improvement in the condition. The teenager said she felt weak, still with vaginal bleeding, but the information she received when she complained to a professional was that she should wait, that the improvement would occur. The day after communicating with her mother, the girl ran away from the maternity hospital, returning home. The pains and transvaginal bleeding increased, with the elimination of "a big blood ball", on the night of the same day, according to the mother.

The mother took her to the local hospital again. The teenager had fever and chills. Again, she was transferred to Teresina, where she spent three more days hospitalized with severe infection, in an Intensive Care Unit, where she died of "sepsis". During this second hospitalization, she underwent pelvic surgery, with hysterectomy. The medical record data register "impairment of pelvic organs due to infection of the digestive system", without specifying which digestive organ.

Third story

The third teenager lived in Teresina. She was 18, a domestic worker, married, black, with a 2-year-old daughter. Completed high school and lived in a stable relationship for 2 years. A year earlier, she had an abortion, in the second month of pregnancy, with medication. There were no complications, however, uterine curettage was necessary. According to her mother-in-law, with the discovery of a new pregnancy, through beta-HCG, she decided to use drugs again.

The mother reports that the four pills of the drug cost two hundred and fifty reais, half of her salary. The drug was taken more than three months after menstrual delay. The teenager took the same dose she had used the previous time. She waited for vaginal bleeding to start for three or four days. She started to feel colic stronger than the bleeding, which made her look for the emergency medical service, accompanied by her mother-in-law and her partner. She thought it would be time to do the curettage, as she did before. When attended, however, she received a prescription for painkillers and the suggestion to seek prenatal care, because it was "just a threat of abortion, with a live and normal fetus, by ultrasound", according to the mother-in-law's narrative.

A week passed between the emergency appointment and the onset of heavy bleeding and symptoms of fever, when the teenager returned to the same hospital. The data in the medical record inform that the diagnosis

of hospitalization was “*infected abortion*”. However, medication was prescribed to inhibit abortion. This time, ultrasonography visualized a 14-week pregnancy. The hospitalization was taking place, the teenager had persistent vaginal bleeding, which caused her “*severe anemia*”. The pregnancy was maintained, despite the worsening of the clinical picture. According to the mother, the teenager “*did not have the strength to get up*”. The explanations for the family’s afflictions were that the presence of gestational viability justified the expectant conduct for the case.

Two weeks later, the adolescent’s clinical condition got worse, and transfer to tertiary maternity was recommended. The diagnosis on admission to the hospital was “*septic shock*”. A new ultrasound was performed, whose report showed “*fetal death*”, and, at that moment, there was an indication of uterine curettage. After uterine emptying, the teenager was referred to the Intensive Care Unit, where she remained for one month, with no clinical improvement. Given the seriousness of the case, and at the request of the social worker, the mother went to that sector to authorize the performance of a tracheostomy. In addition to information about her daughter’s serious condition, she received information about the financial expenses that the service spent during the entire stay in the hospital. After 45 days of hospitalization, the teenager died of “*sepsis*”.

Fourth story

At the age of 18, single, black, student of the 1st year of high school. The teenager lived with her mother and was the only daughter. She would have been dating for a few months, when she gave the mother the news of the pregnancy and stated that she wished to continue with the pregnancy, initiating prenatal care. According to the mother, the boyfriend accepted the situation. After the third month, the mother noticed emotional changes in the teenager, describing them as normal for the

period. But he also realized that she complained of colic too often.

In a prenatal consultation, mother and daughter were instructed to make an assessment in a specialized outpatient clinic, due to an altered test for toxoplasmosis. The mother accompanied her in the consultation of the recommended service. There they received a prescription for treatment, without much explanation. The high cost of medicines made treatment impossible. Weeks after this consultation, the teenager began to experience profuse vaginal bleeding.

The mother took her to the urgency of motherhood. At the end of the service, the doctor would have reported that there was still a fetal death. He asked about complications during prenatal care. The mother, then, reported on the possible toxoplasmosis and non-adherence to treatment, and, according to her narrative, the doctor concluded that the probable cause of fetal death would be infection. Therefore, the teenager should be hospitalized for treatment. The mother was unable to accompany her daughter, but she waited for news at her residence. When returning to the maternity hospital, a person reported that the teenager had not resisted and died of infection. The explanation given was about the possible organic involvement by toxoplasmosis.

The records do not indicate the extent to which toxoplasmosis affected the adolescent to cause damage that would justify the failure of vital organs. There is no autopsy report, although the service exists in the capital. When asked if the daughter had induced the abortion, the mother replied that she did not know, because the teenager had not told her anything about it. However, a friend revealed that the teenager used drugs because she feared serious fetal complications after the diagnosis of toxoplasmosis. The mother said that if the daughter used an abortion medication, it was because she had decided not to continue with a pregnancy compromised by a disease that she had been unable to treat. There is no

record in the medical record, nor the mother's report on the consequences of being a carrier of toxoplasmosis in pregnancy.

Discussion

The death of women in the beginning of reproductive life due to abortion is considered to be an avoidable death and, therefore, violates fundamental rights. The present study shows that, in Piauí, 17.2% of maternal deaths were among adolescents, similar to the percentage in the Northeast (16.1%) and the Country (14%)¹⁸. Similar to the profile found in other locations^{16,17,19}, they were black adolescents, with low education, in their first pregnancy and residing in the interior of the state. It is worth mentioning, as well, the frequency of failure to fill in the fields that inform epidemiological data, both in the death declaration and in the death investigation summary form, with emphasis on the field 'color' (absent in 16%) and 'education' (absent in 40%). This fact shows the low quality of some of the information present in the mortality information system, with a detriment to the proper audit of deaths¹³.

The adolescents lived in the countryside, but died in the capital, Teresina, because it was the only tertiary care service for women in the pregnant-puerperal cycle. It has been shown that the greater the distance between health services and the longer the commuting time, the higher the prevalence of maternal deaths due to the delay in specialized care^{20,21}. In addition, it is possible that the social situation of vulnerability (poverty, low education, loneliness, stigma) is an additional factor for the tragic outcome.

In Brazil, the maternal mortality ratio has declined by 56% in the last decades, from 143,2/100 thousand live births in 1990 to 62/100 thousand live births in 2015^{22,23}. A survey that estimated RMM between 2008 and 2011 in Brazil identified regional disparities, with the highest rate observed in the state

of Maranhão (114,0/100 thousand live births), and the lowest in Santa Catarina (36,9/100 thousand live births). The estimation methodology took into account common causes of masking maternal deaths, such as under-reporting deaths, the proportion of deaths of women of childbearing age that was investigated and the proportion of undeclared maternal deaths in the OC, and were attributed to other causes²⁴. In the present study, the RMM of Piauí was high and with values higher than those that should have been achieved by the 5th Development Goal²⁵, suggesting the absence of policies to improve the maternal health indicator in the analyzed period.

The causes of adolescent deaths in this study were similar to those of women of other age groups and other regions of Brazil and the world^{26,27}. Despite wide regional variations, hemorrhages, hypertensive disorders, infections and complications from unsafe abortion contribute to more than half of direct obstetric deaths in developing countries. In turn, indirect causes, which still predominate in sub-Saharan Africa, are responsible for about a quarter of deaths²⁶. Considered to be largely preventable, 78% (n=39) of maternal deaths of adolescents in this study were determined by direct obstetric causes. It is a consensus that the appropriate use of antibiotics, the systematic use of postpartum oxytocin and the timely use of magnesium sulfate are effective and safe measures to reduce maternal mortality^{22,26}.

Affecting women of all ages in the reproductive period, abortion contributes significantly to the increase in RMM, since it is between the third and fourth causes of maternal death in developing countries^{26,28}. More prevalent in places where there is prohibitive legislation on legal abortion, death from abortion is generally associated with delayed care or diagnosis of complications^{10,12,14}. However, the criminalization of its practice does not prevent women from unsafe termination of pregnancy, only amplifying the risk of a negative outcome^{9,12}. A

case-control study carried out in Teresina (2012-2013) to assess severe maternal morbidity/near miss demonstrated that abortion, resulting in infection and hemorrhage, was the main isolated cause of maternal death, being responsible for 3 out of 10 deaths identified in the period²⁹.

This research identified five adolescents killed by abortion, with many points of intersection in the narratives presented. First, there was the use of medicines, acquired on the illegal market. Second, they all sought the health service at some point in their trajectories, however, this care did not prevent their deaths. Finally, there was a common delay in seeking health services for care, either due to stigma, fear of reporting to the police or fear of discrimination in care services. No less important, also, was the delay of service professionals in diagnosing and treating the complications that led the adolescent to death.

This delay in the diagnosis and/or treatment of abortion complications, already observed in other scenarios³¹, was evident in all reports. In this sense, the third story should be highlighted, of the teenager who died on the 45th day of hospitalization, whose diagnosis given at the time of admission was infected abortion, at 14 weeks of gestation. The initial ultrasound examination had demonstrated a live fetus, however, with a marked reduction in amniotic fluid. Despite the gradual worsening of the adolescent, termination of the pregnancy was only performed by uterine curettage, 15 days after admission, when a new ultrasound examination showed a dead fetus, and the sepsis was already installed. If the recommendation of the technical standard of the Ministry of Health had been considered³⁰, uterine emptying (regardless of fetal conditions) should have occurred shortly after the adolescent's admission to the tertiary hospital, in view of the high risk of worsening her health and the great possibility of death.

This study has some limitations that deserve to be considered, mainly related to the quality of the death record. First, it is noteworthy the

absence of important data in several death certificates, such as cause of death not codified in the chapters of ICD10 referring to maternal deaths, as well as the failure to fill in the fields 'color', 'marital status' and 'schooling'. Second, there was also a shortage of information in the summary sheets, important instruments in the investigation of deaths and that could resolve doubts or correct existing errors in the DC. Third, the data obtained from the interviews may have been masked by both the memory bias and the stigma of abortion among family members. Despite these limitations, this study sheds new light on the preventability of maternal deaths among adolescents. If, on the one hand, the death profile is similar to that of adult women, on the other, there is evidence of an increase in the vulnerability typical of adolescence, especially in deaths resulting from abortion.

Final considerations

There is a lack of studies on abortion mortality in Brazil, however, the urgency of reliable data is needed when the decriminalization of abortion is discussed for up to 12 weeks in the Supreme Court. The profile of adolescent maternal deaths found is common in locations that are still economically and socially vulnerable, such as the state of Piauí. The main result of this study, highlighted by the stories of adolescents, is that deaths could have been avoided if there had been greater agility in assistance. The delay in seeking health services, the silence surrounding the abortion methods used, the difficulty in investigating complaints and the obstacle in dealing with complications culminated in the missed opportunity to care for adolescents in their health needs. Immersed in environments of inequality, the adolescents in this study probably faced several barriers to the free exercise of their reproductive planning. Bearing in mind that access to safe termination of pregnancy is a reproductive right³², multiple actions should

be implemented to reduce negative outcomes and allow adolescents the opportunity to take control over their sexual and reproductive health. If full access to reproductive health is seen as a necessary step towards reducing maternal mortality, topics such as sexuality education, offering effective contraceptive methods and reducing unsafe abortions should be of paramount importance on this agenda. When the issue of abortion is seen as a health policy in

the Country, the imperative must be the protection of women and not their criminalization.

Collaborators

Nunes MDS (0000-0002-6209-3025)*, Madeiro A (0000-0002-5258-5982)* and Diniz D (0000-0001-6987-2569)* also contributed to the elaboration of the manuscript. ■

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