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A replication of the Uruguayan model in the province of Buenos Aires, Argentina, as a public policy for reducing abortion-related maternal mortality

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ABSTRACT

Objective: To describe the application of the risk and harm reduction model at primary care level to decrease the mortality due to unsafe abortion in the Province of Buenos Aires, Argentina, and evaluate the results. **Methods:** The services offered at primary health units to women undergoing abortion are described—first, only risk reduction and later, legal termination of the pregnancy—including their evolution between 2010 and 2015. The changes in abortion-related maternal mortality are also evaluated. The χ^2 test was used to evaluate the differences in the percentage of abortion-related deaths out of the total number of maternal deaths. **Results:** Primary care services increased progressively, both for risk reduction and for legal termination of pregnancy, which was carried out successfully, including manual vacuum aspiration, by general physicians and midwives. The proportion of abortion-related maternal deaths with respect to total maternal deaths fell by two-thirds between 2010 and 2014 ($P < 0.001$). **Conclusion:** The Uruguayan risk reduction model was successfully applied in primary care in the Province of Buenos Aires.

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1. Introduction

The Province of Buenos Aires covers an area of 307 571 km² and occupies 11.06% of the country's territory [1]. With 16.5 million inhabitants, it is the country's most populated province, comprising 39% of Argentina's population [2]. Because of its size and its proximity to the capital, it is a major federal unit in Argentina.

The Province of Buenos Aires' Sexual and Reproductive Health Program (PSSR) was created in 2003 by means of Law 13066 with the goal of guaranteeing policies aimed at promoting sexual and reproductive health, without discrimination [1].

Despite this initiative and the improvement of other health indicators, maternal mortality continued to increase in the Province of Buenos Aires until 2010. Abortion was the first or second cause of maternal death in Argentina during those years and poor women were and still are those who suffer the consequences of the lack of access to safe abortion.

Since 1921, the Argentinean Criminal Code states that: "Abortion performed by a qualified physician with the pregnant woman's consent is not punishable:

- if it has been performed to prevent a danger for the woman's life, if this danger cannot be avoided by other means,
- if it has been performed to prevent a danger for the woman's health, if this danger cannot be avoided by other means,
- if the pregnancy is the outcome of sexual violence,
- if the pregnancy is the outcome of an indecent assault on a subnormal or insane woman" [2].

In March 2012, the Nation's Supreme Court of Justice ratified the legality of abortion in cases of rape and stated that the woman's sworn declaration presented to the attending health professional was sufficient. With this Sentence, the Provincial Ministry of Health updated the Protocol for the Integral Care of Non-Punishable Abortions (ANP), informed consent forms, and the woman's Sworn Declaration Form for cases of rape [3].

That same year, the International Federation of Gynecology and Obstetrics (FIGO) started to provide technical assistance to the Ministry

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Table 1

Evolution of the number of women treated by abortion services (risk and harm reduction plus legal termination of pregnancy), Province of Buenos Aires, 2010–2015.

	Municipality of Morón	José Ingenieros	Total
2010	35	21	56
2011	84	72	156
2012	125	108	233
2013	179	180	359
2014	348	241	589
2015	404	201	605

through the Program, with the goal of supporting strategies for reducing abortion-related maternal mortality.

The present article describes the health policies and strategies adopted by the Province of Buenos Aires' Ministry of Health through the PSSR, in particular, the care program for women seeking abortion, which started by replicating the Uruguayan risk and harm reduction model. The activities are described and their results are evaluated in terms of services rendered and variations in total and abortion-related maternal mortality between 2010 and 2014.

2. Materials and methods

The Provincial Sexual and Reproductive Health Program developed two main strategies for reducing abortion-related maternal mortality [4].

- (1) A risk and harm reduction strategy in primary health care with general physicians and midwives, with the support of secondary care (started in 2007).
- (2) The provision of legal termination of pregnancy (LTP) services, also in primary health care in the same medical centers, since 2012, with the assistance of the Argentine Federation of Societies of Gynecology and Obstetrics (FASGO) and FIGO.

Care has been provided since 2007 to women seeking abortion, consisting of the risk and harm reduction model developed by "Iniciativas Sanitarias" (Health Initiatives) in Uruguay. Services were initially provided at the community health center at the Specialist Subzonal Hospital "Dr José Ingenieros," District of La Plata, and at two primary healthcare centers in the Municipality of Morón, subsequently adding another two centers after 2013.

This model took as its premise women's right to information and health and its goal is to reduce abortion-related maternal morbidity and mortality. It consists of giving advice/counseling before and after abortion to women with an unintended pregnancy, based on the right to confidentiality, privacy, and self-empowerment. This program is run by an interdisciplinary team consisting of a general physician, a psychologist, a midwife, and a social worker.

The advice/counseling has also enabled detection of situations in which the law allows legal abortion. These situations require repositioning of the health team, accepting the need to support the decisions made by women [5]. In turn, this intervention creates an institutional responsibility to provide an adequate response. In the case of primary care, the institutional response in these situations was to indicate outpatient administration of the medical abortion or referral to secondary care.

Starting in October 2014, theoretical and practical training was given to the general practitioners at the primary health centers to enable the health personnel committed to effective protection of women's sexual and reproductive rights to give a better service. The goal pursued by the training was to increase knowledge of the legal framework regulating access to LTPs and the scope of the causes under which abortions can be performed in our criminal code, and also to include manual vacuum aspiration (MVA) in primary health care.

Today, in the province of Buenos Aires, a growing number of primary care teams exist, most of them led by general practitioners and

midwives, who show a high level of commitment to caring for women seeking an abortion.

Data on the number of unsafe abortion prevention services provided by the primary care units described above were gathered systematically from January 2010 to December 2015 and are shown in the descriptive tables. The data on total and abortion-related maternal deaths are collected systematically by the Provincial Ministry of Health from the death certificates.

The statistical significance of the differences in the proportion of abortion-related maternal deaths out of the total maternal deaths between 2011 and the following three years was evaluated using the χ^2 test with Yates correction.

As the data collected did not identify the women who received the services, it was not necessary to use an informed consent form. The study protocol was submitted and approved by the Ethical Committee of the Ministry of Health of the Province of Buenos Aires.

3. Results

Both in the Municipality of Morón and at the José Ingenieros Hospital Community Health Center in La Plata, the number of visits increased 10-fold between 2010 and 2015, particularly in the Municipality of Morón where the number of centers offering counseling doubled from two to four (Table 1).

In addition, the proportion of LTP cases out of the total number of women seen increased from 15.4% in 2014 to 43.7% in 2015 (data not shown in the tables).

Likewise, the number of women who received LTP services in primary care was very low until 2012 but subsequently increased in the following years to reach almost 100% of the cases in 2015. MVA was not performed in primary care until 2013. However, after the training given in 2014, the number of cases treated with MVA at primary health services increased, reaching almost one-third of the cases in 2015 (Table 2).

The experience acquired in the use of MVA by primary care general practitioners has been very positive; no complications have been recorded and the level of acceptance by the women who chose the procedure has been high.

The indication justifying LTP has also changed in recent years. Until 2011, there were no LTPs for health reasons and all were for rape. The first cases arose in 2012 and their number gradually increased until, in 2015, they accounted for almost three quarters of all cases (Table 3).

On the other hand, the maternal mortality rate in the Province of Buenos Aires, which had peaked in 2010 with 43 deaths per 100 000 live births, fell substantially during the following years, reaching 28 and 29 deaths per 100 000 live births in 2013 and 2014, respectively (Fig. 1).

At the same time, there was a considerable decrease in the number of abortion-related maternal deaths in the Province of Buenos Aires.

Table 2

Changes in the level of care of legal termination of pregnancy cases at the Mercedes Sosa Health Center (Morón) and José Ingenieros Hospital Community Health Service (La Plata), Province of Buenos Aires, 2010–2015.

Year	Level of care		Total
	Primary care No. (%)	Secondary care No. (%)	
2010	- (0)	1 (100)	0
2011	1 (50)	1 (50)	1
2012	2 (67)	1 (33)	3
2013	13 (65)	7 (35)	20
2014 ^a	64 (77)	9 (23)	73
2015 ^b	173 (98.3)	3 (1.7)	176

^a In 2015, 9 (14%) MVA procedures were carried out at primary care level out of 64 pregnancy terminations.

^b In 2015, 37 (31.3%) MVA procedures were carried out at primary care level out of 118 pregnancy terminations.

Table 3

Change in the proportion of causes of legal termination of pregnancy at the Mercedes Sosa Health Center (Morón) and José Ingenieros Hospital Community Health Service (La Plata), Province of Buenos Aires, 2010–2015.

Cause of legal termination of pregnancy			
Year	Rape No. (%)	Health No. (%)	Total
2010	1 (100)	0 (0)	1
2011	2 (100)	0 (0)	2
2012	1 (33)	2 (67)	3
2013	15 (71)	6 (29)	21
2014	28 (38)	45 (62)	73
2015	43 (24.5)	133 (75.5)	176

While this cause accounted for 34.4% ($n = 32$) of all maternal deaths in 2011, by 2014 it was responsible for only 12.4% ($n = 11$) of maternal deaths in the province. The differences in the proportion of abortion-related maternal deaths with respect to total deaths between 2011 and the following three years was statistically significant ($P < 0.02$; 0.05 and 0.001, respectively). It appears that the reduction in maternal mortality during this period was due to the reduction in abortion-related mortality, as the number of deaths for other causes increased between 2010 ($n = 61$) and 2014 ($n = 78$) (Table 4).

Lastly, a sustained decrease is observed in the number of discharges for pregnancies terminated by abortion in the province's public hospitals, which peaked at 18 524 cases in 2011 and then fell gradually year by year to 14 999 in 2014 (data not shown in the tables).

It is clear, therefore, that since 2011 both maternal mortality and discharges for abortion have dropped substantially in the Province of Buenos Aires.

4. Discussion

These data concerning the experience of the Province of Buenos Aires strongly suggest that the Uruguayan risk and harm reduction model applied to abortion can be replicated in other contexts, at least in the Latin American region. This experience also shows that, as happened in Uruguay, spending a number of years applying this strategy brings health professionals into contact with unplanned pregnancies and how women who decide to abort feel, making them more willing to provide pregnancy termination services to the full extent allowed by the law [6].

This experience also shows that the involvement of specialists from secondary or higher level centers, as was done in Uruguay, is not indispensable and general physicians and midwives can do the job equally well, motivated by their greater proximity to the women's

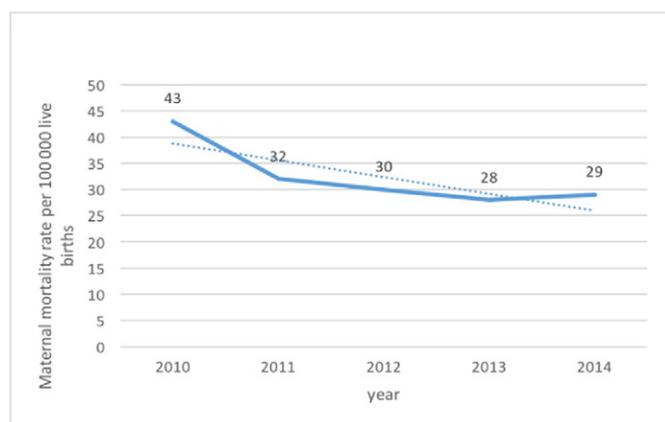


Fig. 1. Evolution of the maternal mortality rate in the Province of Buenos Aires, 2010–2014.

Table 4

Maternal deaths due to abortion and other causes in the Province of Buenos Aires, 2010–2014.

	Abortion	Other	Total	% Abortion	Difference in % of abortion-related deaths between 2011 and 2014 ^a
2011	32	61	93	34.4	Ref
2012	14	70	84	16.7	$P < 0.02$
2013	16	68	84	19.0	$P < 0.05$
2014	11	78	89	12.6	$P < 0.001$

^a χ^2 test with Yates correction.

reality, particularly of the more vulnerable segments of the population. It is true that in Uruguay the nurses and midwives played an important role, but always with the support of the gynecologists, which was not common in the Province of Buenos Aires.

This primary care capacity was not limited to the risk and harm reduction strategy but was extended to LTP services. The data given in this article show that most of the cases of LTP can be dealt with at primary care level, given the low complexity of the procedures recommended, whether medical abortion or MVA, therefore reserving access to hospital care for patients with more complex complications [7].

The advantage of providing treatment at primary care level is shown by the fact that the total number of LTPs carried out in five primary care units during the period from 2012 to 2014 is very similar to the number of LTPs carried out in 18 hospitals using the same program at secondary care level.

The Supreme Court's sentence in March 2012, defining the conditions for performing a pregnancy termination within the terms of the law, acted as a significant facilitator for this program implemented by the Province of Buenos Aires' Ministry of Health.

The marked decrease in abortion-related maternal mortality has contributed considerably to obtaining political support for the programs that have been implemented, although it is not possible to credit this result to the work of a few primary health units alone. However, the fact is that in addition to the formal program that is being evaluated here, the risk and harm reduction strategy has become widely known and adopted in practice in the province's primary health network, although no figures are available as to how many units are taking part or how many women are being treated.

Nevertheless, the results are very encouraging, confirming that including general practitioners and midwives in providing care for these situations improves the quality of care provided to women who are seeking an abortion. Most cases do not require hospital treatment and can be handled in primary care centers, given the procedures' low level of complexity. In turn, the inclusion of general practitioners and midwives allows a more effective and safer resolution, minimizing costs and maximizing care convenience and timeliness for the woman [8].

We hope that the publication of this experience will encourage health managers in our province and in the rest of the country, and even in other countries, to introduce similar programs that help improve women's health and reduce maternal mortality.

Conflict of interest

The authors have no conflicts of interest.

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