

2021

## Association between health care provider factors and the number of prenatal visits in Peruvian Hospital users

Karina Diez Quevedo

*Dirección General de Telesalud, Referencia y Urgencias del Ministerio de Salud, Lima-Perú.,*  
karieliz@gmail.com

Maritza Placencia Medina

Follow this and additional works at: <https://inicib.urp.edu.pe/rfmh>



Part of the [Health Information Technology Commons](#), and the [Public Health Commons](#)

---

### Recommended Citation

Diez Quevedo, Karina and Placencia Medina, Maritza (2021) "Association between health care provider factors and the number of prenatal visits in Peruvian Hospital users," *Revista de la Facultad de Medicina Humana*: Vol. 21: Iss. 1, Article 13.

Available at: <https://inicib.urp.edu.pe/rfmh/vol21/iss1/13>

This Article is brought to you for free and open access by INICIB-URP. It has been accepted for inclusion in Revista de la Facultad de Medicina Humana by an authorized editor of INICIB-URP.



# ASSOCIATION BETWEEN HEALTH PROVIDER FACTORS AND THE NUMBER OF PRENATAL CARE IN USERS A HOSPITAL FROM PERU, 2019

ASOCIACIÓN ENTRE LOS FACTORES DEL PROVEEDOR DE SALUD Y EL NÚMERO DE ATENCIONES PRENATALES EN LAS USUARIAS DE UN HOSPITAL DEL PERÚ, 2019

Karina Elizabeth Diez-Quevedo<sup>1,a</sup>, Maritza Dorila Placencia-Medina<sup>2,b</sup>

## ABSTRACT

**Introducción:** He maternal and child health care is a priority for health services, it is essential that every pregnant woman complies with the necessary amount of prenatal care for proper supervision of the pregnancy and the detection of possible warning signs or complications in a timely manner. **Objective:** To identify the association between the health provider factors and the number of prenatal care in the users of the Carlos Lanfranco La Hoz hospital attended in 2019. **Methods:** Quantitative, relational and non-experimental design study. 342 pregnant users attended from January to December 2019, who were selected through a systematic probability sampling. For the statistical analysis, a descriptive statistic was used through the distribution of absolute and relative frequencies and an inferential statistic through the use of Poisson regression. **Results:** The age from 18 to 35 years (74%) predominated, the degree of secondary instruction (62.9%), the cohabiting marital status (71.1%) and the comprehensive health insurance (92.7%). The factors associated with the number of prenatal care were, as a scientific technical factor, receiving guidance on the results of analysis in prenatal care "(p = 0.000; expB = 1.2 95% CI 1.10-1.39), and the doctor or obstetrician if recommended medications in their prenatal consultation (p = 0.003; expB = 1.2 95% CI 1.05-1.27); As a human factor, the doctor or obstetrician calls her by name during the prenatal visit (p = 0.000; expB = 1.5 95% CI 1.19-1.77). **Conclusion:** There is an association between the health provider factors and the number of prenatal care in the users of the Carlos Lanfranco La Hoz Hospital attended in 2019.

**Key words:** Health provider factors; Number of prenatal care; Users; Pregnant women (source: MeSH NLM).

## RESUMEN

**Introducción:** La atención de la salud materno infantil es una prioridad para los servicios de salud. **Objetivo:** Identificar la asociación entre los factores del proveedor de salud y el número de atenciones prenatales en las usuarias del Hospital Carlos Lanfranco La Hoz atendidas en el año 2019. **Métodos:** Estudio cuantitativo, relacional y observacional. Conformaron la muestra 342 usuarias gestantes atendidas de enero a diciembre del 2019, las cuales fueron seleccionadas mediante un muestreo probabilístico sistemático. Para el análisis estadístico se usó una estadística descriptiva mediante la distribución de frecuencias absolutas y relativas y una estadística inferencial mediante el uso de la regresión de Poisson. **Resultados:** Predominó la edad de 18 a 35 años (74%), el grado de instrucción secundaria (62,9%), el estado civil conviviente (71,1%) y el seguro integral de salud (92,7%). Los factores asociados al número de atenciones prenatales fueron el factor técnico científico-recibir orientación sobre los resultados de análisis en la atención prenatal" (p<0,001; expB=1,2 IC95% 1,10-1,39), y que el médico u obstetra le recomiende medicamentos en su consulta prenatal (p=0,003; expB=1,2 IC95% 1,05-1,27)-: y como factor humano -médico u obstetra la llama por su nombre durante la consulta prenatal (p<0,001; expB=1,5 IC95% 1,19-1,77)-. **Conclusión:** Existe asociación entre los factores del proveedor de salud y el número de atenciones prenatales en las usuarias del Hospital Carlos Lanfranco La Hoz atendidas en el año 2019.

**Palabras clave:** Factores del proveedor de salud; Número de atenciones prenatales; Usuarias; Gestantes (fuente: DeCS BIREME).

<sup>1</sup> Dirección General de Telesalud, Referencia y Urgencias del Ministerio de Salud, Lima-Perú.

<sup>2</sup> Universidad Nacional Mayor de San Marcos, Lima-Perú.

<sup>a</sup> Obstetrician, specialist in Health Management.

<sup>b</sup> Pharmaceutical Chemist, Dr. in Pharmacy and Biochemistry.

**Cite as:** Karina Elizabeth Diez-Quevedo, Maritza Dorila Placencia-Medina. Association between health provider factors and the number of prenatal care in users a hospital from Peru, 2019. Rev. Fac. Med. Hum. January 2021; 21(1):108-117. DOI 10.25176/RFMH.v21i1.3200

Journal home page: <http://revistas.urp.edu.pe/index.php/RFMH>

Article published by the Magazine of the Faculty of Human Medicine of the Ricardo Palma University. It is an open access article, distributed under the terms of the Creative Commons License: Creative Commons Attribution 4.0 International, CC BY 4.0 (<https://creativecommons.org/licenses/by/4.0/>), that allows non-commercial use, distribution and reproduction in any medium, provided that the original work is duly cited. For commercial use, please contact [revista.medicina@urp.pe](mailto:revista.medicina@urp.pe)





## INTRODUCTION

The health situation in the world requires society to place issues such as impartiality in the foreground of analysis; health development and prevention; the quality of care; the ethical dilemmas; and the recognition of technological health requirements in national policy, as a key element for its development<sup>(1)</sup>.

Today, patients' controversies about the care provided to them are more common. They are not only with reference to aspects of well-being or treatment but also about points of the technical development of care<sup>(2)</sup>. A health provider is a subject that offers or provides everything necessary to guarantee good health to large groups, corporations, and communities<sup>(3)</sup>.

The relationship between the health professional and their patients is based on asymmetry, since healthcare personnel persistently occupy a dominant role and have a large part of knowledge<sup>(4)</sup>. This asymmetry is essential for care, since it demands and grants the professional a higher and updated grade to follow when their expectations are not satisfied, for which it is important to carry out standard surveys, periodic questionnaires, or questions to the subjects to approve their perception of the peculiarities of the service provided<sup>(5)</sup>.

The technical-scientific factor refers to the scientific-technical aspects of health care, its features being: obtaining positive changes and purposes, the precise use of resources, the continuous provision of the service, the capacity for innovation and training in service providers to avoid obsolescence<sup>(6)</sup>. Among the indicators involved is a measurement of the use of resources, events or incidents, justification of procedures, observation of care processes, and audits of files<sup>(7)</sup>.

The human factor or "talent" is seen as the activity offered from the interpersonal aspect in care and is based on respect for rights, culture, personal traits, complete information, interest, courtesy, empathy, solidarity, and attention in problem-solving<sup>(6)</sup>.

Likewise, it must be willing and able to transcend clinical care and not, only, only in the patient's somatic, that is to observe, understand and provide a better treatment<sup>(8)</sup>.

Maternal and child health care is a priority for health services. The priority of antenatal care is the prevention of maternal complications during pregnancy, the timely detection and appropriate assistance thereof; and adequate care of them and

preventing unnecessary interventions and favoring the satisfaction of the pregnant woman, through a series of conducive activities towards prevention and education<sup>(9)</sup>.

These prophylactic activities are recognized as a standard of care during pregnancy. Generally, it is offered through private consultations, with a competent provider, through a series of cost-effective interventions that improve maternal and infant outcomes and reduce complications during pregnancy, delivery, and the puerperium<sup>(10)</sup>.

Likewise, the Ministry of Health (2013) maintains that the surveillance and comprehensive evaluation of the pregnant woman and fetus, before fourteen weeks of gestation, provides a series of interventions that help in the timely detection of danger signs, risk elements, education for self-care and family collaboration, as well as for the proper management of complications<sup>(11)</sup>.

Its main characteristics of precociousness (before 12 weeks of gestation), periodic, continuous, comprehensive, in teams and with the community's participation, among others, allow a complete appreciation of each pregnant woman<sup>(12)</sup>.

Its objectives include evaluating the health status of the mother and fetus, establish gestational age, assess possible risks and correcting them, plan prenatal checkups; and prescribing folic acid as soon as possible to prevent neural tube defects<sup>(13)</sup>.

The Ministry of Health (2017) in its Technical Standard establishes that the minimum prenatal care minimum is six<sup>(14)</sup>.

Therefore, all pregnant women must comply with the necessary amount of prenatal care for correct supervision of the pregnancy and detect possible warning signs or complications on time. However, some of the patients do not comply with the minimum attendance for different reasons, which have been treated in the following studies:

Tovar and Gutiérrez (2019) in their research showed that the factors that were associated with the continuity of prenatal control were observing health personnel (OR = 12.9; p = 0.017), early assistance (OR = 3.0; p = 0.001), good treatment of administrative personnel (OR = 2.2; p = 0.015) and the immediate resolution of problems during prenatal care (OR = 3.8; p = 0.001)<sup>(15)</sup>.

Hernández et al. (2019) in their work found that 56.1% received quality prenatal care, unlike 43.9% who

did not receive all quality components, the element associated with non-compliance being the patient's native ethnicity<sup>(16)</sup>.

Farje (2019) in his work indicated that multiparity ( $p = 0.017$ ,  $OR = 1.7$ ), the journey to the health center ( $p = <0.001$ ,  $OR = 5.1$ ) and marital status ( $p = <0.001$ ,  $OR = 2.5$ ) proved to be indicators of danger associated with incomplete prenatal controls in pregnant women<sup>(17)</sup>.

Machado, Molinares, Urzola and Valdés (2017) in their study found institutional factors related to the lack of attendance at prenatal control: not receiving physical preparation for delivery (74.7%), long waiting time for care (27%) and a short duration of the consultation (21.2%)<sup>(18)</sup>.

Castillo et al. (2017) in their research revealed that 53.26% of women reported adequate use of prenatal care, the associated peculiarities being: being over 23 years old ( $OR: 1.4$ ), higher than secondary education ( $OR: 1.6$ ), having a partner ( $OR: 1.9$ ), receiving family support ( $OR: 3.2$ ), planned pregnancy ( $OR: 2.2$ ), being employed ( $OR: 2.3$ ), having a health affiliation ( $OR: 3.8$ ) and having a small family ( $OR: 1.3$ )<sup>(19)</sup>.

Miranda (2016) in her research found that the majority of pregnant women attend prenatal care (97.7%), the reasons being: detection of alterations (83.9%) and at the suggestion of someone (14.6%); while 0.3% do not attend because they have to do a lot of paperwork (47.1%), because they have missed the appointment (23.5%), because they believe they do not require monitoring when having children without complications (23.5%) and for thinking that it is too early to start the control (5.9%)<sup>(20)</sup>.

On the other hand, Roberts et al. (2015) in their study showed that mothers distinguish that health workers often mistreat or degrade them during visits; on the other hand, health personnel mentioned that, due to the lack of workers, patients do not receive the attention they deserve<sup>(21)</sup>.

Joshi, Torvaldsen, Hodgdon and Hayen (2014) in their work observed how predictors of receiving quality prenatal care: having the consultation by a qualified provider in an institutionalized hospital, living in an urban area and being exposed to the media<sup>(22)</sup>.

Boerleider, Wieggers, Manniën, Francke and Devillé (2013) found, through the systematic review, that the factors associated with an inappropriate use of consultations by pregnant women were: migration, culture, position in the host country, social network, the experience of the care and treatment provider,

and personal communication, which hinder the use of prenatal care by non-Western women, being of significant importance the low command of the country language and interpersonal communication, which were the elements of impairment reported with the highest incidence<sup>(23)</sup>.

Taking into account these antecedents, in the present work, the detection of traits belonging to the health provider at the time of prenatal care, which may facilitate or hinder the care of pregnant women, it is essential to know them so that these actions can be corrected to that the patients feel satisfied and go to their prenatal care, otherwise there may be a series of negative consequences on the health of the mother-child binomial.

This research aimed to identify the association between health provider factors and the number of prenatal care in patients of Hospital Carlos Lanfranco La Hoz, 2019.

## METHODS

### Design and study area

The study had a quantitative, relational level and observational design approach. It was developed in pregnant women of the Carlos Lanfranco La Hoz Hospital during 2019.

### Population and sample

This study's population consisted of 342 pregnant patients treated at the Hospital Carlos Lanfranco La Hoz from January to December 2019. The Sample selection was through systematic random sampling, and the finite sample formula was applied to determine the sample size, with an error of 5% and a prevalence of 50%. The following inclusion and exclusion criteria were met.

### Inclusion criteria

- Patients who attended their prenatal care during 2018
- Patients of the OBGYN service
- Patients who completed the satisfaction questionnaire
- Patients who signed the informed consent

### Exclusion criteria

- Patients who withdrew in the middle of the survey
- Patients who were found in labor



## Variables and Instruments

The variables studied were factors of the health provider and the number of prenatal care. The instrument was a questionnaire entitled "Questionnaire of factors related to the health provider" that evaluated the scientific technical factor (10 questions) and the human factor (7 questions) according to the perception of the pregnant women who agreed to participate in the study. The first part of this instrument describes the sociodemographic characteristics of the pregnant women, made up of 4 questions, the second part corresponds to the obstetric characteristics which include 3 questions and the third and fourth of the dimension, scientific-technical factor, and human factor, made up of 10 and 7 questions respectively.

This instrument had content and construct validity, the first obtained through the judgment of experts, who manifested a concordance between their assessments. The second obtained through the analysis of the variability of their reagents. Likewise, the reliability was verified by means of a pilot test applied to 30 pregnant users, obtaining reliability by Kuder Richardson of 0.82 for the dichotomous responses.

## Procedures

The technique used was the personalized survey of each pregnant woman attended at the Hospital Carlos Lanfranco La Hoz from January to December 2019 who had fulfilled the selection criteria through systematic random sampling.

## Statistical

Analysis Descriptive statistical analysis was performed using absolute and relative frequencies and through mean and standard deviation. For the association of factors related to the provider and the number of prenatal care, the Poisson regression was used, which began with a crude model that consisted of including all the factors to identify those significant ( $p < 0.05$ ), to later include only these significant factors in the adjusted model, finally resulting in those with a p-value less than 0.05 being the factors significantly associated with the number of prenatal care. Furthermore, the expB value greater than 1, showed the number of times in which the number of prenatal care increases in those with the factor.

## Ethical Aspects

All ethical principles for research with human beings were observed.

## RESULTS

An 342 pregnant women who attended their prenatal care at the Carlos Lanfranco La Hoz Hospital, in 2019, were surveyed. The most frequent age was from 18 to 35 years in 74%, with secondary education in 62.9%, state civil cohabiting in 71.1%. 92.7% have comprehensive health insurance (Table 1).

Regarding obstetric characteristics, 75.7% of the pregnant women had two or more pregnancies, and 40% had a delivery (Table 2). On the other hand, the average number of prenatal care was 5.5 (Table 3).

To associate the scientific technical factors with the number of prenatal care, the Poisson regression was used, initially in the crude analysis of the ten scientific technical factors was found association in three, and after analyzing with the adjusted model the association was confirmed of the number of prenatal care with the factor "receive guidance on the results of the analysis in prenatal care" ( $p = < 0.001$ ), that is, the number of prenatal care in pregnant women who report that receive guidance on the results of analysis in prenatal care, it is 1.2 times more than in pregnant women who answered no (ExpB: 1.2 95% CI 1.10 - 1.39). Likewise, the association of the factor "the doctor or obstetrician recommends medications in their prenatal consultation" was also confirmed ( $p = 0.003$ ). The number of prenatal care in pregnant women who report that the doctor or obstetrician does recommend medications in their prenatal consultation, is 1.2 times more than in pregnant women who answered no (ExpB 1.2 CI95% 1.05-1.27) (Table 4).

Table 5 shows the association of human factors with the number of prenatal care, which initially in the crude analysis of the seven scientific-technical factors, an association between two factors was found, and of them later when analyzed with the adjusted model The association of the number of prenatal care with the factor was confirmed: the doctor or obstetrician calls her by name during the prenatal consultation ( $p = < 0.001$ ). The number of prenatal care in pregnant women who report that "the doctor or obstetrician who calls her by her name during the prenatal visit", it is 1.5 times more than in pregnant women who answered no (ExpB: 1.5 95% CI 1.19 - 1.77).

Finally, Table 6 shows the health provider's factors associated with the number of prenatal care, "receives guidance on the results of the analysis in prenatal care" ( $p = < 0.001$ ), "the doctor or obstetrician recommends medications in her prenatal visit" ( $p = 0.003$ ), and "the doctor or obstetrician calls her by name during the prenatal visit" ( $p = < 0.001$ ).

**Table 1.** Sociodemographic characteristics in patients of prenatal care hospital Carlos Lanfranco la Hoz, 2019.

Characteristics of patients		n	%
<b>Age of gestante</b>	Minor 18	20	5.8%
	18 a 35	253	74.0%
	higher 35	69	20.2%
<b>Degree of Education</b>	Primary	64	18.7%
	Secondary	215	62.9%
	Higher	63	18.4%
<b>Marital status</b>	Single	55	16.1%
	Cohabiting	243	71.1%
	Married	44	12.9%
<b>Type of insurance</b>	SIS	317	92.7%
	No	25	7.3%
<b>Total</b>		342	100.0%

ORIGINAL PAPER

**Table 2.** Obstetric characteristics in patients of antenatal care hospital Carlos Lanfranco sickle, 2019.

Features obstetrical		n	%
<b>Number of gestational</b>	Single	83	24.3%
	Two or more	259	75.7%
<b>Number of deliveries</b>	None	83	24.3%
	One	137	40.0%
	Two or more	122	35.7%
<b>Total</b>		342	100.0%

**Table 3.** Prenatal tenciones in patients of the Carlos Lanfranco la Hoz hospital, 2019.

Number of care prenatal	Mean	Desv. Est.	Min	Máx
	5.51	2.3	1	11



**Table 4.** Association of the scientific-technical factor and the number of prenatal care of patients of the Hospital Carlos Lanfranco la Hoz, 2019.

Scientific-technical factor	Crude			Model Adjusted model *		
	Exp B	(IC 95%) Inf-Sup	Sig.	Exp B	(IC 95%) Inf-Sup	Sig.
The doctor or obstetrician asks you if you have ailments during the prenatal visit.						
Yes	1.097	(0.961- 1.252)	0.169	-		
No	Ref.					
The physician or obstetrician ask if have any alarm signs during pregnancy.						
Yes	1.010	(0.873-1.169)	0.890	-		
No	Ref.					
The physician or obstetrician gave guidance on their ailments during prenatal consultation.						
Yes	1.048	(0.897-1.224)	0.557	-		
No	Ref.					
The doctor or obstetrician gave him timely guidance on the steps of prenatal care.						
Yes	0.983	(0.849-1.139)	0.822	-		
No	Ref.					
The doctor explained about the warning signs of prenatal pregnancy consultation.						
Yes	0.850	(0.738-0.980)	0.026	0.903	(0.811-1.005)	0.061
No	Ref.			Ref.		
Solve doubts about her pregnancy during prenatal consultation.						
Yes	1.038	(0.884-1.219)	0.652	-		
No	Ref.					
Receive guidance on the analysis results in prenatal care.						
Yes	1.203	(1.057-1.369)	0.005	1.238	(1.099-1.394)	0.000
No	Ref.			Ref.		
The doctor or obstetrician examines thoroughly.						
Yes	1.042	(0.929-1.169)	0.479	-		
No	Ref.					
The doctor or obstetrician will recommend medications in their prenatal visit.						
Yes	1.186	(1.072-1.312)	0.001	1.154	(1.051-1.268)	0.003
No	Ref.			Ref.		
The doctor or obstetrician recommends tests or procedures in the prenatal consultation.						
Yes	1.076	(0.961-1.206)	0.205	-		
No	Ref.					
Poisson regression						

\* Adjusted variables obtained with a value of less than 0.05 in the oil analysis.

ORIGINAL PAPER

**Table 5.** Association of the human factor and the number of prenatal care in patients of Hospital Carlos Lanfranco la Hoz, 2019.

Human Factor	Crude model			Adjusted model		
	Exp B	(IC 95%) Inf-Sup	Sig.	Exp B	(IC 95%) Inf-Sup	Sig.
The doctor or obstetrician greets her upon admission to the prenatal consultation.						
Yes	1.186	(0.895-1.572)	0.234	-		
No	Ref,					
The doctor or obstetrician calls her by name during the prenatal visit.						
Yes	1.186	(0.895-1.572)	0.234	-		
No	Ref,					
Your doctor or obstetrician says goodbye to you at the end of prenatal care.						
Yes	1.416	(1.152-1.741)	0.001	1.452	(1.194-1.767)	0.000
No	Ref,					
The doctor or obstetrician treats her with kindness during the prenatal visit.						
Yes	0.911	(0.752-1.104)	0.344	-		
No	Ref,					
The doctor or obstetrician is patient with you during the prenatal visit.						
Yes	1.240	(0.967-1.592)	0.090	-		
No	Ref,					
The doctor or obstetrician respects your privacy during care in the office						
Yes	0.750	(0.609-0.924)	0.007	0.932	(0.815-1.067)	0.310
No						
The doctor or obstetrician cares for privacy in the prenatal consultation						
Yes	1.235	(0.687-2.222)	0.481	-		
No	Ref,					
The doctor or obstetrician takes care of your privacy in your prenatal visit						
Yes	0.791	(0.432-1.449)	0.447	-		
No	Ref,					
Regresión de Poisson						

\*Adjusted with the variables obtained a value p less than 0.05 in the crude analysis

ORIGINAL PAPER





**Table 6.** Health provider factors and the number of prenatal care in the patients of the hospital Carlos Lanfranco la Hoz, 2019.

Health provider factors	Adjusted model *		
	Exp (B)	(95% CI)	Sig.
Receive guidance on test results in prenatal care	1.238	1.099 – 1.394	<0.001
YouThe doctor or obstetrician recommends medications during the prenatal visit.	1.154	1.051 – 1.268	0.003
Doctor or obstetrician calls her by her name during the prenatal visit	1.452	1.194 – 1.767	<0.001
Poisson regression.			

## DISCUSSION

Prenatal care is health care provided to patients when they are pregnant through a health provider, public or private. Likewise, it is recommended that pregnant women comply with their prenatal care to know what situation they are in and how their baby is doing. Mostly, patients access prenatal care when they believe that it is a positive practice that is in accordance with their principles and values, easily accessible, and when they are treated with respect and kindness, because they want care that helps them feel safe, in confidence and with well-being when the delivery occurs, both for them and the newborn, with the certainty that it was provided by respectful, kind, culturally sensitive, flexible and empathetic personnel, with time to give them support and ratification about their health and wellness. They also value the tests and treatments offered to them when they need them with the information and advice relevant to them<sup>(24)</sup>.

Regarding the technical-scientific factor, in the present work, it was found that receiving guidance on the results of the analysis in prenatal care and that the health provider recommends medications in their consultation were associated with the number of prenatal care ( $p < 0, 05$ ). Perhaps when the professional explains in detail the meaning of the laboratory result, whether normal or pathological, in addition to suggesting certain medicines, it generates confidence and security in the pregnant woman, since he observes that the provider has the necessary knowledge and demonstrates experience at the time of care, and motivates you to comply with each of your prenatal care. Similar to the Miranda study, where it was found that the proper use of prenatal care is related to the doctor's interest in elucidating health

situations, with the information admitted about the treatment and with the solutions provided by the health professional<sup>(20)</sup>. Likewise, Tovar and Gutiérrez in their research showed that the orientation of the staff about the examinations to be performed is related to the continuity of prenatal care<sup>(15)</sup>, corroborating what Boerleider et al. stated: treatment with the personalized attention of the health provider favors to have a prenatal care<sup>(23)</sup>.

Regarding the human factor, in the present work it was found that when the doctor or obstetrician calls the pregnant woman by her name during the consultation, it is associated with the highest number of prenatal care ( $p < 0.05$ ), possibly because they show respect and treatment personalized that generates comfort and interest in the patient to continue with prenatal care. It is similar to the study by Tovar and Gutiérrez, where it was observed that perceiving respect from the staff is related to the continuity of prenatal care<sup>(15)</sup>.

In summary, there are health provider factors associated with the number of prenatal care, such as guiding the analyzes, explaining them about the medications and demonstrating personalized treatment, which shows a suitable professional valued by the patient. Similar to the research by Joshi, Torvaldsen, Hodgdon, and Hayen, where it was shown that being seen by a qualified provider is a predictor of continuing prenatal care and receiving quality care<sup>(22)</sup>.

This research study's limitation is that the variables considered were simply observed, so the results obtained do not indicate whether there are a cause and effect relationship between them.

## CONCLUSION

Based on the results obtained in this research, it is concluded that there is an association between the health provider factors and the number of prenatal

care in the patients of the Hospital Carlos Lanfranco La Hoz that attended in 2019.

---

**Authors' contributions:** The authors participated in the conception, design, information gathering, data analysis and interpretation, writing, critical review, and approval of the final version of the manuscript.

**Funding:** Self-financed.

**Conflicts of interest:** The authors deny any conflict of interest in the preparation of the manuscript.

**Received:** August 19, 2020

**Approved:** September 19, 2020

---

**Correspondence:** Karina Elizabeth Diez Quevedo

**Address:** Jr. Inclán 242 Dpto. 9, San Miguel, Lima-Perú.

**Telephone number:** 959181595

**E-mail:** karieliz@gmail.com



## BIBLIOGRAPHIC REFERENCES

- Torres Fernández T, Guerra Giménez L, Ordás González A, Salas San Juan O, Sánchez Padilla LM. Desarrollo científico y tecnológico. Su impacto en la Atención Primaria de Salud.. Rev Panorama. Cuba y Salud [Internet]. 2019 [citado el 12 de abril del 2020]; 13(3):91-96. Disponible en: <http://www.revpanorama.sld.cu/index.php/rpan/article/view/>
- Massip Pérez Coralía, Ortiz Reyes Rosa María, Llantá Abreu María del Carmen, Peña Fortes Madai, Infante Ochoa Idalmis. La evaluación de la satisfacción en salud: un reto a la calidad. Rev Cubana Salud Pública [Internet]. 2008 [citado el 12 de abril del 2020]; 34( 4 ). Disponible en: [http://scielo.sld.cu/scielo.php?script=sci\\_arttext&pid=S0864-34662008000400013&lng=es](http://scielo.sld.cu/scielo.php?script=sci_arttext&pid=S0864-34662008000400013&lng=es)
- Ayuzo C. Pacientes, clientes, médicos y proveedores, ¿es solo cuestión de terminología?. Gac Med Mex. 2016;152(3):429-30. Disponible en: <https://www.medigraphic.com/cgi-bin/new/resumen.cgi?IDARTICULO=67089#>
- Heerlein Andrés. La relación entre la medicina y los proveedores médicos. Rev. méd. Chile [Internet]. 2014 Mar [citado el 21 de mayo del 2020]; 142( 3 ): 361-367. DOI: <http://dx.doi.org/10.4067/S0034-98872014000300011>.
- Vargas V, Valecillos J, Hernández C. Calidad en la prestación de servicios de salud: Parámetros de medición Revista de Ciencias Sociales (Ve) [Internet]. 2013 [citado el 21 de mayo del 2020]; XIX(4): 663-671. Disponible en: <https://www.redalyc.org/articulo.oa?id=28029474005>
- Ministerio de Salud. Sistema de gestión de la calidad en salud. Lima-Perú: Ministerio de Salud [Internet]. 2007. [accedido el 21 de mayo del 2020]. Disponible en: [http://bvs.minsa.gob.pe/local/dgsp/000\\_SGCalidad-1.pdf](http://bvs.minsa.gob.pe/local/dgsp/000_SGCalidad-1.pdf)
- Zurita B. Calidad de la atención de la salud. Anales de la Facultad de Medicina [Internet]. 1996 [citado el 20 de mayo del 2020]; 57(4). Disponible en: [https://sisib.unmsm.edu.pe/bvrevistas/anales/v58\\_n1/casalud.htm](https://sisib.unmsm.edu.pe/bvrevistas/anales/v58_n1/casalud.htm)
- De la Torre F. ¿Qué es el Humanismo en la Medicina? [Internet] 2017 [accedido el 15 de abril del 2020]. Disponible en: <http://isanidad.com/85641/que-es-el-humanismo-en-la-medicina/>
- Hernández B, Trejo J, Ducoing D, Vázquez L, Tomé P. Guía clínica para la atención prenatal. Rev Med IMSS [Internet]. 2003 [citado el 19 de mayo del 2020]; 41(1): S59-S69. Disponible en: <https://www.medigraphic.com/pdfs/imss/im-2003/im5031f.pdf>
- Andrade Z, Heredia I, Fuentes E, Alcalde J, Bolaños L, Jurkiewicz L, et al. Atención prenatal en grupo: efectividad y retos de su implementación. Revista de Saúde Pública [Internet]. 2019 [citado el 15 de abril del 2020]; 53:85. Disponible en: <https://scielosp.org/pdf/rsp/2019.v53/85/es>
- Ministerio de Salud. Norma Técnica para la atención integral de salud materna. Perú: Ministerio de Salud; [Internet] 2013. [accedido el 15 de abril del 2020]. Disponible en: [https://cdn.www.gob.pe/uploads/document/file/202170/198935\\_RM827\\_2013\\_MINSA.pdf20180926-32492-1iuyz6n.pdf](https://cdn.www.gob.pe/uploads/document/file/202170/198935_RM827_2013_MINSA.pdf20180926-32492-1iuyz6n.pdf)
- Lugones M. La importancia de la atención prenatal en la prevención y promoción de salud. Revista Cubana de Obstetricia y Ginecología [Internet]. 2018 [citado el 05 de junio del 2020]; 44(1). Disponible en: <https://www.medigraphic.com/pdfs/revcubobsgin/cog-2018/cog181a.pdf>
- Aguilera P, Soothill M. Control prenatal. Revista Médica Clínica Las Condes [Internet]. 2014 [citado el 19 de mayo del 2020]; 25(6): 880-886. Disponible en: [https://www.clinicalascondes.cl/Dev\\_CLC/media/Imagenes/PDF%20revista%20m%C3%A9dica/2014/6%20Nov/06-aguilera.pdf](https://www.clinicalascondes.cl/Dev_CLC/media/Imagenes/PDF%20revista%20m%C3%A9dica/2014/6%20Nov/06-aguilera.pdf)
- Ministerio de Salud. Norma Técnica de Salud para la Atención Integral y Diferenciada de la gestante adolescente durante el embarazo, parto y puerperio. Perú: Ministerio de Salud; [Internet] 2017. [accedido el 15 de abril del 2020]. Disponible en: [https://cdn.www.gob.pe/uploads/document/file/191000/190557\\_RM\\_N\\_007.pdf20180823-19572-n07xwz.pdf](https://cdn.www.gob.pe/uploads/document/file/191000/190557_RM_N_007.pdf20180823-19572-n07xwz.pdf)
- Tovar G, Gutiérrez H. Factor humano, organizacional y su influencia con la continuidad de la atención prenatal de la Institución Prestadora de Salud de Lima – Perú, 2017. Rev. Int. Salud Materno Fetal [Internet]. 2019 [citado el 17 de abril del 2020]; 4(1): 29-37. Disponible en: <http://ojs.revistamaternofetal.com/index.php/RISMF/article/view/82/95>
- Hernández-Vásquez Akram, Vargas-Fernández Rodrigo, Bendezu-Quispe Guido. Factores asociados a la calidad de la atención prenatal en Perú. Rev. perú. med. exp. salud pública [Internet]. 2019 [citado el 21 de Abril 2020]; 36( 2 ): 178-187. DOI: <http://dx.doi.org/10.17843/rpmesp.2019.362.4482>
- Farje S. Factores asociados a controles prenatales incompletos en gestantes del Hospital Santa Rosa en el periodo Enero – Julio 2018 [Tesis de Medicina]. Universidad Ricardo Palma, Perú, 2019 [accedido el 21 de abril del 2020]. Disponible en: <http://repositorio.urp.edu.pe/bitstream/handle/URP/1772/SFARJE.pdf?sequence=1&isAllowed=y>
- Machado S, Molineras A, Urzola L, Valdés M. Factores asociados a la falta de asistencia al control prenatal y consecuencias maternas y perinatales en tres IPS de Sincelajo 2016 – 2017. [Tesis]. Colombia: Universidad de Sucre. [citado el 21 de abril del 2020] Facultado Ciencias de la Salud; 2017. Disponible en: <https://repositorio.unisucre.edu.co/bitstream/001/637/1/T618.32%20F%20142.pdf>
- Castillo IY. Factores asociados al uso adecuado del control prenatal en 13 municipios de Bolívar, Colombia. Rev Cubana Enferm [Internet]. 2017 [citado el 21 de abril 2020]; 33(1). Disponible en: <http://revenfermeria.sld.cu/index.php/enf/article/view/840>
- Miranda C. Factores de capacidad en el uso de control prenatal adecuado en gestantes de Sincelajo (Colombia). Salud Uninorte [Internet]. 2016 [citado el 21 de abril del 2020]; 32 (3): 436-451. Disponible en: <https://www.redalyc.org/pdf/817/81750089006.pdf>
- Roberts J, Sealy, Hopp H, Manda L, Gleason P, Matalaya R. The patient-provider relationship and antenatal care uptake at two referral hospitals in Malawi: A qualitative study. Malawi Med J. [Internet] 2015 [citado el 21 de abril 2020]; 27(4): 145-150. Disponible en: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4761706/>
- Joshi C, Torvaldsen S, Hodgdon R, Hayen A. Factors associated with the use and quality of antenatal care in Nepal: a population-based study using the demographic and health survey data. BMC Pregnancy Childbirth [Internet]. 2014 [citado el 20 de mayo 2020]; 14: 94. Disponible en: <https://pubmed.ncbi.nlm.nih.gov/24589139/>
- Boerleider A, Wieggers T, Manniën J, Francke A, Devillé W. Factors affecting the use of prenatal care by non-western women in industrialized western countries: a systematic review. BMC Pregnancy Childbirth. [Internet] 2013 [citado el 21 de abril 2020]; 13:81. Disponible en: <https://pubmed.ncbi.nlm.nih.gov/23537172/>
- Downe S, Finlayson K, Tunçalp Ö, Gülmezoglu A. Provision and uptake of routine antenatal services: a qualitative evidence synthesis. Cochrane Database of Systematic Reviews [Internet]. 2019 [citado el 9 de Junio 2020]; 6. Disponible en: [https://www.cochrane.org/es/CD012392/EPOC\\_provision-y-captacion-de-los-servicios-prenatales-de-rutina](https://www.cochrane.org/es/CD012392/EPOC_provision-y-captacion-de-los-servicios-prenatales-de-rutina)