


Building a network of sentinel centres for the care of women in an abortion situation: advances in Latin America and the Caribbean

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ABSTRACT

Previous reports have already estimated the overall number of abortions and the number of unsafe abortions in Latin America. Conversely, there are few reliable data from this region to inform public policies aiming to meet women's needs. In this context, the Latin American Centre of Perinatology (Centro Latinoamericano de Perinatología (CLAP)) created a network specialising in the care of women in an abortion situation (CLAP MUSA-Network) in an attempt to strengthen healthcare surveillance in Latin America by using the Perinatal Information System (Sistema Informático Perinatal (SIP)). This system was developed by the CLAP with a special module named SIP Abortion (SIP-A), a data collection tool designed by Latin American experts to be routinely used in cases of legal and incomplete abortions. The SIP-A follows the standards established by WHO, allowing investigators to systematise information, generate local reports and monitor changes after training and follow-up interventions based on national guidelines. This network promotes collaborative work between institutions to strengthen epidemiological surveillance, cooperative investigation and development of a critical mass of professionals skilled in sexual and reproductive health. Currently, 29 sentinel centres from 13 countries jointly work exchanging information to improve surveillance of healthcare indicators of women in an abortion situation. Latin America was the first region in the world to have a network of sentinel centres that continuously monitors healthcare provision to these women. Data collected by this network are already being used to design, implement and evaluate public policies.

BACKGROUND

It is estimated that 32 out of 1000 women have an abortion in Latin America per year,¹ and an unknown number of women require treatment for incomplete abortion at healthcare facilities. Comprehensive abortion care includes the provision of information, abortion management and care related

SUMMARY BOX

- ⇒ In Latin America and the Caribbean, the legal context for terminating a pregnancy is heterogeneous, and in some countries, abortion is prohibited in any situation.
- ⇒ It is estimated that less than a quarter of abortions that occur in the region can be considered safe.
- ⇒ The Latin American Centre of Perinatology (Centro Latinoamericano de Perinatología (CLAP)) has taken the leadership in strengthening systems to provide information on the care of women in an abortion situation in Latin America and the Caribbean since the creation of CLAP MUSA-Network.
- ⇒ The CLAP MUSA-Network consists of several health institutions that promote collaborative work to strengthen epidemiological surveillance, cooperative investigation and development of a critical mass of professionals skilled in sexual and reproductive health.
- ⇒ Since its creation, the CLAP MUSA-Network has encouraged the use of safe methods of uterine evacuation and the use of long-acting reversible contraceptives after abortion.
- ⇒ The CLAP MUSA-Network is an interesting tool to promote comprehensive abortion care and monitor abortion-related services in Latin America and the Caribbean.

to pregnancy loss/spontaneous abortion and postabortion care.² Since 2003, WHO has published guidelines and standards to substantially reduce the risk of severe abortion-related complications or death.³⁻⁵ These normative documents emphasise the role of healthcare professionals in ensuring healthcare and human rights for women in an abortion situation.⁴ Recently, WHO updated and replaced three previous guidelines on abortion with a single document.²



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Unsafe abortion is the termination of a pregnancy by persons lacking the necessary skills, with inappropriate methods or in an environment lacking minimal medical standards, which may result from the lack of women's access to effective contraceptive methods and legal abortion services. It is estimated that only 23.5% of the abortions taking place in Latin America are safe.⁶ However, accurate figures are difficult to obtain because of misclassification and under-reporting of abortions in legally restricted contexts and of the constraining impact of abortion stigma on women's willingness to seek medical care.^{7,8}

In Latin America, conditions for the provision of legal abortion vary across countries. In some countries, abortion is legally available at healthcare facilities, while in other countries, it is permissible under some circumstances or strictly prohibited. In this region, unsafe abortion is estimated to cause 1000 deaths and nearly 500 000 hospitalisations per year, especially among vulnerable women.⁹ With respect to enabling legal frameworks, some healthcare professionals show a lack of willingness to provide legal abortion based on personal beliefs, thus restricting women's rights and threatening their health.¹⁰

Health decision-making requires reliable information systems that fulfil the crucial roles of data generation, compilation, synthesis, analysis and communication.¹¹ In a complementary way, it is necessary to rely on data disaggregated by sex in order to address the challenges faced by both men and women, since women's reproductive needs change throughout their lives. Epidemiological data on abortion can be obtained from country-based official statistics, surveys of women and scientific studies. However, legal context and social stigma can negatively influence the quality of the data obtained.⁸ Furthermore, the frequency of publication of abortion information is fickle. Official statistics for each country can be published annually, but data from surveys and scientific studies are less frequent due to the costs involved. In Latin America, there is no reliable or systematic information allowing us to design, implement and evaluate public policies aimed at meeting the needs of women in an abortion situation. Recent data suggest that only 45% of the countries in the region have data available on abortion epidemiology, which are often of limited usefulness as they lack consistency and reliability.⁸ To fill this gap, the network of sentinel centres of the Latin American Centre of Perinatology (Centro Latinoamericano de Perinatología (CLAP)) specialising in the care of women in an abortion situation (CLAP MUSA-Network) was created in 2015.

FUNCTIONING OF THE NETWORK

The CLAP has taken the leadership in strengthening systems to provide information on the care of women in an abortion situation in Latin America and the Caribbean since the creation of CLAP MUSA-Network in 2015. This network promotes collaborative work between institutions to strengthen epidemiological surveillance,

cooperative investigation and development of a critical mass of professionals skilled in sexual and reproductive health. It started in 2015 with 29 sentinel centres located in 12 countries. These institutions signed a collaboration agreement with the CLAP defining the roles of each part. The CLAP is responsible for coordinating and providing technical support to promote investigation and maintenance of a surveillance repository. Sentinel centres are responsible for entering data into the system and ensuring their quality, for promoting the use of information from this system in decision-making and for disseminating experiences that emerge from participating in the CLAP MUSA-Network.

The CLAP MUSA-Network uses the Perinatal Information System (Sistema Informático Perinatal (SIP)), which has a long-standing tradition in the region since its implementation in 1983. Recently, more automated versions have been developed using different platforms for data entry and analysis. The SIP comprises a set of instruments originally designed for use in gynaecological, obstetric and neonatal services.¹² The SIP Abortion (SIP-A) is an instrument adapted from the SIP to be used in the CLAP MUSA-Network as a data collection form on the care of women in an abortion situation (abortion at any gestational age, miscarriage, ectopic and molar pregnancies). Data collected by the SIP-A are anonymised, kept confidential and never shared.

Four work stages were defined for the functioning of the CLAP MUSA-Network: conceptualisation, initiation, consolidation and total functioning (figure 1). In the two first stages, a consensus was established between participating institutions, all members agreed on the final design of the SIP-A, sentinel centres were recruited, agreements were signed and healthcare teams were trained at the sentinel centres. In the consolidation stage, the focus was on improving the quality of the data collected at the sentinel centres to ensure that the data were reliable, comprehensive and accurate. This assignment was performed by a data coordinating centre external to the CLAP through monthly data control reports.¹³ Meanwhile, a process of healthcare quality improvement was developed through the provision of monthly feedback to each sentinel centre on the frequency of use of the

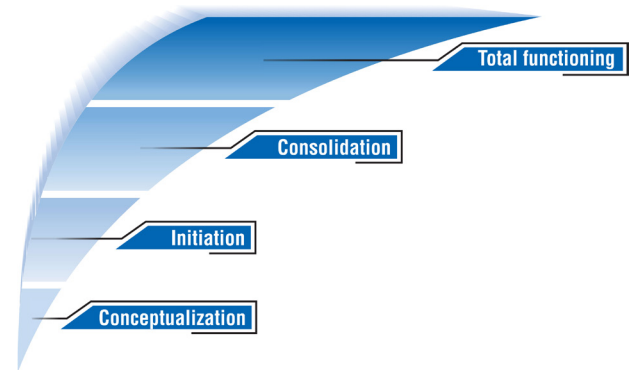


Figure 1 Stages of implementation CLAP MUSA-Network.

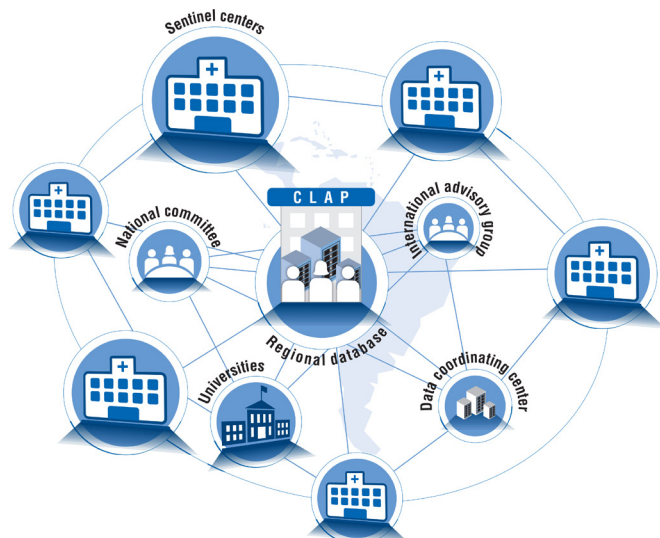


Figure 2 Structure of the CLAP MUSA-Network.

recommended practices according to WHO standards and health outcomes (figure 2). Currently, the CLAP MUSA-Network is in its total functioning stage.

SITUATIONAL ANALYSIS

Since the beginning of its creation in 2015, the CLAP MUSA-Network has already had 37 participating sentinel centres. The total number of cases accumulated until August 2021 was 120 080. The CLAP continuously analyses the specific needs for improving the data reported by each sentinel centre, and specific action plans are developed for each country. Figure 3 clearly shows the continued expansion in the number of cases included and the strengthening of the CLAP MUSA-Network.

The CLAP aims to build installed capacity in sentinel centres through the acquisition of knowledge, skills and resources that will allow these centres to fully operate independently from CLAP. Sentinel centres are expected to be able to individually analyse their strengths and weaknesses and to provide the best possible care. One of the principles of the CLAP MUSA-Network is the ethical duty to strengthen public health surveillance in order to support public health decision-making.¹⁴

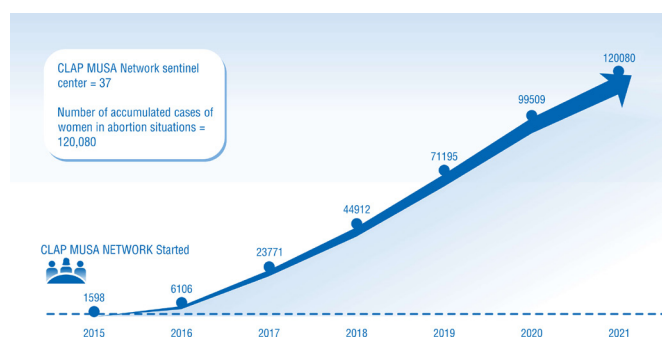


Figure 3 Evolution overtime of the CLAP MUSA-Network. Building a regional data base. CLAP, Centro Latinoamericano de Perinatología.

A challenge reported by sentinel centres is the use of appropriate abortion methods, namely misoprostol or manual vacuum aspiration (MVA), rather than curettage. It is essential to rely on professionals skilled in the use of MVA and medications whose training in these abortion methods has started preferably during professional education. This may be seen by sentinel centres as an opportunity to improve the training of medical residents who rotate through different services during their training. Recently, a review of the available evidence on family planning in Latin America and the Caribbean identified that short-acting reversible contraceptives (SARCs) are the most commonly used methods. Long-acting reversible contraceptives (LARCs) are independent of direct user compliance and, therefore, have a lower failure rate than SARCs; however, in 13 of the 23 countries studied, the use of LARCs was <5%. Furthermore, in countries with greater social inequalities, the use of LARCs was greater among women of higher socio-economic status. The pent-up demand for the use of contraceptive methods increases the risk of unwanted pregnancies and, consequently, the risk of unsafe abortions.¹⁵

Women who start contraceptive methods soon after the expulsion of products of conception have lower rates of unwanted pregnancies and subsequent abortions compared with women who delay starting contraceptives.¹⁶ However, women often have to wait for days until a new medical appointment is scheduled for counselling and establishment of a contraceptive method after abortion.¹⁷ This practice represents an unnecessary risk, since it is estimated that in 85% of women ovulation can return in the first month after abortion, even before they have an episode of menstruation.^{18 19}

ACTIONS FOR IMPROVEMENT IN THE LOCAL CONTEXT

EviSIP: 'using evidence for decision-making' in 2019

The use of innovative efforts is critical to reduce the risk of abortion-related morbidity, including increasing access to contraception.²⁰ The main goal of the CLAP MUSA-Network is to combine encouragement to adopt the best clinical practices and knowledge generation. This became clear after completion of the first EviSIP: 'using evidence for decision-making' in 2019. This event was conducted using innovative methodology and brought together representatives from each sentinel centre and mentors, who were chosen based on their previous research experience in the context of WHO and Pan American Health Organisation to analyse local data and to propose changes in the locoregional context through the production of scientific articles. The event included a distance mentoring process, which ended with a face-to-face meeting held in Montevideo/Uruguay.²¹ Below, we detail the publications resulting from data collected by the CLAP MUSA-Network and analysed after the first EviSIP held in 2019 (tables 1 and 2).

Table 1 EviSIP 2019—postabortion complications and use of safe methods of uterine evacuation

Country/Hospital/Number of women	Objectives	Main findings
Brazil/UNICAMP/305–474 women ^{22–24}	To evaluate the factors associated with abortion complications and the effects of the participation in the CLAP MUSA-Network on the use of safer methods of uterine evacuation	<ul style="list-style-type: none"> ▶ Approximately 30% of women became pregnant despite contraceptive use and at least one complication was observed in 7.5% of women. ▶ The factors associated with complications were higher gestational age and abortions resulting from contraceptive failure. ▶ High rate of use of curettage and a dual method for uterine evacuation (misoprostol and curettage). ▶ After the implementation of the CLAP MUSA-Network, there was an increase in use of MVA; however, medical abortion remained little used.
Chile/Hospital San Borja Arriarán/554 women ²⁵	To describe the characteristics and to compare several variables of interest between patients with and without complications	<ul style="list-style-type: none"> ▶ 13% had complications (40% had bleeding and 30% had sepsis). ▶ Complications were more common in women with unplanned pregnancies and in those with incomplete abortion. ▶ Women undergoing curettage had a four times higher rate of complications than women undergoing MVA.
Chile/Hospital San José/1343 women ²⁶	To describe the creation of a sexual and reproductive health unit after joining the CLAP MUSA-Network	<ul style="list-style-type: none"> ▶ An increase was observed in the use of WHO-recommended methods of uterine evacuation, from 75.1% to 84.25%, owing to the increased use of medications. ▶ There was a decrease in the use of non-recommended methods of uterine evacuation.

CLAP, Centro Latinoamericano de Perinatología; MVA, manual vacuum aspiration.

Postabortion complications and use of safe methods of uterine evacuation

In Brazil, Cavalari *et al* published the results of a cross-sectional study aiming to evaluate factors associated with the presence of abortion-related complications after the implementation of the CLAP MUSA-Network in their institution (table 1). The authors identified that the factors associated with the presence of complications were higher gestational age and abortions resulting from contraceptive failure. It is noteworthy that approximately 30% of women became pregnant despite contraceptive use.²² In the same publication, the authors reported an approximate 90% rate of need for a uterine evacuation procedure, with a high rate of use of curettage and a dual method for uterine evacuation (misoprostol and curettage). Aiming to analyse the effects of participation in the CLAP MUSA-Network on the use of safer methods, this same sentinel centre performed trend analyses of the use of MVA and medical abortion among 474 women and reported an increased use of MVA; medical abortion, however, remained less used.^{23 24}

In Chile, Solar *et al* conducted a cross-sectional study to describe the characteristics of women in an abortion situation who had undergone surgical intervention,

in addition to comparing variables of interest between patients with and without complications. Complications were more common in women with unplanned pregnancies and in those with incomplete abortion. Notably, the authors reported that women undergoing curettage had a four times higher rate of complications than women undergoing MVA.²⁵

Rubio *et al* described the creation of a sexual and reproductive health unit in a Chilean hospital after joining the CLAP MUSA-Network. The authors analysed data from 1343 women. The analysis was divided into two periods: ‘initial period’, from June 2016 to June 2017, when healthcare professionals were trained to use WHO-recommended uterine evacuation methods; and ‘consolidation period’, from July 2017 to June 2019, when an improvement was expected in quality-of-care indicators. Indeed, an increase was observed in the use of WHO-recommended methods, owing to the increased use of medications. In addition, there was a decrease in the use of non-recommended by WHO uterine evacuation methods. No differences were observed in the number of complications.²⁶

Table 2 EviSIP 2019—postabortion contraception

Country/Hospital/Number of women	Objectives	Main findings
Chile/Hospital San José/1343 women ²⁶	To analyse the rates of immediate postabortion contraception after the implementation of the CLAP MUSA-Network	<ul style="list-style-type: none"> ▶ A significant increase in immediate postabortion contraception was observed between the initial period (66.8%) and the consolidation period (76.8%) of the implementation of the CLAP MUSA-Network.
Brazil/UNICAMP/382 women ²⁷	To analyse the rates of immediate postabortion contraception after the implementation of the CLAP MUSA-Network	<ul style="list-style-type: none"> ▶ Significant increase in the rates of immediate postabortion contraception due to the increased use of injectables, such as DMP. ▶ Low start of contraceptives in women undergoing legal abortion (mostly due to sexual violence). ▶ LARCs still little used.
Honduras/Hospital Leonardo Martínez de San Pedro Sula; Hospital Dr Roberto Suazo Córdova; Hospital de área de Puerto Cortés; Hospital Enrique Aguilar Cerrato/1117 adolescents ²⁸	To determine the rate of LARC use among adolescents receiving postabortion care in four sentinel centres of the CLAP MUSA-Network	<ul style="list-style-type: none"> ▶ 85% of adolescents reported not having used any contraceptive before the abortion. ▶ 72.4% of adolescents received counselling on the different types of contraceptives that can be used in the postabortion period, of whom 5.5% chose to use an intrauterine device and 6.88% opted for a subdermal implant. DMP was the most requested method (64.4%). ▶ Having received counselling had a positive effect on the possibility of choosing a LARC. ▶ The contraceptive method was effectively delivered only to 53.1% of the women who requested it.
Honduras/Hospital Dr Roberto Suazo Córdova/684 women ²⁹	To describe the factors associated with the choice of a contraceptive after an abortion	<ul style="list-style-type: none"> ▶ Among adolescents, 50% had unplanned pregnancies, highlighting the fact that approximately 90% of them did not use any type of contraceptive method before becoming pregnant. ▶ Half of the women chose to start a contraceptive method after abortion, with DMP being the most frequent (40%) one. ▶ LARCs were initiated in only approximately 8% of women.

CLAP, Centro Latinoamericano de Perinatología; DMP, depot medroxyprogesterone acetate; LARC, long-acting reversible contraceptive.

Postabortion contraception

In the same article published by Rubio *et al*, the rates of immediate postabortion contraception were analysed (table 2). A significant increase was observed between the initial period (66.8%) and the consolidation period (76.8%), which can be viewed as further evidence of the beneficial effects of participation in a network to promote good clinical practices.²⁶ In Brazil, Veiga-Junior *et al* conducted a study to evaluate the initiation of contraceptive use before hospital discharge after the beginning of the hospital's participation in the CLAP MUSA-Network. Although LARCs remained less used in the institution, the authors identified a significant increase in the initiation

of contraceptive use before hospital discharge due to the increased use of injectables. A finding that deserves to be highlighted in this study is the lower start of contraceptives in women undergoing legal abortion (mostly due to sexual violence).²⁷

In Honduras, Bustillo *et al* conducted a study to determine the rate of LARC use among adolescents receiving postabortion care in four sentinel centres of the CLAP MUSA-Network. Data from adolescents treated at four hospitals in the country from January 2017 to July 2019 were analysed. Careful counselling on the different types of contraceptives that can be used in the postabortion period is essential. In this study, 72.4% of adolescents

received counselling, of whom 5.5% chose to use an intra-uterine device and 6.88% opted for a subdermal implant. Depot medroxyprogesterone acetate (DMP) was the most requested method (64.4%); however, having received counselling had a positive effect on the possibility of choosing a LARC. A negative finding was that the contraceptive method was effectively delivered only to 53.1% of the women who requested it, showing a repressed demand in relation to the use of contraceptives.²⁸ Castro and Paz conducted a study of women receiving care in another sentinel centre participating in the CLAP MUSA-Network in Honduras. Data from women admitted for spontaneous abortion were analysed. Half of the women chose to start a contraceptive method after abortion, with DMP being the most frequent (40%) one. LARCs were initiated in only approximately 8% of women.²⁹ It is essential that counselling on the use of LARCs be provided more effectively. In addition, LARCs should be available at healthcare facilities and provided free of charge to the population.^{28 29}

EviSIP 'using evidence for decision-making' in 2021

The COVID-19 pandemic has led to changes in the structure of care for women experiencing abortion in several countries, with the need to prioritise resources to meet the growing demand for care of cases complicated by the novel coronavirus infection.³⁰ Outside the healthcare facilities, there was a reduction in the number of consultations available in primary healthcare units and a reduction in the availability of public transport in some countries. In addition, due to stay-at-home orders, many people were advised to seek medical care only in urgent and emergency cases, which may lead to a delay in diagnosis and proper treatment.³¹ Inside the healthcare facilities, there was a reduction in the physical space available for hospitalisation due to the increased distance between beds and a reduction in the availability of intensive care unit beds.³² In view of this scenario, EviSIP 2021 was recently held entirely online. Among several research questions, one was common to different participating centres: How will changes resulting from the COVID-19 pandemic affect the quality of care provided to women in an abortion situation? More specifically, how will the 'three delays'³³ affect different outcomes, such as the incidence of potentially life-threatening conditions and severe maternal outcomes? Sentinel centres are currently in the final stages of analysis of their data, and we should soon have answers to these questions.

CONCLUSION

The main challenge of Latin America and the Caribbean is reducing inequalities. This is reflected in the fact that international commitments, such as the Sustainable Development Goals (SDGs), should apply to all individuals rather than simply aiming to comply with a national average. In this respect, the agenda set forth by the SDGs

may serve as beacon that leads the way to cross-sectoral work aimed at improving health conditions for all people.

Through the collection and continuous monitoring of data since 2015, the CLAP MUSA-Network was able to identify problematic situations in some of its sentinel centres. Regarding comprehensive abortion care, outdated methods of uterine evacuation such as the use of sharp curettage have been discouraged and increasingly replaced by MVA or medical abortion. The training of health providers in the use of uterine evacuation methods recommended by WHO is always encouraged in the CLAP MUSA-Network meetings. In the future, it is intended to increase the incentive for these trainings, both for public and private providers. Sentinel centres have emphasised the need to incorporate contraceptive methods to reduce unintended pregnancy especially by encouraging the use of LARCs immediately after abortion.³⁴ One of the articles produced with data from the CLAP MUSA-Network identified that contraceptive counselling may be difficult for women who have been victims of sexual violence.²⁷ Individualised multidisciplinary care is essential so that these women do not continue to be exposed to the risk of unwanted pregnancy.

Two great achievements of the CLAP MUSA-Network should also be mentioned: giving prominence to the healthcare status of women in an abortion situation and overcoming prejudices that hinder healthcare provision to this population, especially where abortion is illegal. The use of systems such as the SIP-A by the CLAP MUSA-Network to systematically collect data on women in an abortion situation is a way to promote a common language between and within countries. Additionally, the CLAP MUSA-Network has helped healthcare providers to overcome their own prejudices towards the treatment of women who present with the decision to have an abortion or with an incomplete abortion.

Recently, WHO published its new 'abortion care guideline', updating and replacing previous publications on the topic. According to this new guideline, the concept of 'quality of abortion care' is fundamental and defines that care for a patient in an abortion situation must be effective, efficient, accessible, acceptable/patient centred, equitable and safe. Efforts must be made to ensure that this guideline is effectively disseminated and implemented widely in health systems. Monitoring and evaluation of abortion-related services remains weak in most national health systems (OMS). With the aim of improving this problem, WHO is also developing a quality abortion care monitoring and evaluation framework based on WHO's monitoring and evaluation of health systems strengthening: an operational framework.³⁵ A set of abortion care indicators is under development and will be published soon.² The CLAP MUSA-Network, an international cooperation of countries with different legislation regarding abortion but speaking the same language through SIP-A, is a very interesting tool to promote and disseminate the new WHO guideline and also monitor and evaluate abortion-related services in Latin America

and the Caribbean. Continuous surveillance of quality indicators in postabortion care, based on the best standards established by WHO, and increased autonomy of each health institution to use their own epidemiological data to improve their routine practices and promote continuing medical education can help reduce abortion-related morbidity and improve the care provided to the population.

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REFERENCES

- 1 Bearak J, Popinchalk A, Ganatra B, *et al*. Unintended pregnancy and abortion by income, region, and the legal status of abortion: estimates from a comprehensive model for 1990-2019. *Lancet Glob Health* 2020;8:e1152-61.
- 2 Abortion care guideline. Geneva: World Health Organization 2022.
- 3 World Health Organization (WHO). *Safe abortion: technical and policy guidance for health systems*. Geneva: World Health Organization, 2003.
- 4 Organización Mundial de la Salud. *Funciones del personal sanitario en la atención para un aborto sin riesgos y los métodos anticonceptivos después del aborto*. 6th ed. Geneva: Organización Mundial de la Salud, 2015.
- 5 Safe abortion: technical and policy guidance for health systems – 2nd ed. Geneva: World Health organization 2012.
- 6 Ganatra B, Gerdtts C, Rossier C, *et al*. Global, regional, and subregional classification of abortions by safety, 2010-14: estimates from a Bayesian hierarchical model. *Lancet* 2017;390:2372-81.
- 7 Kumar A, Hessini L, Mitchell EMH. Conceptualising abortion stigma. *Cult Health Sex* 2009;11:625-39.
- 8 Popinchalk A, Beavin C, Bearak J. The state of global abortion data: an overview and call to action. *BMJ Sex Reprod Health* 2022;48:3-6.
- 9 Kulczycki A. Abortion in Latin America: changes in practice, growing conflict, and recent policy developments. *Stud Fam Plann* 2011;42:199-220.
- 10 Faundes A. The responsibility of gynecologists and obstetricians in providing safe abortion services within the limits of the law. *Int J Gynaecol Obstet* 2017;139:1-3.
- 11 World Health Organization (WHO). *Monitoring the building blocks of health systems: a handbook of indicators and their measurement strategies*. Geneva: World Health Organization, 2010.
- 12 Fescina R, De Mucio B, Martínez G. *Sistema Informático perinatal (SIP): historia clínica perinatal: instrucciones de llenado Y definición de términos*. Montevideo: CLAP/SMR, 2011.
- 13 Clinical & Epidemiological Research Unit [Internet]. Montevideo: UNICEM, 2020. Available: <http://www.unicem-web.org/>
- 14 World Health Organization (WHO). *WHO guidelines on ethical issues in public health surveillance*. Geneva: World Health Organization, 2017.
- 15 Ponce de Leon RG, Ewerling F, Serruya SJ, *et al*. Contraceptive use in Latin America and the Caribbean with a focus on long-acting reversible contraceptives: prevalence and inequalities in 23 countries. *Lancet Glob Health* 2019;7:e227-35.
- 16 Langston AM, Joslin-Roher SL, Westhoff CL. Immediate postabortion access to IUDs, implants and DMPA reduces repeat pregnancy within 1 year in a New York City practice. *Contraception* 2014;89:103-8.
- 17 Tripney J, Kwan I, Bird KS. Postabortion family planning counseling and services for women in low-income countries: a systematic review. *Contraception* 2013;87:17-25.
- 18 Schreiber CA, Sober S, Ratcliffe S, *et al*. Ovulation resumption after medical abortion with mifepristone and misoprostol. *Contraception* 2011;84:230-3.
- 19 Lähteenmäki P, Luukkainen T. Return of ovarian function after abortion. *Clin Endocrinol* 1978;8:123-32.
- 20 Mehrtash H, Kim CR, Ganatra B, *et al*. What's needed to improve safety and quality of abortion care: reflections from WHO/HRP Multi-Country study on abortion across the sub-Saharan Africa and Latin America and Caribbean regions. *BMJ Glob Health* 2021;6:e007226.
- 21 Serruya SJ, Gómez Ponce de León R, Bahamondes MV, *et al*. EviSIP: using evidence to change practice through mentorship - an innovative experience for reproductive health in the Latin American and Caribbean regions. *Glob Health Action* 2020;13:1811482.
- 22 Cavalari CAA, Veiga-Junior NN, Kajjiura BD, *et al*. Factors associated with abortion complications after the implementation of a surveillance network (MUSA-Network) in a university hospital. *Rev Bras Ginecol Obstet* 2021;43:507-12.
- 23 *et al* Kajjiura BD, Veiga-Junior NN, Nunes CC. [Utilização de aspiração manual intrauterina após instalação de uma rede de vigilância em um hospital universitário no Brasil]. XXVI Congresso Paulista de Obstetrícia e Ginecologia. Anais. P41. Available: chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/viewer.html?pdfurl=https%3A%2F%2Fwww.sogesp.com.br%2Fmedia%2F2963%2FAnais-congresso-2021.pdf&clen=5802537&chunk=true
- 24 Eugen C, Veiga-Junior NN, Junqueira AA, *et al*. [Utilização de esvaziamento uterino medicamentoso exclusivo em mulheres em situação de aborto após instalação de uma rede de vigilância em um hospital universitário no Brasil]. XXVI Congresso Paulista de Obstetrícia e Ginecologia. Anais. P40. Available: [chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/viewer.html?pdfurl=https%](http://chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/viewer.html?pdfurl=https%3A%2F%2Fwww.sogesp.com.br%2Fmedia%2F2963%2FAnais-congresso-2021.pdf&clen=5802537&chunk=true)

- 3A%2F%2Fwww.sogesp.com.br%2Fmedia%2F2963%2Fanais-congresso-2021.pdf&clen=5802537&chunk=true
- 25 Solar F, Rumante K, Valenzuela F, *et al*. Experiencia clínica del uso de la ficha SIP/CLAP en mujeres con aborto espontáneo resuelto por vía quirúrgica. *Revista chilena de obstetricia y ginecología* 2020;85:324–34.
- 26 Rubio-Schweizer G, Caro-Elgueta M, Witker-Jiménez D, *et al*. Atención a mujeres en situación de aborto en el Hospital San José (2016-2019). *Revista chilena de obstetricia y ginecología* 2021;86:202–9.
- 27 Veiga-Junior NN, Cavalari CA, Eugeni C, *et al*. Post-abortion contraception before hospital discharge after installation of a surveillance network in Brazil. *Int J Gynaecol Obstet* 2020;150:200–5.
- 28 Bustillo Urbina MC, González Castro GM. Use of long-acting contraceptive methods in adolescent women in hospitals in Honduras. *Rev. méd. Hondur* 2020;88:99–103.
- 29 Castro R, Paz J. Contraceptive methods chosen by women after abortion in a public hospital in Honduras. *Rev. méd. Hondur* 2021;89.
- 30 Spurlin EE, Han ES, Silver ER, *et al*. Where have all the emergencies gone? the impact of the COVID-19 pandemic on obstetric and gynecologic procedures and consults at a new York City Hospital. *J Minim Invasive Gynecol* 2021;28:1411–9.
- 31 Masroor S. Collateral damage of COVID-19 pandemic: delayed medical care. *J Card Surg* 2020;35:1345–7.
- 32 Romanis EC, Parsons JA, Hodson N. COVID-19 and reproductive justice in Great Britain and the United States: ensuring access to abortion care during a global pandemic. *J Law Biosci* 2020;7:lsaa027.
- 33 Barnes-Josiah D, Myntti C, Augustin A. The "three delays" as a framework for examining maternal mortality in Haiti. *Soc Sci Med* 1998;46:981–93.
- 34 Practices HI. Planificación familiar post-aborto: Fortaleciendo el componente de planificación familiar de la atención post-aborto. Available: https://www.fphighimpactpractices.org/wpcontent/uploads/2018/08/PAI_Planificaci%C3%B3n-familiar-post-aborto.pdf
- 35 World Health Organization (WHO), World Bank, Gavi, Global Fund. *Monitoring and evaluation of health systems strengthening: an operational framework*. Geneva: World Health Organization, 2009. https://www.who.int/healthinfo/HSS_MandE_framework_Nov_2009.pdf