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SISPRENATAL as a tool for evaluating quality of prenatal care

ABSTRACT

OBJECTIVE: To evaluate coverage by the Prenatal and Birth Humanization Program, according to its minimal requirements and process indicators, by comparing information from prenatal booklets to SISPRENATAL (System to Accompany the Prenatal and Birth Humanization Program).

METHODS: A cross-sectional study was carried out with prenatal data from 1,489 women in the postpartum period after birth in the Brazilian Unified Health System, between November 2008 to October 2009 in São Carlos municipality, Southeastern Brazil. Data were collected from the prenatal booklet and afterwards from the SISPRENATAL. Information from both sources was compared using the McNemar χ^2 test for related samples.

RESULTS: Prenatal coverage in relation to the number of live births was 97.1% according to the prenatal booklet and 92.8% according to SISPRENATAL. There were statistical significant differences between both sources of information for all the minimum requirements of the Prenatal and Birth Humanization Program, and also the process indicators. Except for the first prenatal visit, the prenatal booklet always had greater frequencies than SISPRENATAL. The proportion of women with six or more prenatal visits and all basic exams was 72.5%, according to the prenatal booklet and 39.4% by the official system. These differences remained for the five health regions in the municipality.

CONCLUSIONS: SISPRENATAL was not a reliable source for evaluating the available information on care during pregnancy. There was high adherence to the Prenatal and Birth Humanization Program, but documentation of information was insufficient for all the minimum requirements and process indicators. Ten years after the start of the program, municipalities should provide adequate quality of care and build health professional capacity for proper documentation of health information.

DESCRIPTORS: Prenatal Care. Humanization of Assistance. Outcome and Process Assessment (Health Care). Health Services Accessibility. Information Systems. Quality of Health Care.

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INTRODUCTION

The Prenatal and Birth Humanization Program (*Programa de Humanização do Pré-natal e Nascimento*, PHPN) was created by the Brazilian Ministry of Health in the mid-2000s. The objectives were to assure universal access to quality care during pregnancy, delivery and the postnatal and neonatal periods; reduce maternal and perinatal morbidity and mortality rates; and complement already adopted measures to improve care for pregnant women given the basic rights of citizenship.[14] The PHPN established innovative quantitative parameters for

a minimum level of care, from primary care to higher complexity levels.[14] These minimum requirements were early first prenatal visit, a minimum of six visits, tetanus immunization, two routine sets of basic exams (including HIV and syphilis) and a puerperal visit within 42 days of birth. The SISPRENATAL software is the information system for the program available at each municipality. Process indicators were created to monitor implementation steps and program continuity.[a]

For the PHPN, the Ministry of Health recommends utilization of the following process indicators: trimester of first visit; percentage of women enrolled in prenatal care in relation to the number of live births; percentage of women with six or more prenatal visits; percentage of women with six or more prenatal visits and a puerperal visit; percentage of women with six or more prenatal visits and all basic tests; percentage of women with six or more prenatal visits, all basic tests and a puerperal visit; percentage of enrolled women with an HIV test; percentage of enrolled women with the recommended tetanus doses; and percentage of women with six or more visits, all basic tests, a puerperal visit, HIV test and recommended tetanus doses.

Since implementation, national data on the PHPN still show low coverage, with large regional variation.[2,3,6-10,12,13,16] Although the number of women with six or more prenatal visits has increased over the years, the minimum requirements have not reached 20% coverage, with large regional differences.[12,13] All data from Brazilian municipalities are inserted in DATASUS through local upload to SISPRENATAL. The program uses collection instruments (enrollment forms and weekly spreadsheets), and information should be subsequently transcribed. Any error in the transcription of data from the prenatal accompaniment booklet to the worksheet and from the worksheet to the computer system can result in incomplete or unavailable information.

São Carlos is a municipality in Southeastern Brazil, with 193,000 residents and five administrative regions for health (*administrações regionais de saúde*, ARES) divided according to the geographical location of health care units. It was the first municipality to adopt the PHPN, agreeing to the terms on 16 January 2001. The Municipal Secretary of Health developed a protocol for obstetric care and also developed training efforts for the multiprofessional team in primary care. In addition, specialized prenatal ambulatory care was created, and ties to the hospital network improved, as represented by partnership with the only accredited maternity hospital to the National Health System (*Sistema Único de Saúde,* SUS). São Carlos has high prenatal coverage

and low rates of perinatal mortality, in comparison to the mean for the state.[b] Despite of this, the local program coverage has always been below expectations.

The recording and typing of data for visits and other procedures performed during the prenatal period present technical difficulty, since they are performed in São Carlos by employees not involved in prenatal care. After attendance by a health professional, data are transcribed to PHPN worksheets, usually by another member of the multiprofessional team at the health unit. It can be assumed that information recorded on the prenatal booklet and on medical records are more reliable since they are performed during the visit by direct transcription. It is also reasonable to assume that loss of additional information may occur on the worksheet and when typing data.

The current study aimed to compare prenatal data from two information sources: the prenatal booklet, where all prenatal care should be recorded, and the SISPRENATAL database. Coverage of PHPN was also analyzed, according to the minimal requirements and the process indicators proposed by the Ministry of Health.

METHODS

The target population consisted of puerperal women residing in São Carlos municipality, who had institutional deliveries and were selected following birth during their stay in the institution. Women were excluded if they lost their prenatal booklet, refused participation or had home delivery.

A worksheet was developed especially for the study, containing all relevant variables from the information sources (admission records, prenatal booklet and SISPRENATAL) which were initially submitted to pre-testing, and subsequently adapted.

Data collection was performed in two stages. The first step occurred in the maternity hospital, between 1 November 2008 and 31 October 2009, a 12 month study period. The minimum stay for a woman in a maternity hospital is 48 hours. To include the total women admitted for deliveries, the maternity was visited every two days to identify study candidates from the report of deliveries in SUS during the previous 48 hours. Visits with puerperal women were designed to avoid interruption of other activities (breastfeeding, counseling for discharge and for next visit, newborn vaccination, visit of newborn in observation cribs or an intensive care unit).

The data collected from admission records and prenatal booklets (which are routinely attached to each other) were transcribed on the data collection instrument.

After three months of the start of data collection in the maternity, data collection began through searches of the DATASUS database to obtain SISPRENATAL information, where were also transcribed to the instrument. Data were collected directly from the computer used by the worker responsible for the receipt and typing of SISPRENATAL data, at the Municipal Health Secretary, Informatics Sector. This data collection stage ended in January of 2010. During the second stage, the procedure for collection followed the identification steps used by the health unit, typing the SISPRENATAL enrollment number in the database, review of the name and date of birth and transcription of the data from the information system to the collection instrument. If the women was not found in the system, the search was undertaken with the full name and date of birth; when these data were unavailable, the women was considered as not enrolled.

The following analyses were conducted of PHPN coverage: the number of pregnant women enrolled in the program compared to the number of live births during the same period, obtained from the State System Foundation for Data Analysis;[c] care to pregnant women in accordance with the minimum requirements of the PHPN; and available information about the process indicators for prenatal care according to Ministry of Health recommendations. Results were controlled for age, schooling, marital status, race/skin color, number of pregnancies, clinical occurrences, gestational age at birth, delivery mode, 5-minute Apgar, hospitalization during pregnancy, referral for high risk prenatal care, and the woman's regional health area.

The data-entry program was developed in EpiInfo, version 6.04b. McNemar's chi-square test was performed for paired samples, comparing the two information sources according to the minimum PHPN requirements and process indicators, according to regional health area. Pearson chi-square test was used to compare maternal characteristics according to municipal regional health area.

The study respected recommended guidelines for ethical research with humans. The research project was approved by the Research Ethics Committee of the College of Medical Sciences of UNICAMP, appearance number 748/2008. Participants signed voluntary informed consent forms, after being informed about the research methods, objectives and justification.

RESULTS

According to Municipal Epidemiologic Surveillance data, between 1 November 2008 and 31 October 2009, São Carlos municipality registered 1,533 live births through SUS. During the same period, 1,505 were admitted in the maternity through SUS, of which 1,489 were included in the study. Only 16 eligible women did not agree to participate, and 28 live births in the public sector were not identified by the study, possibly corresponding to births outside the municipality or home births.

At least one prior cesarean section was documented for 402 women. Anemia, arterial hypertension, urinary tract infection and pre-term labor were among the most frequent problems during pregnancy. Almost half of hospitalizations during gestation were for urinary tract infections. The majority of women referred to high risk prenatal care had arterial hypertension and/or diabetes. There were not a significant number of newborn hospitalizations, in observation cribs or in intensive care units. One maternal death occurred during data collection, but the study period and the number of cases are small for inferences about this occurrence.

Table 1 shows the information obtained from the pregnancy booklet compared to SISPRENATAL. There was a significant difference between information sources for all parameters analyzed. With the exception of first prenatal visit by 17 gestational weeks, all other requirements had significantly higher frequencies in the pregnancy booklet than in SISPRENATAL. The greatest difference between the registries occurred in the documentation of routine second tests.

Table 2 shows the process indicators according to information on the minimal requirements. There was a significant difference between the two information sources, with higher coverage in the prenatal booklet, except for gestational age of first prenatal visit. Indicators that include information on the timing of the first postnatal visit could obviously not be evaluated through use of the prenatal booklet.

Maternal characteristics are found in Table 3, according to the five different areas of the municipality. Regional Health Administration Area 1 (*Área de Administração Regional de Saúde, ARES* 1) presented a significantly greater proportion of adolescent pregnancies, greater parity and lower cesarean rates. These same women were also minority white skin, had lower schooling, greater proportion of births at term and more newborns with a 5- min Apgar score less than 7, although the latter was not statistically significant.

Table 4 presents information on minimum requirements, obtained from the prenatal booklet and SISPPRENATAL, for each of the five regional health areas in the municipality. The differences between the two information sources remained significant for

[c] Secretaria Municipal de Saúde de São Carlos. Dados da Vigilância Epidemiológica do Município de São Carlos, SP. São Carlos; 2010.

Table 1. Coverage of care, according to the minimum requirements of the Prenatal and Birth Humanization Program, by information source. São Carlos, Southeastern Brazil, 2009.

Minimum requirements	Prenatal booklet		SISPRENATAL		P-value*
	n	%	n	%	
Start of prenatal care by 17 weeks (120 days)	1,095	73.5	1,283	86.2	< 0.001
Six or more prenatal visits	1,334	89.6	984	66.1	< 0.001
First postnatal visit	-	-	659	44.3	-
First routine exams					
Hb and Ht	1,468	98.6	1,231	82.7	< 0.001
Fasting glucose	1,471	98.8	1,231	82.7	< 0.001
Blood type	1,471	98.8	1,231	82.7	< 0.001
VDRL	1,469	98.7	1,230	82.6	< 0.001
HBsAg	1,469	98.7	1,183	79.4	< 0.001
Urine I	1,451	97.4	1,246	83.7	< 0.001
Second routine exams (30 weeks)					
Hb an Ht	1,220	81.9	698	46.9	< 0.001
Fasting glucose	1,217	81.7	789	53.0	< 0.001
Urine I	1,184	79.5	797	53.5	< 0.001
VDRL	1,224	82.2	791	53.1	< 0.001
All basic exams	1,136	76.3	658	44.2	< 0.001
HIV Test	1,472	98.9	1,200	80.6	< 0.001
Tetanus vaccination	1,236	83.0	1,005	67.5	< 0.001
Total	1,489		1,489[a]		

* McNemar Test for paired samples.
[a] 67 cases not enrolled in SISPRENATAL, and 70 cases with incorrect or missing registration in the booklet.
Hb: hemoglobin; Ht: hematocrit; VDRL: veneral disease research laboratory for syphillis; HBsAg: Hepatitis B surface antigent

Table 2. Process indicators for the Prenatal and Birth Humanization Program, by information source. São Carlos, Southeastern Brazil, 2009.

Process indicators	Cartão da gestante		Sisprenatal		p*
	n	%	n	%	
1.Trimester of first prenatal care					<0.001**
First	865	66.7	1,145	80.5	
Second	389	30.0	243	17.1	
Third	42	3.2	34	2.4	
Total	1296[a]		1,422[b]		
2. Proportion of pregnant women in relation to number of live births	1,489/1,533	97.1	1,422/1,533	92.8	<0.0001
3. Proportion with 6 or more prenatal visits	1,334	89.6	984	66.1	<0.001
4. Six or more prenatal visits + Puerperal visit	-	-	534	35.9	-
5. Six or more visits + All basic tests	1,079	72.5	587	39.4	<0.001
6. Six or more prenatal visits + Puerperal visit + All basic exams	-	-	322	21.6	-
7. Proportion of women with HIV test	1,472	98.9	1,200	80.6	<0.001
8. Proportion of women immunized against tetanus	1,236	83.0	1,005	67.5	<0.001
9. Six or more visits + Puerperal visit + All basic tests + HIV test + Tetanus Vaccination	-	-	286	19.2	-
Total	1,489		1,489[c]		

* McNemar Test for paired samples; ** Comparison: 1st trimester to others
[a] Missing information in 193 cases
[b] Missing information in 67 cases;
[c] 67 cases not enrolled in SISPRENATAL, and 70 cases with incorrect or missing registration in the booklet

Table 3. Characteristics of women, by regional health area. São Carlos, Southeastern Brazil, 2009.

| Characteristic | Municipal regional health area | | | | | Total[a] | P-value* |
	1	2	3	4	5		
Age (years)[b]							0.002
≤ 19	28.5%	16.8%	20.3%	19.2%	19.7%	21.2%	
20-29	51.3%	55.9%	44.5%	55.9%	53.6%	52.9%	
30-39	17.7%	25.0%	33.5%	23.4%	25.1%	23.9%	
40 or more	2.4%	2.4%	1.6%	1.4%	1.7%	2.0%	
(n)	(372)	(340)	(182)	(286)	(295)	(1,475)	
Schooling[c]							+
None	0.9%	0.3%	0.6%	0.0%	0.0%	0.4%	
Primary	27.0%	18.2%	14.1%	13.9%	15.1%	18.3%	
Secondary	72.1%	75.7%	84.1%	82.0%	82.1%	78.4%	
Higher	0.0%	5.8%	1.2%	4.1%	2.9%	2.9%	
(n)	(330)	(313)	(170)	(266)	(279)	(1,358)	
Marital status[d]							0.914
Single	14.4%	16.2%	15.9%	16.3%	17.1%	15.9%	
Stable union	85.6%	83.8%	84.1%	83.7%	82.9%	84.1%	
(n)	(367)	(339)	(182)	(288)	(292)	(1,468)	
Race/skin color[e]							+
White	70.6%	78.8%	80.1%	79.1%	82.3%	77.6%	
Black	5.7%	5.0%	6.6%	5.2%	3.8%	5.2%	
Mixed	23.7%	15.9%	12.7%	14.3%	14.0%	16.8%	
Asian	0.0%	0.3%	0.6%	1.4%	0.0%	0.4%	
(n)	(367)	(339)	(181)	(287)	(293)	(1,467)	
Number of pregnancies[f]							0.004
1	39.8%	40.3%	42.5%	48.8%	45.1%	43.1%	
2	22.3%	33.8%	32.0%	26.5%	27.1%	27.9%	
3	19.4%	13.8%	14.9%	12.5%	14.9%	15.3%	
4 or more	18.5%	12.1%	10.5%	12.2%	12.9%	13.7%	
(n)	(372)	(340)	(181)	(287)	(295)	(1,475)	
Complications during pregnancy[g]							0.589
Yes	13.4%	17.1%	14.8%	13.7%	16.7%	15.1%	
No	86.6%	82.9%	85.2%	86.3%	83.3%	84.9%	
(n)	(366)	(334)	(182)	(284)	(288)	(1,454)	
Gestational age at birth[h]							+
< 32 weeks	0.8%	1.8%	0.5%	1.1%	1.0%	1.1%	
32 - 36 weeks	5.7%	7.9%	9.8%	8.5%	10.7%	8.3%	
37 weeks or more	93.5%	90.3%	89.6%	90.5%	88.3%	90.7%	
(n)	(369)	(340)	(183)	(284)	(290)	(1,466)	
Type of delivery[i]							0.025
Vaginal	44.2%	35.9%	33.3%	42.7%	35.7%	39.0%	
Cesarean	55.8%	64.1%	66.7%	57.3%	64.3%	61.0%	
(n)	(373)	(340)	(183)	(286)	(294)	(1,476)	
5-min Apgar[j]							+
< 7	1.9%	2.7%	1.7%	1.4%	0.3%	1.6%	
≥ 7	98.1%	97.3%	98.3%	98.6%	99.7%	98.4%	
(n)	(368)	(337)	(180)	(284)	(294)	(1,463)	

To be continued

Table 3 continuation

Characteristic	Municipal regional health area					Total[a]	P-value*
	1	2	3	4	5		
Hospitalization during pregnancy							0.623
Yes	2.1%	0.9%	1.6%	2.4%	1.7%	1.8%	
No	97.9%	99.1%	98.4%	97.6%	98.3%	98.2%	
(n)	(374)	(341)	(183)	(288)	(296)	(1,482)	
High risk prenatal care							0.269
Yes	7.2%	7.3%	6.6%	4.2%	8.8%	6.9%	
No	92.8%	92.7%	93.4%	95.8%	91.2%	93.1%	
(n)	(374)	(341)	(183)	(288)	(296)	(1,482)	

* Pearson chi-square test; + Chi-square test not applicable
Information is missing from a:7; b:7; c:124; d:14; e:16; f:8; g:28; h:16; i:6; j:19

all requirements analyzed and all regional areas, with the exception of first postnatal visit which could not be evaluated. Overall, prenatal care began on time in all regions, with the lowest percentage in ARES 2 (67.4%), according to the prenatal booklet. According to SISPRENATAL, the percentage of pregnant women with six or more prenatal visits was similar in all ARES, with the lowest rate in ARES 4. Nonetheless, in ARES 3, only 18.6% of women underwent all basic exams and 50.3% underwent HIV testing. Also, in ARES 4 there was a lower rate of women vaccinated for tetanus (only 66.3%, according to the prenatal booklet), while all the other regions reached more than 80% of women vaccinated. Also in ARES 4, a greater proportion of women performed all basic exams according to the prenatal booklet (81.6%).

DISCUSSION

The results of this study reinforce the initial hypothesis of undernotification of procedures in SISPRENATAL in comparison to those actually performed, as documented in prenatal booklets.

The minimal PHPN requirements were adapted from international studies, especially World Health Organization recommendations, although with a perspective to make them appropriate to the reality of the Brazilian population.[15] Through SISPRENATAL, the Brazilian Ministry of Health monitors performance of the basic program interventions and provides financing to municipalities that meet these requirements. The availability of financial resources for local investment is fundamental for the organization of care and the quality of the health service.[11,12]

Initially, municipalities from across the country adhered to PHPN,[14] although there is much to be improved in the fulfillment of program goals. After ten years of the program, low coverage of interventions persists, with coverage rates for all program requirements under 20%, and with large regional variation.[2,4,5,12,13,16,d]

One of the novel aspects of this study was to evaluate prenatal information according to different sources of information. Prior studies about PHPN coverage and process indicators, utilized interviews with new mothers and/or review of patient records or DATASUS, without consideration that the information sources could withhold differences when compared.

The discrepancy between the data from the two information sources on prenatal care in the municipality revealed probable failures in recording. Prenatal coverage was greater than 90% in both information sources, although only 19.2% of women met all minimal criteria, according to SISPRENATAL. The timeliness of the first postnatal visit could only be evaluated through SISPRENATAL, since the information from the pregnancy booklet was obtained during hospitalization for delivery.

Gestational age for start of prenatal care was the exception in which SISPRENATAL outperformed the pregnancy booklet, which could be explained by the municipal strategy of timely confirmation of pregnancy through a urine test performed by the nursing team. The health team is responsible for PHPN enrollment and for requesting the first routine exams; the pregnancy booklet is only initiated during the second prenatal care visit, when the results of the laboratory exams are available. Another alternative or complementary explanation for this finding concerns the financial incentive that the municipality receives from SUS in performing a timely enrollment of pregnant women in the system. This could be a strong enough motive to increase capture of these women.

The pregnancy booklet is filled out during the visit, and SISPRENATAL relies on worksheets by the health unit, after each visit. This method can create failures in documentation, due to the details involved in the worksheet, sending the worksheet and in subsequent typing into the system. Generally, the employee responsible for registering information on the SISPRENATAL worksheets

Table 4. Information about the minimum requirements for the Prenatal and Birth Humanization Program, by regional health areas and source of information. São Carlos, Southeastern Brazil, 2009.

Minimal requirements	Regional health areas									
	1		2		3		4		5	
	Booklet	SISPRENATAL	Booklet	SISPRENATAL	Booklet	SISPRENATAL	Booklet	SISPRENATAL	Booklet	SISPRENATAL
Start prenatal by 17 wk (120 d)	$p < 0.005$*		$p < 0.001$*		$p < 0.001$*		$p < 0.001$*		$p < 0.001$*	
	82.6%	88.0%	67.4%	85.6%	70.5%	86.9%	71.5%	83.7%	74.0%	88.2%
Six or more visits	$p < 0.001$*		$p < 0.001$*		$p < 0.001$*		$p < 0.001$*		$p < 0.001$*	
	94.1%	66.8%	90.0%	63.3%	91.8%	69.4%	83.7%	68.4%	88.2%	65.2%
Puerperal visit	-	43.6%	-	44.9%	-	46.4%	-	48.6%	-	39.9%
All basic exams	$p < 0.001$*		$p < 0.001$*		$p < 0.001$*		$p < 0.001$*		$p < 0.001$*	
	76.5%	46.3%	77.4%	41.9%	66.7%	18.6%	81.6%	57.6%	75.3%	48.0%
HIV Test	$p < 0.001$*		$p < 0.001$*		$p < 0.001$*		$p < 0.001$*		$p < 0.001$*	
	99.2%	83.4%	98.5%	78.6%	98.4%	50.3%	99.0%	91.3%	99.0%	89.2%
Tetanus vaccination	$p < 0.001$*		$p < 0.001$*		$p < 0.001$*		$p < 0.05$*		$p < 0.001$*	
	90.1%	72.5%	87.7%	69.8%	91.3%	78.1%	66.3%	58.7%	80.4%	61.8%
(n)[a]	(374)		(341)		(183)		(288)		(296)	

* TMcNemar chi-square test for paired samples; [a] Missing information in regional area for 7 cases

does not participate in the visits. In the current study, the worksheets sent to the Informatics Sector of the Health Secretary were always typed in the system by the same employee, who was accustomed with the program.

Considering that the prenatal booklet is more reliable than SISPRENATAL since it is less subject to recording errors, it can be concluded that the municipality has quantitative performance measures above the national average. In São Carlos, SISPRENATAL was not a reliable method to evaluate information on prenatal care. There is an especially large difference between the information on the second set of routine exams. According to previous studies, the proportion of women that perform the second round of exams is always less than expected and less than the proportion that performed the first routine exams.[2,3,6-10,12,13,16] In the current study, the decrease in the number of routine second exams was much less according to the prenatal booklet compared to SISPRENATAL, which indicates that most women meet this requirement, without a corresponding record in the system. A substantial difference can also be found for tetanus vaccination according to DATASUS, which reinforces the conclusion that integration between the multiprofessional team is fundamental for improved documentation of information. In general, vaccination is performed by a professional unconnected to prenatal care and on a different day.

Program coverage, evaluated by the proportion of pregnant women in relation to the number of live births in the municipality, was 97.1% according the booklet and 92.8% according to SISPRENATAL. Although there was a statistically significant difference, we can confirm that this program goal was met, since São Carlos presented one of the highest prenatal coverage rates in the state. This fact can be explained by early municipal adherence to PHPN and by the creation of a municipal protocol for individualized care. The municipal protocol includes serology exams not included in PHPN, such as hepatitis B, rubella and toxoplasmosis and a second hemoglobin/hematocrit evaluation. In addition, the provision of care was organized through referral mechanisms for specialized care and hospitalization and by improving the technical capacity of the multiprofessional team through training courses and workshops. Nonetheless, the correct recording of health information is another goal to still be reached and is fundamental for the development of new projects, understanding the target population and receipt of federal resources by the municipality, in order to generate greater local investment in improved care.

In comparing the results of the diverse regions in the municipality, the prenatal booklet showed greater

[d] Ministério da Saúde. Departamento de Ciência e Tecnologia. Secretaria de Ciência, Tecnologia e Insumos Estratégicos. Brasília, 2008. Avaliação nacional do Programa de Humanização do Pré-natal e Nascimento. *Rev Saude Publica*. 2008;42(2):383-7. DOI:10.1590/S0034-89102008000200029

notification than SISPRENATAL in all regions. Although the sociodemographic characteristics may suggest that less favored regions have worse indicators, this was not a rule. These regional differences, though, should have greater importance for the planning of regional/municipal actions to correct distortions that may exist in services provided by the respective basic health units.

The PHPN process indicators allow for quantitative (and indirect qualitative) evaluations of prenatal care, by regional or national level. The proportion of pregnant women who meet the minimum PHPN recommendations can be determined, but the quality of care cannot be evaluated through these parameters. As the name suggests, the PHPN assumes humanized and quality care, to reach the goal to decrease maternal and perinatal mortality in Brazil, although the causal relationship between improved prenatal care and reduction in morbidity and mortality rates is questionable, due to the observational nature of the relevant studies.

PHPN has new challenges after ten years of implementation. There is a need for continuous motivation for adherence and program maintenance in each municipality. Health information should be made available more effectively through strategies to avoid data loss, and investments are necessary to fulfill the initial proposals, including the humanization of care. Pregnant women should be welcomed by the health network, understand and be involved in care and create ties with the multiprofessional team. They frequently report difficulties to adhere to the program due to inefficient or impersonal processes at care units.[1]

Correct utilization of the available information would allow national programs to be developed considering local and regional differences, ensuring improved resolvability, which is a nationwide overcoming barrier to public health. In developing countries such as Brazil, initiatives like PHPN can impact health indicators, as long as they are customized and appropriate to each location. For greater effectiveness of obstetric health policies, especially in the context of a developing region, investments in human resources are necessary, along with financing to improve the quality of care. The later includes the physical infrastructure of health units, subcontracting of quality complementary tests according to strict parameters and the establishment of connections between different levels of care. Human resources include the technical capacity of the care team, from the receptionist and the security guard to the nursing staff and physicians. The involvement of the entire health team in meeting the implicit and explicit demands of the population, in addition to correctly documenting data about prenatal care, would represent fundamental changes in public policy. Eventually, decentralization of the information system could reduce undernotification of procedures performed during prenatal care, through online information systems for professionals providing care in the health units.

Innovative and challenging, the PHPN remains a main guideline for health care during pregnancy, birth and the puerperal period, and challenges remain to improve the quality of care delivered and the adequate documentation of health information.

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