

ORIGINAL ARTICLE

REPRODUCTIVE PLANNING AND INSERTION OF INTRAUTERINE DEVICES BY PHYSICIANS AND NURSES IN BRAZIL

HIGHLIGHTS

- 1. Reproductive planning
- 2. Expansion of intrauterine device insertion procedures by nurses and physicians
- 3. Need for training in reproductive planning consultations

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ABSTRACT

Objective: to analyze the records referring to reproductive planning consultations and to intrauterine device insertion performed in 2021 by nurses and physicians in Primary Health Care in Brazil. **Method:** this is a quantitative, cross-sectional and descriptive study that resorted to secondary data from the Health Information System for Primary Care and submitted to simple descriptive statistics data analysis. **Results:** a total of 18,243 procedures about IUD insertion were recorded in the country, with prevalence of physicians, except for the state of Roraima; as well as 54,186 reproductive planning consultations with predominance of 41,184 (76%) nurses in relation to physicians (13,002; 24%). **Conclusion:** there is a need to invest in the training of physicians and nurses in order to expand access and the right to sexual life care of the women living in the country. Nursing care is a way to consolidate women's right to sexual and reproductive life care.

DESCRIPTORS: Intrauterine Devices; Women's Health: Nurses; Physicians; Interprofessional Education.

HOW TO REFERENCE THIS ARTICLE:

Rodrigues GA, Alves VH, Rodrigues DP, Pereira AV, Marchiori GRS, Oliveira MLB, *et al.* Reproductive planning and insertion of intrauterine devices by physicians and nurses in Brazil. Cogitare Enferm. [Internet]. 2023 [cited in "insert year, month, day"]; 28. Available from: https://dx.doi.org/10.1590/ce.v28i0.90554.

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INTRODUCTION

Around the world, the distribution of women that make use of intrauterine devices is unequal, with relatively low rates. Even when it is a safe contraception method for women in stable clinical conditions and of low cost for the health system, its use rate across different countries and continents varies around 15%, with underuse in Oceania, Sub-Saharan Africa and Latin America. In Brazil, IUD use is little frequent, with only 1.9% of the women of reproductive age using copper IUDs¹.

This unequal distribution can be influenced by factors such as governmental policies, health professionals with due skills to insert and remove the devices and availability of in-service training, in addition to the unequal distribution of resources and institutions referenced for this service²⁻³. International experiences such as those from Australia and the United States of America (USA) indicate that investing in training processes for health professionals, including nurses, is a necessary approach that contributes to increasing the rate of successful insertion procedures, reducing the complication rates and, in that respect, expanding the possibility of choosing and the respective access means to this contraception method by the country's population⁴⁻⁵.

In addition to Australia and USA, Egypt is also cited as a country that exemplifies the importance of investing in training and qualification of nurses for safe intrauterine device insertion, thus contributing to exerting a positive impact on maternal health, cost reduction and expansion of access and collaborative activities between health professionals in the sexual and reproductive health care context⁵⁻⁶.

Reproductive planning in line with the Sustainable Development Goals (SDGs) and defines actions and targets aimed at reducing the maternal mortality rate, at ensuring universal access to sexual and reproductive health services, and at expanding gender equality⁷. Currently in Brazil, and from a perspective of promoting health and reproductive rights beyond the nuclear family scope, the term "reproductive planning" has been adopted instead of "family planning", with actions encompassing health care, supply distribution and education in health⁸.

Ensuring women's access to contraceptive services with an emphasis on intrauterine devices becomes fundamental, with the possibility of contributing to reducing maternal health and negative outcomes to women's health, such as miscarriages. They are severe public health problems and challenges both for the Unified Health System (*Sistema* Único *de Saúde*, SUS) and for society, especially when it comes to population groups in situations marked by inequalities and vulnerabilities⁹. Thus, women's nonexistent or difficult access to Intrauterine Devices, for example, represents a severe violation of human rights and of Law No. 9,263/96¹⁰, which in its Article 9 regulates the family/reproductive planning practice, ensuring the possibility of offering such devices coupled to all the scientifically-accepted conception and contraceptive methods and techniques that do not imply any risk to people's life and health.

Ensuring access to health as a right for all is the State's duty through Article 196 of the 1988 Federal Constitution, which contributes to reducing the risk of diseases and other problems, determining that men and women should be guaranteed their right to freedom and autonomy to decide if they should have children, and how many. It can prioritarily be performed based on services linked to Primary Health Care, with an emphasis for actions and approaches that dialogue with sexual and reproductive health promotion or through services linked to birth and delivery, or even specialized services for specific population groups¹¹⁻¹².

The ways in which basic health services are organized present little flexibility in terms of meeting people's needs. As a consequence, there is inadequate regulation of the access to health services as a constitutional right. Thus, the waiting lines are increasingly longer, both for performing procedures and for professional evaluations, characterizing the functional aspect by the offer of services according to the population's needs¹³. In this sense, the current article aims at analyzing the records referring to reproductive planning consultations and to intrauterine device insertion procedures performed in 2021 by nurses and physicians in Primary Health Care in Brazil.

METHOD

The research conducted in this study adopts a quantitative, cross-sectional and descriptive approach, based on secondary and public domain data extracted from the Health Information System for Primary Care (*Sistema de Informação em Saúde para a Atenção Básica*, SISAB) (https://sisab.saude.gov.br/). SISAB can be defined as a resource used to identify the data referring to Primary Health Care procedures and services, in order to transform them into reliable and necessary information to contribute to the health organizations' decision-making process in the federal, state and municipal scopes, as well as for health training institutions.

Data collection was performed in April 2022 according to the following search procedure: access to the SISAB website, Health Production tab; Geographical Unit: State; Competence: selection of the period from January to December 2021; in the Report Line: selection of the Professional Category; in the Report column: selection of Procedure: SIGTAP; subsequently, the following filters start – Type of Team: Family Health Team-FHT; Basic Care Team; Street Office Team; Prison BC Team, Primary Care Team; Category: Nurse or Physician; Care Locus: BHUs, Mobile Unit – we access the Type of Production stage: +SIGTAP selecting "Insertion of Intrauterine Device, IUD" (Procedure: 0301040141).

The data about consultation records also followed the same search path, but using the International Classification of Primary Care (ICPC) – Code W12: Intrauterine contraception/ Intrauterine Device/IUD for access to IUDs, correlating the professional categories of nurses and physicians and according to Federation Units. The data were generated by the website itself with on-screen visualization and download to an *Excel* spreadsheet.

The simple relative frequency analysis technique was resorted to, which allows exploring the data by using the quotient between the absolute frequency of the variable and the total number of observations. Tables and graphs generated in *Excel* were also used to assist in visualization and analysis of all the information produced.

The study was approved by the Research Ethics Committee of *Universidade Federal de Roraima*, under opinion No. 5,022,055/2021.

RESULTS

Based on the analysis of the data collected from the Health Information System for Primary Care in 2021, 18,243 procedures about IUD insertion by nurses and physicians were recorded. In relation to the reproductive planning consultations, a total of 54,186 were found performed by the professional categories in question, regarding the number of consultations and IUD insertion procedures performed in Primary Health Care by states and regions of the country.

Table 1 allows ratifying differences between the number of procedures related to IUD insertion by nurses and physicians in Primary Health Care in 2021 and by region.

Table 1 - Number of intrauterine device insertion procedures performed by physicians andnurses in Primary Health Care in 2021, Brazil

REGION	Nurses	Physicians
Midwest	842	2,140
Northeast	905	1,029
North	981	279
Southeast	612	5,442
South	1,313	4,700
Total	4,653	13,590

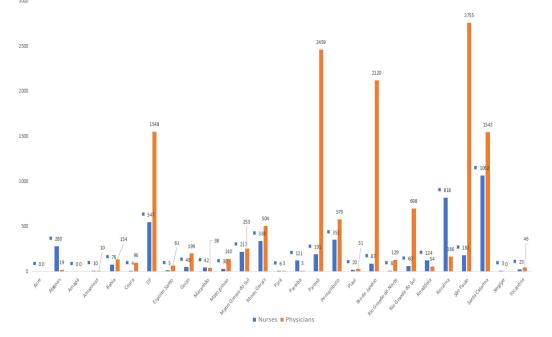
Source: SISAB, 2022.

Predominance of physicians can be verified in all Brazilian regions, with the highest number of procedures related to intrauterine devices recorded in the Southeast region with 5,442 (90%), followed by the South region with 4,700 (78%). There is reversal of this situation in the North region, where professional nurses assume the leading role, resulting in a lower number of procedures for the physicians in this region of the country: 279 (22%).

In the North region, nurses performed more Intrauterine Device insertion procedures than physicians. In proportional terms, 981 (78%) of the procedures in the region were performed by this professional category. In turn, the Northeast region records close data, with nurses accounting for 915 (47%) appointments, evidencing a change in the scenario of IUD provision to women of reproductive age in these Brazilian regions, collaborating with reproductive planning in these families.

Regarding the number of procedures related to intrauterine device insertion in Primary Health Care by state and performed by nurses and physicians in 2021, Graph 1 allows identifying that physicians inserted more IUDs than nurses in Primary Health Care in the country.

Graph 1 - Number of Intrauterine Device insertion procedures performed in Primary Health Care by nurses and physicians, by state, 2021 - Brazil.



Reproductive planning and insertion of intrauterine devices by physicians and nurses in Brazil Rodrigues GA, Alves VH, Rodrigues DP, Pereira AV, Marchiori GRS, Oliveira MLB, et al. Source: SISAB, 2022.

The data confirm that, in relation to the number of procedures related to IUD insertion, physicians performed more (13,590; 74.49%), than nurses (4,653; 25.51%).

In the states of São Paulo (2,755), Paraná (2,459), Rio de Janeiro (2,120), *Distrito Federal* (1,548) and Santa Catarina (1,543), the physicians inserted more than 1,000 devices throughout the year. In some of these states, such as Bahia, Mato Grosso do Sul, Minas Gerais, Pernambuco and Santa Catarina, the number of IUD insertion procedures did not present any significant difference when considering the number of procedures by professional category.

It was also possible to observe that, in three states (Roraima, Alagoas and Paraíba), nurses performed more IUD insertion procedures than physicians, as was the case in the following states: Roraima, where nurses inserted 818 (94%) devices and physicians, 54 (6%); in Alagoas, nurses 280 (94%) and physicians 19 (6%); and in Paraíba, nurses 121 (97%) and physicians three (3%). Certain predominance of this professional category is inferred in Primary Health Care, in line with COFEN Resolution No. 690/2022, which standardizes nurses' performance in Family and Reproductive Planning.

When analyzing the number of individual consultations related to intrauterine devices by region of the country, it was possible to reinforce visibility of disproportions, both between the professional categories and across the regions, as shown in Table 2:

Table 2 - Number of consultations related to Intrauterine Devices using CIAP W12 performedby nurses and physicians in Primary Health Care in 2021 and by region, Brazil.

Consultations conducted	Nurses	Physicians	Total	Proportion
Midwest	5,142	2,784	7,926	0.648
Northeast	12,305	3,092	15,397	0.799
North	4,795	901	5,696	0.841
Southeast	14,121	4,657	18,778	0.751
South	4,821	1,568	6,389	0.754
Total	41,182	13,002	54,186	0.760

Source: SISAB, 2022.

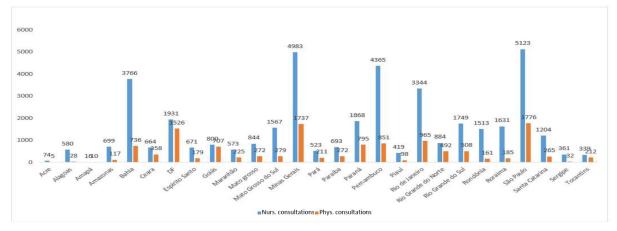
The analyses indicate that, regarding the individual consultations related to IUDs, nurses performed more procedures (41,184;76%) than physicians (13,002;24%). In the North region, the total of appointments was 4,795 (84%), the highest rate observed, followed by the Northeast region with 12,305 (80%) of the consultations. These data corroborate what is recommended in COFEN Resolution No. 690/2022, Article 2, which stipulates that, in the Nursing team, performance in terms of Family and Reproductive Planning is exclusive to nurses, respecting the legal dispositions of the profession.

The Southeast region was the one that recorded the highest numbers, both for nurses (14,121) and for physicians (4,657). The North region presented the fewest records, both for nurses (4,795) and for physicians (901), which can be related to the number of

women of reproductive age in each region of the country.

When analyzing the number of individual consultations related to intrauterine devices conducted in the country by physicians and nurses in Primary Health Care in 2021 by Federation Unit, and comparing the data between the professional categories and across the states, it is possible to identify differences that can be seen in Graph 2:

Graph 2 - Number of consultations related to Intrauterine Devices using CIAP W12 performed by physicians and nurses in Primary Health Care in 2021 and by state, Brazil.



Source: SISAB, 2022.

Certain hegemony of Nursing is thus evidenced in all Brazilian states, with a mean of 76% in professional performance in relation to the individual consultations related to IUDs. When this difference is analyzed by state, it is identified that nurses conducted more consultations in the states from the North, with a mean of 84% of appointments when compared to physicians. The states of Acre (74), Amapá (16), Tocantins (339) and Sergipe (361) were the ones that recorded the lowest numbers of consultations attended to by nurses. And in relation to the physicians, the states of Acre (five), Amapá (10), Alagoas (28) and Sergipe (32) were the ones with the fewest records.

From the data, certain inequality is inferred between the professional categories in all regions of the country, not noticing any reversal in the numbers by categories across the regions. However, the predominance of professional categories was changed between IUD insertion and consultation. In the first, the medical class was outdone in the state of Roraima, although it remained predominant in all the regions; regarding the IUD-related consultations, nurses prevail in the results found.

DISCUSSION

In Brazil there are still demographic differences that interfere in women's need to use contraceptive methods. Social, economic and cultural factors influence this process, reinforcing locoregional inequalities that indicate weaknesses involving health actions and difficulties accessing reproductive planning services, and with regard to differentiated choice and use of each method¹⁴⁻¹⁵.

Studies based on the National Health Survey conducted in 2013 in Brazil¹⁴ indicate that using oral or injectable hormones substituted the hegemony of tubal sterilization historically present in the country. The permanent sterilization method was more pointed out by black-/brown-skinned women and those with low schooling levels. In turn, in relation to the IUD, the device emerges as a little chosen method in the country, as only two out of 100 Brazilian women use it¹⁴.

There is global variability regarding IUD use around the world; in some countries, the percentage of women resorting to intrauterine contraception is below two percent (2%), whereas it is over 40% in other countries¹. Thus, even if IUDs are a reversible contraceptive method with a considerable use percentage in countries that are considered developed, it is still underused in Brazil¹⁶⁻¹⁷.

Of the 52.2 million people aged between 15 and 49 years old, 80.5% (33.6 millions) used some method to avoid pregnancy; of them, 50.4% resorted to hormone methods (40.6% used pills and 9.8% injectables), 22.9% employed definite sterilization methods (17.3% tubal and 5.6% vasectomy) and 20.4% chose male condoms, followed by 4.4% that used IUDs¹⁸.

It is a method that provides contraception safety, even for young women, as the uterine perfusion risk is low, as well as for presence of infection or removal due to intense bleeding in most of the women who use IUDs The unfavorable aspects would be related to IUD spontaneous expulsion, more common when there is immediate postpartum insertion and less when associated with the breastfeeding period. In addition to that, there is still controversy in the literature about the effect on subsequent fertility and possible predisposition to pelvic inflammatory disease¹⁹⁻²⁰.

Some factors that can negatively interfere in IUD use can also be mentioned, such as the following: organizational barriers with unnecessary criteria for device availability and insertion, limited knowledge about the benefits of the method among women and insufficient number of health professionals duly trained to offer the insertion procedures, in addition to ineffective health education processes to assist women's decision-making^{3,21-22}.

In order to expand women's coverage in relation to intrauterine device use, some factors should be considered, such as the following: existence of a public policy in the scope of each country that recommends their use and prioritizes funding, making the inputs available in reproductive health services, in addition to the presence of duly trained professionals that encourage use by providing diverse information based on updated scientific evidence^{18,23}. Among those issues, it is worth noting that having duly qualified professionals and engaged in strategies that expand insertion and use coverage of the devices in reproductive health services is one of the strategies that can significantly contribute to debureaucratizing the organizational structures and expanding use of the devices

It is considered important to increase the number of consultations related to Intrauterine Devices conducted in Brazil since, in addition to being focused on nurses (n=14,121/26.06%) and physicians (n=4,627/8.6%) in the Southeast region, this total (n=18,788/34.65%) becomes non-significant against the 52.2 million women of reproductive age between 15 and 49 years old living in the country¹⁸. The data that signal the highest number of consultations in the Southeast region can be related to the accumulation of professionals in this Region when compared to the others, as well as to the number of women living in each region.

The fact that Brazilian nurses conducted more individual consultations related to Intrauterine Devices than physicians in 2021 reinforces the involvement and competence of these professionals in the performance of activities targeted at reproductive health²⁴⁻²⁶.

In relation to the performance of the IUD insertion procedure, there is predominance of physicians in most of the country. However, in the North region, nurses performed more

Intrauterine Device insertion procedures than physicians. This regional difference, which is not identified in the other regions, reinforces a historical trend of difficulties or restrictions in relation to nurses introducing or removing IUDs in Brazil. The aforementioned differs from the reality of countries such as England, United States of America, India, Australia and South Africa, for example, where such practice by nurses is encouraged or consolidated^{6,15-16,27-28}.

In Brazil, the devices can be inserted by professional nurses or physicians. To such end, nurses need to be duly certified and trained according to the recommendations set forth in COFEN Resolution No. 0690/2022. Since 2012, the World Health Organization (WHO) recommends that intrauterine devices can be inserted and removed both by duly trained nurses and by physicians^{2-3,16-18}.

And, even if there are divergences in terms of stances across class entities, it is understood that investing in reproductive health care collaborative models focused on the relationship of interdependence between physicians and nurses may be a strategy capable of repairing historical distances in the health work process, reducing organizational barriers, expanding women's access to reproductive health professionals and services, expanding access to contraception to women of low socioeconomic levels and living in geographical territories with limited number of physicians, enhancing services with health education/ contraceptive counseling activities, and ensuring women's right to choose and use longlasting reversible contraception methods, such as IUDs.

Considering the dynamics of Primary Health Care and the Family Health Strategy (FHS), sharing of actions related to this family health and planning issue cannot be discarded. One study²⁹ involved safe expansion of procedures, historically performed by a professional (in this case, a physician) to allow performance by other health professionals, that is, nurses and midwives. A number of research studies can be found around the world that bet on this initiative, with viable investments in efforts to implement public policies and services with work processes in this collaborative perspective regarding reproductive health care²⁷⁻³⁰.

Consequently, recognizing interprofessional sharing of actions as a fruitful strategy to deal with historical and structural differences in the country is indispensable to expand women's access to individual consultations in reproductive health services and in Primary Health Care, in addition to expanding IUD insertion coverage in the entire country.

It is noted that the study presents limitations for not deepening on correlations between reach of the procedures and the insufficiency of duly trained professionals in the entire country. In addition, the data related to Clinical care for IUD indication, provision and insertion were not addressed, nor was the IUD removal procedure, all available in SISAB.

CONCLUSION

Public policies are indispensable to ease the operationalization of reproductive health services and to disseminate contraceptive methods, especially those that face professional, religious and political barriers and disputes such as IUDs. The analyses indicate the need for continued and in-service investments to expand the population's access to family and reproductive planning policies, directly involving expansion of the offer provided by this service in Primary Health Care.

In Brazil, investing in reducing inequalities through access to health services and professional qualification in the Primary Health Care scope contributes to implementing sexual and reproductive planning actions, increasing women's possibility of accessing conception and contraception methods and improving their quality of life; these investments should also be directed to the number of IUD insertion procedures, as the insufficiency of trained professionals for this purpose in the entire country signals the importance of

professional training of nurses and physicians targeted at quality of the consultations.

Investments focused on sharing interprofessional actions are important to ensure expansion of women's access to reproductive health services and contraceptive methods, with a focus on limiting or spacing pregnancies. In addition to that, in-service training and monitoring of health professionals aimed at the collaborative perspective, especially between nurses and physicians and linked to Primary Health Care, continue to be a permanent strategy, aiming at maintaining actions and practices that dialogue with the international trends based on updated scientific evidence.

Thus, to ensure success in this process, some suggestive indications should be considered, such as the following: the class entities and professional categories should be involved in the possibility of mediating conversations and implementing changes focused on acceptability of collaborative work and of women's reproductive health; the professions' responsibilities and competences need to be regulated and publicized; adequate flows should be operationalized in the referral system, reducing organizational barriers; teaching and training from an interprofessional perspective; and professional engagement with the complexity involving women's sexual and reproductive rights.

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Received: 11/07/2022 **Approved:** 27/01/2023

Associate editor: Dra. Tatiane Trigueiro

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ISSN 2176-9133



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Reproductive planning and insertion of intrauterine devices by physicians and nurses in Brazil Rodrigues GA, Alves VH, Rodrigues DP, Pereira AV, Marchiori GRS, Oliveira MLB, et al.