# Cervical cytology in a family health strategy: nursing profile, results and conduct

Citologia cervical em uma estratégia saúde da família: perfil, resultados e condutas de enfermagem La citología cervical en una estrategia de salud familiar: perfil de enfermería, resultados y conducta

#### **RESUMO**

Objetivo: Descrever o perfil sociodemográfico, dos exames do colo uterino e identificar as principais condutas realizadas pela enfermeira frente aos resultados encontrados nos exames citológicos de uma Estratégia Saúde da Família de Manaus. Método: Estudo quantitativo, descritivo, retrospectivo e exploratório, de análise de dados secundários dos prontuários e livro de registro dos exames citológicos realizados no período de janeiro a dezembro de 2018. Resultados: Foram realizados 217 exames, dos quais, seguindo critérios de inclusão 203 compuseram a amostra final. O perfil sociodemográfico, mostrou prevalência da faixa etária de 30-39 anos, casadas, ensino médio completo e do lar. Os exames apresentaram amostra satisfatória para avaliação, as microbiologias predominantes foram Lactobacillus e Gardenerella. A inflamação foi identificada como alteração celular benigna reativa ou reparativa mais evidente. Conclusão: Conhecer a realidade da população onde desempenha suas atividades é fator de grande relevância para que se possam estabelecer intervenções adequadas a realidade local.

**DESCRITORES:** Exame de Papanicolau; Câncer de colo do útero; Prevenção; Enfermeiro.

#### **ABSTRACT**

Objective: To describe the sociodemographic profile and the examinations of the uterine cervix and identify the main procedures performed by the nurse in view of the results found in the cytological examinations of a Family Health Strategy in Manaus. Method: Quantitative, descriptive, retrospective and exploratory study, analyzing secondary data from medical records and registry book of cytological exams performed in the period from January to December 2018. Results: 217 exams were performed, of which, following inclusion criteria, 203 made up the final sample. The sociodemographic profile showed a prevalence in the age group of 30-39 years old, married, completed high school and at home. The exams showed a satisfactory sample for evaluation, the predominant microbiologies were Lactobacillus and Gardenerella. Inflammation was identified as the most evident benign reactive or reparative cell alteration. Conclusion: Knowing the reality of the population where they carry out their activities is a factor of great relevance so that interventions that are appropriate to the local reality can be established.

**DESCRIPTORS:** Pap smear; Cervical cancer; Prevention; Nurse.

## RESUMEN

Objetivo: Describir el perfil sociodemográfico y los exámenes del cuello uterino e identificar los principales procedimientos realizados por la enfermera a la vista de los resultados encontrados en los exámenes citológicos de una Estrategia de Salud de la Familia en Manaus. Método: Estudio cuantitativo, descriptivo, retrospectivo y exploratorio, analizando datos secundarios de historias clínicas y libro registro de exámenes citológicos realizados en el período de enero a diciembre de 2018. Resultados: se realizaron 217 exámenes, de los cuales, siguiendo criterios de inclusión, 203 conformados la muestra final. El perfil sociodemográfico mostró una prevalencia del grupo de edad de 30 a 39 años, casados, bachillerato completo y amas de casa. Los exámenes arrojaron una muestra satisfactoria para la evaluación, las microbiologías predominantes fueron Lactobacillus y Gardenerella. La inflamación se identificó como la alteración celular benigna reactiva o reparadora más evidente. Conclusión: Conocer la realidad de la población donde desarrollan sus actividades es un factor de gran relevancia para que se puedan establecer intervenciones adecuadas a la realidad local.

**DESCRIPTORES:** Papanicolaou; Cáncer de cuello uterino; Prevención; Enfermero.

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ervical cancer is characterized by the disordered replication of the lining epithelium of the organ, compromising the stroma and being able to invade adjacent structures and organs or not. Signs and symptoms vary according to the location and extent of the disease, and there may be fetid and even bloody vaginal discharge, irregular menstrual cycles, intermenstrual spotting and post-coital bleeding. In more advanced stages, pain in the lower abdomen, anemia, urethral involvement, invasion of the bladder and rectum may occur. 1

Among the risk factors that are directly associated are socioeconomic conditions, multiple sexual partners, smoking, partner's sexual promiscuity,

precariousness or lack of intimate hygiene, prolonged use of contraceptives, nulliparity, multiparity, early initiation of sexual activities and mainly due to infection by the Human Papilloma Virus, the HPV. 2

For each year of the 2020-2022 triennium, 16,590 new cases of cervical cancer are calculated for Brazil, with an estimated risk of 15.43 cases per 100,000 women. Its incidence varies according to the regions, without considering non-melanoma skin tumors, cervical cancer and the second most incident in the North Region with 21.20/100 thousand. In detailed observation, the estimates for Amazonas and capital (Manaus) in 2020 correspond to a gross rate of 27.60/100 thousand in Amazonas and 51.94/100 thousand women for Manaus, with an estimated risk above the national average. 3

The northern region of Brazil is the only one where cervical cancer has a greater magnitude, with rates much higher than the world average and similar to those of Central America. The State of Amazonas. on the other hand, has an incidence of cervical cancer similar to that of East Africa, one of the least developed places in the world.4

According to the epidemiology and statistics bulletin of the Fundação Centro de Controle de Oncologia do Estado do Amazonas - FCECON, there were 189 deaths from cervical cancer in 2018, representing 25.5% of the 742 deaths recorded by cancer in the female population, thus following as the main cause of cancer mortality in Amazonian women. 5

Despite the exorbitant numbers, it is known that the disease has a cure with an expectation of 100% when the diagnosis is early and the treatment is immediate. 6 Early detection of cancer and its precursor lesions occurs through screening by Pap smear or Pap smear. It is a routine procedure for gynecological consultation, offered free of charge in primary care, in addition to being an important component of the Comprehensive Care Program for Women's Health - PAISM, created in 1984 and reaffirmed in the Health Pact in 2006.7

The periodic performance of the Pap smear and the high coverage of the target population is the most important component in the scope of primary care, in order to obtain a significant reduction in the incidence and mortality from cervical cancer.

In this context and in accordance with Resolution Federal Council of Nursing (COFEN) No. 381/2011, the nurse is the professional responsible for carrying



out the collection, requiring that he be endowed with knowledge, skills and abilities that guarantee technical-scientific rigor to the procedure. <sup>8</sup>

It is also up to the health professional to formulate strategies for a high coverage of the target population, as the predominant pattern of screening in Brazil is opportunistic, since women have undergone the Pap smear when they seek health services for other reasons.<sup>7</sup>

Based on the above, from the experience in a curricular internship in a Basic Health Unit (UBS), considering that the northern region has a high incidence of cervical cancer cases, especially the Amazon, a study addressing this issue becomes relevant in order to know the local reality and obtain effective subsidies that mediate prevention and care guidance.

In view of the problem of cervical cancer for public health, and the need to develop strategies to improve prevention and early detection, this study aimed to describe the sociodemographic profile and the uterine cervix exams and to identify the main behaviors performed by the nurse in view of the results found in the cytological exams performed in women assisted in a Family Health Strategy in Manaus.

# **METHOD**

This is a retrospective, cross-sectional, descriptive study with a quantitative approach, with a sample of the medical records of women who collected cervical-vaginal material through colpocytopathological examination in the period from January to December 2018 carried out by the nurse of the health unit and analysis of the register book of cytological exams of a Family Health Strategy (ESF) in the urban area of Manaus.

Inclusion criteria were having medical records and data prescribed in the ESF record books, having performed the Pap smear in 2018, and excluding data that contained only the collection information performed, without notes or description of results. The information obtained in the registry book and medical records were en-

tered into a database in a Microsoft Office® Excel 2010 spreadsheet, for recording all information, involving sociodemographic characteristics (gender, age, education, marital status and occupation), the profile of the results of the cervical cytology exam classified according to the Brazilian Guidelines for the Screening of Cervical Cancer (sampling suitability, type of epithelium found, microbiology and cellular alterations) and the behaviors adopted by the nurse (prescription of medication and guidelines), submitting them to descriptive statistical analysis and expressed in absolute and relative frequencies.

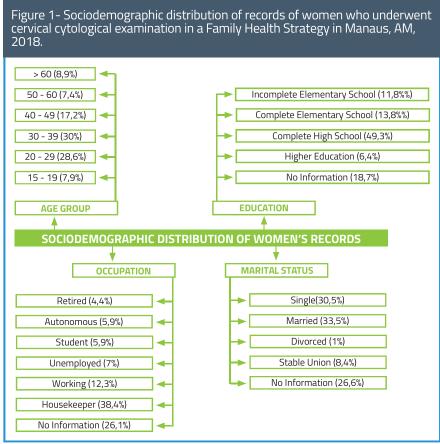
All measures regarding the ethical dimension of the study were taken in accordance with Resolution No. 466/2012 of the National Health Council (CNS). The research protocol was analyzed and approved by the Research Ethics Committee (CEP) of the Centro Universitário Lute-

rano de Manaus (CEULM/ULBRA) with CAAE: 15637319.5.0000.5014 and with the consent of the Municipal Health Department of Manaus.

## **RESULTS**

A total of 217 exams were performed from January to December 2018 for cervical cancer screening in the Family Health Strategy, in 14 exams (6.5%) there was only the collection information and did not contain the results records. Thus, 203 composed the analysis of this study.

Regarding the sociodemographic characteristics of the women who underwent the examination of the cervix, it was observed (Figure 1), the age group was predominantly 30-39 years (30%). As for marital status, 33.5% of the women were married, 30.5% were single, and 26.6% had no information. The most expressed level of educa-





tion was high school (49.3%), followed by complete elementary school (13.8%). The predominant occupation declared in the records was housewives (38.4%).

Regarding the collection suitability, in all analyzed records, the samples were classified as adequate because they present the cellular material in a well-distributed, fixed and stained demonstrative quantity, a satisfactory characteristic that enables a correct diagnostic conclusion.

Regarding the epithelium found in the records, the squamous with (176) of the evaluated reports stood out, followed by the glandular (88), metaplastic (25), squamous cells of undetermined significance when high-grade ASC-H lesion cannot be excluded (01) and low-grade squamous intraepithelial lesion LSIL/HPV (01).

In the microbiota found, 45.8% were Lactobacillus sp., followed by the infectious agents Gardnerella and Candida sp, which represented 31% and 6.8% of the microorganisms found, respectively.

Regarding benign cellular changes, inflammation was present in almost all results (90.65%) and followed by atrophy with inflammation (7.3%).

As for the behavior of the nurse after the examination, the study observed that guidance on intimate hygiene and prevention of sexually transmitted infections through the use of condoms was present in most of the records 133 followed by the prescription of medications, which accounted for 82, 5 women were referred and records without conduct information were in 49 medical records. However, it highlights the lack of specific health education practices that strengthen the prevention and early detection of cervical cancer.

### **DISCUSSION**

The highest proportion of tests performed in the 30 to 39 age group found in this study corroborated the screening age recommended by the Ministry of Health of 25 to 64 years. The marital status found in the highest proportion (33.5%) was in the "married" category, which coincides with a study carried out in another scenario, the

Figura 1- Distribuição sociodemográfica dos registros das mulheres que realizaram o exame citológico do colo de útero em uma Estratégia Saúde da Família de Manaus, AM, 2018.

	F	%
Sample suitability		
Satisfactory	203	100
Unsatisfactory	0	0
Epithelia represented in the sample		
Scaly	172	84,7
Glandular		43,3
Metaplastic	25	12,3
Microbiology		
Lactobacillus sp.	93	45,8
Cocos		3,0
Suggestions of Gardnerella	63	31,0
Trichomonas vaginalis	3	1,5
Candida sp.	14	6,9
Other bacilli	36	17,7
Benign reactive or reparative cell changes		
Inflammation	184	90,6
Atrophy with inflammation	15	7,4
Without changes	4	2,0
Atypical cells		
ASC-H	1	0,5
LSIL	1	0,5

Source: Data resulting from the survey (2018).

author affirms the importance of carrying out the test in this population, since women who are married or in a stable relationship are strongly predisposed to infection by the HPV virus, an agent expressly associated with cervical cancer.9 It is noteworthy that women who lived with a partner were more often diagnosed with advanced stage cervical cancer, emphasizing the importance of screening and performing the exam in this specific group. 10

The individual's level of education strongly reflects on their health care, the higher their level of education, the greater the attention to health conditions. Low education is directly related to the failure to perform the cervical cancer screening test due to the precarious level of information

about the severity of the disease and the importance of the test, leading to a higher risk of late diagnosis and complications. 11 It is noted that women with higher education are less likely to develop cervical cancer. 12

The predominant occupation declared in the records was housewives, a result that is in line with another study where 36% of the women studied also did not have paid work, exercising the role of home caregiver.

Regarding the epithelia found, squamous, glandular and metaplastic cells may be present in satisfactory samples for evaluation representing the cervical epithelium.7 In addition, metaplastic or endocervical cells must be present, as they represent the transformation zone, where 90% of ne-



oplastic and pre-neoplastic lesions occur. 14

As for the microbiota found, lactobacillus, cocci and bacilli are normal microorganisms that act in defense of the body, being responsible for the production of lactic acid, which makes the vaginal pH acidic, preventing the proliferation of pathogenic microorganisms. <sup>15</sup>

With regard to infectious agents, the present study identified gardnerella as the most prevalent. This bacteria is found in low concentration in the vaginal microbiota, without causing damage, however when they multiply in an exaggerated way it can cause changes. It usually manifests itself when there are changes in the amount of lactobacillus, it is characterized by producing a voluminous secretion, with a grayish color and with a fetid odor characteristic of rotten fish. <sup>16</sup>

Candida sp., is a fungus that is part of the natural biota of the human being, but they increase in number and become pathogens in situations of immunosuppression and immunosuppression. Candida is one of the main causative agents of vulvovaginitis, with age and menstrual years linked to this process. <sup>17</sup>

Finally, less expressed in the study is Trichomonas vaginalis, one of the non-viral sexually transmitted infections that most affect women. When this protozoan comes into contact with the vaginal canal, it colonizes it in an evolutionary way, leading to strong inflammation, discharge, atypical odor and vulvar irritation, which can cause lesions and/or bleeding. <sup>18</sup> Its early detection and treatment are essential, because in addition to the complications already mentioned, it has a strong correlation with HIV and cervical cancer. <sup>19</sup>

According to the guidelines for cervical cancer screening, the limitations presented by the Pap smear compared to the microbiological study interfere with the identification of pathogens that cause inflammation, and it is common after colposcopy to identify ectopias, vaginitis and cervicitis. <sup>7</sup>

Inflammation was present in almost all samples. Inflammation is one of the most common benign cellular changes in the results of Pap smears. The reasons for the

inflammatory process are determined by epithelial modifications, often deliberate by the action of physical agents, which can be radioactive, mechanical, thermal or chemical. 20 The literature presents as causative agents of inflammation, the supra cytoplasmic bacilli (gardnerella/ mobiluncus), candida sp., trichomonas vaginalis. <sup>21</sup>

With regard to atrophy with inflammation, it is a benign physiological change commonly found in the climacteric, postpartum and lactation period, when there is no presence of atypia, normal conduct should be followed. <sup>14</sup>

With regard to atypical cells, those of undetermined significance stood out when high-grade ASC-H lesions cannot be excluded, since the diagnosis of ASC-H is defined as the presence of cellular abnormalities similar to those of high grade, however, they do not have defined parameters for such lesions. <sup>22</sup> In the same study, the author showed that the prevalence of CIN II/III was 19.29% higher in ASC-H than in those diagnosed with atypical squamous cells of undetermined significance/ACS-US.

As for the low-grade squamous intraepithelial lesion/LSIL, it constitutes the differentiation of the epithelium caused by the HPV infection, it is a common occurrence and with great potential for regression, especially in young women. <sup>23</sup> Noting that HPV is the most prevalent sexually transmitted infection in the world and has a well-defined association with cervical cancer in the literature, present in almost 100% of cases. <sup>24</sup>

Thus, the professional nurse is the most capable of analyzing the difficulties encountered in the prevention of cervical cancer and in carrying out the cytopathological examination, seeking appropriate solutions when possible and providing a more humanized care. <sup>25</sup> From this perspective, in the context of nursing practice and in the scope of Primary Care, among the specific duties of nurses, there is the request for complementary exams, prescription of medications established in public health programs and routines approved by health institutions and referral of users when necessary to other services. <sup>26,27</sup>

Among the drugs prescribed by the Nurse in view of the test results were Miconazole, Fluconazole and Metronidazole. Miconazole is intended for the treatment of infections in the vaginal region caused by fungi, being the first option in the treatment of vulvoginal candidiasis, as a second drug option the guidelines recommend Fluconazole. Metronidazole is indicated in the treatment of bacterial genital infections, such as those causing bacterial vaginosis, gardnerella, mobiluncus. <sup>28</sup>

The study observed that the word guidance was present in most of the records, however, it was not described which behaviors were prescribed to the users. These gaps in the guidance specifications raise doubts as to whether the act of guidance was actually carried out.

The referrals, as well as the guidelines, were incompletely recorded due to the lack of specification to which professional or, if necessary, to another health unit with a higher level of complexity. As the records are insufficient or inadequate, they compromise the patient's safety and care perspective, as well as making it impossible to evaluate the results of the care provided by the nurse.

Nursing records are the most significant type of evidence of the quality of the nurse's performance. For this reason, the written information reflects the care and all the care provided during the consultation and follow-up of the users, requiring a reliable and clear record of the assistance provided.

In accordance with the code of ethics of nursing professionals in Resolution n0 564/2017, in art. 36 it is the duty of the nursing professional to record in the medical record and in other documents the information inherent and indispensable to the care process in a clear, objective, chronological, legible, complete and without erasure form. <sup>31</sup>

The quality of health care offered by a system is related to the continuing education of its professionals, the use of clinical protocols and the definition of lines of care, training professionals who can act in solving problems and deliver quality care



to the subjects. Thus, knowing the health of the population is a decisive factor for taking effective measures, not only related to the treatment of the disease, but mainly to the action plan for the prevention of diseases and health promotion, seeking the effectiveness and resolution of services. 32,33

#### CONCLUSION

Cervical cancer is a major public health problem in Brazil, especially in the state of Amazonas, making its understanding indispensable for both epidemiological, and the relationships and conditions necessary for its prevention and early detection, implying a crucial role for nurses in the conduct of these strategies to intervene in possible changes that may precede cancer. Knowing

the reality of the population where it performs its activities is a factor of great relevance so that appropriate interventions can be established for the local reality.

The evaluation of the sociodemographic and gynecological profile present in the records has a valuable meaning since from these it is possible to know the individual characteristics and relate the most eminent risk factors, enabling the organization of educational and preventive methods. Based on the results presented, the cytological exams presented an adequate and satisfactory sample, allowing the identification of alterations and favoring the early detection

Taking into account the behavior performed by the nurse in the face of the results of the exams, the lack of adequate nursing records that support the assistance performed, emerging as a reflection on how these women are being guided and what information they received regarding their results. In this way, the professional nurse needs to be able to act in the implementation of strategic actions in order to prevent cervical cancer.

Finally, it is assumed that this study does not exhaust the different investigation alternatives in view of the complexity involving the theme and its relationship with the conducts for the prevention and detection of the disease. In this sense, it is expected that it can favor the organization of health actions, prioritizing the needs focused on the local context and contribute to the execution of public policies, programs and projects that address women's health.

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