

## Behavior patterns in the automation of the nursing professional against the absence of sanitary prevention policies in a national hospital, 2017

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### Resumen

La Organización Mundial de la Salud reporta que el 5% de la población del planeta podría ser alérgico a uno o más medicamentos o hacer resistencia al mismo, debido a la automedicación. Lo que se quiere determinar son los patrones de comportamiento en la automedicación del profesional de enfermería de un Hospital Nacional. El estudio fue cuantitativo de corte transversal, con una muestra compuesta de 118 enfermeros. Se utilizó un cuestionario que fue sometido a pruebas de validez y confiabilidad. Para el análisis de los datos se utilizó estadística descriptiva con el paquete estadístico SPSS versión 24, respetando las consideraciones éticas. Se constata que los patrones de comportamiento de los enfermeros con respecto a la automedicación fueron: Que del total de encuestados, un 95% se automedicaron sin receta médica, el 75% consumió analgésicos y/o antiinflamatorios, el 16% antihistamínicos y el 6% antipiréticos. Respecto a la frecuencia de automedicación, "a veces" fue un 93%, mientras que casi siempre es 6%. En la forma de obtención de la dosis, 43% refiere de la literatura del medicamento, 38% por consulta médica anterior, 15% utiliza su criterio personal, mientras que el principal motivo para automedicarse es la falta de tiempo para acudir al médico en 40%. El 37% refiere tener el conocimiento para recetarse solo, 14% por otros motivos (falta de dinero, demora en la atención) mientras, el 9% sobrecarga de labores.

**Palabras clave:** Automedicación, Salud Pública, Profesional de Enfermería.

### Abstract

World Health Organization reports that 5% of the population of the planet could be allergic to one or more drugs or make resistance to it, due to self-medication. Objective: To determine the behavior patterns in the self-medication of the nursing professional of a National Hospital. Methodology: Quantitative cross-sectional study, a sample composed of 118 nurses. A questionnaire was used that was subjected to validity and reliability tests. For the analysis of the data, descriptive statistics were used with the statistical package SPSS version 24, respecting the ethical considerations Results: The behavior patterns of the nurses with respect to self-medication were: That of the total of respondents, 95% self-medicated without a prescription, 75% used analgesics and / or anti-inflammatories, 16% antihistamines and 6% antipyretics Regarding the frequency of self-medication, "sometimes" was 93%, while almost always it is 6%. In the form of obtaining the dose, 43% refers to the medication literature, 38% for previous medical consultation, 15% use their personal criteria, while the main reason for self-medication is the lack of time to go to the doctor in 40%. 37% reported having the knowledge to prescribe themselves, 14% for other reasons (lack of money, delay in care) while, 9% overload of work. Conclusions: It is confirmed that the nursing professional has competencies in pharmacological management, which facilitates the adoption of non-responsible self-medication behaviors placing them in a vulnerable situation with respect to their health.

**Keywords:** Self-medication, Public Health, Nursing Professional.

## 1. Introduction

The World Health Organization (WHO) reports that almost two thirds (64%) of nearly 10 000 people interviewed in 12 countries say they know that resistance to antibiotics is a problem that could affect them and their families. However, the way in which it affects them and what they could do is to avoid taking medicines without medical indications that many times, they are not well understood. For example, 64% of respondents think that antibiotics can be used to treat Colds and flu, although antibiotics have no effect on influenza viruses (World Health Organization, 2015). Antibiotic resistance occurs when bacteria change and become resistant to antibiotics used in infections (World Health Organization, 2017).

The excessive and improper use of antibiotics increases the development of resistant bacteria and, in this previous survey, some of the practices, the gaps in understanding and the misconceptions that contribute to this phenomenon are pointed out. About one third (32%) of the people interviewed believe that they should stop taking antibiotics when they feel better, instead of finishing the prescribed treatment. Assess the true magnitude of the consumption of medicines, herbs and home remedies that are consumed on the advice of another person or on their own initiative, without consulting the doctor; it is a phenomenon that has increased over time, becoming a serious public health problem; This practice occurs in the population of the health team and is becoming more common.

In Peru, the General Directorate of Drugs and Drugs (DIGEMID) in a study conducted in 2013 indicates that 43% of people who visit pharmacies in Lima self-medicate, while 57% of this percentage do so inadequate when buying medicines that require a medical prescription. That is to say, it can be shown that in many pharmacies, products are often freely sold for whose sale the mandatory presentation of the prescription is needed.

The above shows the little control for the sale of drugs in Peru, in pharmacies drugs are sold without recipes which puts people at risk to develop resistance to antibiotics, which represents a risk to public health. These inadequate behaviors, called "medicated culture", is a daily practice in the population. Within the population that is self-prescribed are adults and older adults, the latter, to alleviate the discomfort caused by the physical and psychological exhaustion of their age; This dangerous practice can cause dizziness, intoxication, allergies, mental confusion, stiffness in the face and joints or body tremors and even kidney damage (Marriner, 2011).

The study of Quijandría Q. & Rivera C. (2014). concludes that nursing professionals practice self-medication in greater percentages and more frequently to relieve pain, intestinal disorders and emotional disorders. The most used drugs are analgesics, anxiolytics, antiinflammatories, antihistamines and antibiotics, in initial dose only; they do not show collateral reactions. Also, Medina and Trujillo (2016), report that the majority of nurses do not perform responsible self-medication; Regarding the other indicators, there is no significant relationship, so that age, sex, marital status, service, years of service and specialty have no tendency to practice any of the self-medication types, which makes it difficult to control this problem, giving us to understand that the strengthening of education and Professional preparation in nurses makes it less likely that they will perform self-medication that is not responsible. The reasons, in their majority, would be the difficulty of access to the meticulous medical attention, which adds to different factors like the lack of time to go to the doctor, lack of money, the multiple days of hospitable work, promoting the use of analgesics, anti-inflammatories of free access, factors that favor self-medication.

However, Rivera (2016) in his study shows that individuals with a greater risk of self-medication are those who have previous experiences, chronic diseases, accessibility to medications and lack of accessibility to medical professionals, among other factors. In addition, its conclusions indicate that among the main risk factors we have female individuals, age, marital status, the unemployed, those who do not have health insurance, chronic diseases and access to medicines. Reaffirms that self-medication is a widespread practice in Peruvian society and in the world. Despite the

positive evolution about the self-care that each person handles<sup>1</sup>, self-medication constitutes a health problem, because it is by its very nature an uncontrolled therapy, without patient follow-up that implies numerous risks derived from the lack of information about the disease as of the medications that the patient has. It is important to note that the abuse of self-medication consumption in some cases becomes disorder not only in the intake but in the schedules and doses, damaging the effects on the body and causing the risk to the resistance of the same.

The DIGEMID (2013) states that "Self-medication is an irresponsible act of people who, instead of consulting a doctor, resort to the use of antibiotics, they can produce unwanted effects and complications that could put their health at risk. Usually, the population when presenting any type of discomfort such as a headache, sneezing, nasal congestion, cough, self-medicate with flu to control symptoms, and antibiotics to fight an infection that usually does not exist, because flu and Colds are caused by viruses, before which antibiotics do not cause any effect. "[...] Incurring these behaviors is a big mistake that can trigger adverse reactions such as poisoning, and decreases the effectiveness of medications, because it produces resistance to antibiotics when a respiratory infection actually occurs. The use will be useless because having ingested them unnecessarily, it contributed to the bacteria becoming resistant to their therapeutic actions, as if they had been vaccinated against them".

The seriousness of self-medication is drug resistance, in addition to generating dependence drug. In many cases, people who self-medicate increase the dose due to the anguish caused by the lack of results and improvement of their health status. "Self-medication produces adverse reactions and delays the treatment of diseases, and is a public health problem. The doctor is the only one who can prescribe a treatment, determine the composition, frequency and schedule of the medication and provide the necessary recommendations, information that will be included in a recipe. Any additional guidance on the use of the drugs can be requested to the pharmacist chemist of the pharmacy or apothecary in which he acquires said products" (idem).

In the hospital environment, health personnel have multiple days, associated with the complexity of hospital work and are usually exposed to chemical, biological and bodily fluids risks, among others. Conscious of this situation, the nursing staff is always using preventive measures to avoid occupational health risks and this alert situation to any manifestation of signs and symptoms of any disease. She knows that this alert limits her in her actions of integral care that she can provide to patients. It should be noted that, having health affected, the caregiver may cause a risk to the patient due to cross-exposure. So the nursing staff assumes the decision to consume the drugs, which are accessible to health personnel, thus facilitating the conduct of their lives to continue their work. The search for a quick relief to the affections, pains, promotes the use of certain analgesics, anti-inflammatories, among other medicines of free access and without medical prescriptions (idem).

In hospital practices, health personnel, usually, when manifesting a medical condition, usually suggest brands of medicines or offer a medical sample. Such practices reach even their family and friends, avoiding previous medical evaluation, these events occur on a daily basis because the staff has professional skills in the handling and preparation of medicines, these strengths have led to self-medication not responsible caused by the same health personnel. When performing professional interviews in nursing, they expressed that they always self-medicate because they do not have enough time to visit the doctor and that they are aware of the properties and the use of the drugs. Likewise, it can be observed that the nursing professionals have conditions due to work overload and occupational health problems. In fine, we observed patterns of behavior in the nursing professional that in the future can lead to consequences such as microbial resistance, therapeutic ineffectiveness, appearance of adverse reactions, and so on.

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<sup>1</sup> In 2000, the WHO published the "Guidelines for the regulatory evaluation of medicines for use in self-medication" in which, far from promoting generalized self-medication, it tries to regulate the use of self-administered medicines (non-antibiotics).

## 2. Methodology

The research was a descriptive study, not experimental transectional (Hernández, Fernández & Baptista, 2014). The total population was 118 nurses who work in the healthcare area of a National Hospital. The technique used for data collection was the survey, and as a tool a questionnaire was used, which was applied in a personalized manner, each nurse was provided with the questionnaire in their respective services or other settings of their own institution, in the different shifts with an estimated time of 3 to 5 minutes per person. The self-medication questionnaire in the nursing staff consists of a total of 13 Likert scale items. The instrument was subjected to content and construct validity test by expert judgment and later the pilot test was applied to 30 nurses, this was to determine the reliability of the instrument through the calculation of Cronbach's alpha, for the analysis of the statistical package SPSS version 24 was used, taking into account the ethical considerations.

## 3. Results

Table 1 Patterns of behavior in the self-medication of the nursing professional of a National Hospital: Sociodemographic characteristics

VARIABLE	CATEGORY	Nº	%
SEX	MALE:	9	8
	FEMALE:	109	92
AGE	24-37:	52	44
	38-51:	41	35
	52-65:	25	21
SERVICE TIME	1-9:	43	36
	10-19:	35	30
	20-29:	20	17
	30-38:	20	17
LEVEL REACHED	Graduate:	102	86
	Magister:	16	14
UNIVERSITY OF EGRESS	National:	72	61
	Private:	46	39

Source: Survey applied in the National Study Hospital.

**Table 1** shows the following variables: Sex, of the total number of respondents, 92% are women, while 8% are men; Age, we find that the average age is 41 years, the group of 24-37 is in 44%, the group of 38-51 in 35%, while in the group of 52-65 it is 21%; Service Time, we find that the average time is 14 years, it is divided into four groups, the 1st group 1 to 9 years is 36%, the 2nd group 10 to 19 years is 30%, the 3rd group 20 to 29 years and the 4th group 30 to 38 years is 17%; Level reached, 86% are graduates, while 14% are Masters. Universidad de Egreso, 61% refers to seeing graduates in a national university, while 39% have graduated from a private university.

Table 2 Patterns of behavior in the self-medication of the nursing professional of a National Hospital according to the Self-medication dimension without a prescription

CATEGORY	Nº	%
Yes	112	95
Not	6	5
<b>TOTAL</b>	<b>118</b>	<b>100</b>

**Source:** Survey applied in the National Study Hospital.

In Table 2 we observed that 95% of the nurses have self-medicated at some time in their lives and reported having self-medicated without a prescription and 5% have not self-medicated without a prescription.

Table 3 Behavioral patterns in the self-medication of the nursing professional of a National Hospital according to the dimension: Types of medications used in self-medication.

CATEGORY	Nº	%
Analgesic/Anti-inflammatory	89	75
Antipyretic	7	6
Antibiotic	3	3
Antihistamine	19	16
<b>TOTAL</b>	<b>118</b>	<b>100</b>

**Source:** Survey applied in the National Study Hospital.

In Table 3 we observed that 75% reported having consumed analgesics and / or anti-inflammatories, 16% reported consuming antihistamines, 6% had self-medicated with antipyretic, only 3% with antibiotics.

Table 4 Patterns of behavior in the self-medication of the nursing professional of a National Hospital according to the dimension: Frequency of taking medications.

CATEGORY	Nº	%
Never	2	1
Sometimes	109	93
Almost always	7	6
<b>TOTAL</b>	<b>118</b>	<b>100</b>

**Source:** Survey applied in the National Study Hospital.

Table 4 shows that the population of nurses who self-medicate is sometimes 93%, while almost always self-medicates 6%, and never only 1%.

Table 5 Behavioral patterns in the self-medication of the nursing professional of a National Hospital according to the dimension: Obtaining information on the dose that should be taken.

CATEGORY	Nº	%
Medication literature	51	43
Previous query	45	38
Personal criteria	17	15
Internet search	5	4
<b>TOTAL</b>	<b>118</b>	<b>100</b>

**Source:** Survey applied in the National Study Hospital.

In Table 5 we observe that 43% indicate that they find the dose information that they should take in the literature of the drug, while 38% do so by previous medical consultation, 15% use their personal criteria regarding the dose should take, in 4% search the internet.

Table 6 Patterns of behavior in the self-medication of the nursing professional of a National Hospital according to the dimension Motive for which the nursing professional of the National Hospital has self-medicated.

CATEGORY	Nº	%
Lack of time to go to the doctor	47	40
I have the knowledge to prescribe myself	43	37
Work overload	11	9
Others	17	14
<b>TOTAL</b>	<b>118</b>	<b>100</b>

**Source:** Survey applied in the National Study Hospital.

In Table 6, we observe that of the total number of respondents, 40% indicate that the main reason for which they have self-medicated is the lack of time to go to the doctor. In the same way, it is found that 37% say they have the knowledge to prescribe themselves, 14% affirm that it is for other reasons (such as lack of money, time lost in a care, etc.), while the 9% say that it is due to an overload of tasks.

#### 4. Discussions and conclusions

Self-medication is a public health problem, which puts people in a situation of vulnerability and exposing them to risks in their health. Statistics confirm that self-medication has increased in recent times, especially among health personnel. Self-medication is seen as another alternative within the set of options for choosing care.

The present investigation characterized the nursing professional of a National Hospital that self-medicates. Of a total of 118 individuals surveyed: 92% are women, while 8% are men; the average age is 41 years; an average service time of 14 years; 86% are licensed, while 14% are Masters; 61% are graduates of a national university, while 39% have graduated from a private university.

Regarding the identification of behavioral patterns, in the self-medication of the nursing professional, it is observed that 95% of respondents have self-medicated at some time in their lives and claim to have self-medicated without a prescription and 5% have not self-medicated. The results obtained are similar to those obtained by Burgos, García & González (2010) in which 73.33% of nursing professionals self-medicate. It is evident that self-medication is more pronounced in Nursing professionals in Peru, but the most alarming is the percentage of self-medication without a prescription. The medicines are in free demand without any control on the part of the health professionals, because not only this influences in making the decision to self-medicate, but also their self-care. The pharmacological knowledge of nurses is probably an important factor to practice self-medication.

Self-medication is a daily practice that affects the health of people, the main causes of the practice of self-medication without medical advice are: the lack of time, the publicity that generates high expectation in the effects it can provide to health, lack of money and recommendations from third parties, among others. The irresponsible self-medication is caused by the therapeutic non-compliance and the irrational use of medicines, this can cause habitual relapses, as well as the resistance to the non-adherence of the treatment, affecting the resolution of the health problem and even rethinking new treatments of greater therapeutic duration and even greater economic expenses, which leads to the deterioration of health. However, responsive self-medication does have benefits through self-care behaviors of drug consumption, guaranteeing the efficacy and reliability and safety of the drug, which is harmless according to the instructions.

The medical evaluations allow to investigate in an integral way the person on the symptomatic data expressed by the patient, anamnesis, collection of the clinical information, diagnosis and the medical prescription; All these are important for the choice of drugs in medical indications. To start a medical therapy requires a thorough clinical analysis of the patient and especially pharmacological knowledge of the physician, considering the particularities of the patient. For the integral administration of medicines, it is necessary to achieve a high level of professional and ethical competences for the application of the forms of use, frequency of use, care, warnings and duration of the therapy.

Regarding the types of medications used in self-medication, 75% reported having consumed analgesics and / or anti-inflammatories, 16% reported using antihistamines, 6% self-medicated with antipyretics, and only 3% with antibiotics. A study conducted in Brazil by Ferreira, Damázio, Carvalho, Emm & Varanda, in 2011, indicates that the prevalence of self-medication was 38.8%. The generating source and the prevailing determining factors of this practice were the student himself in 54.1% of the cases and the lack of time to go to the doctor in 50%. Dipyron was the most used analgesic (59.8%) and pain relief classified as good (average of 8.5, max of 10 and min of 0).

The prevalence of self-medication was greater than that observed in similar studies and for many students the relief was good, fact that can delay the elucidation of the diagnosis and the adequate treatment of pain. However, according to Dorothea Orem in her definition of self-care in relation to deviations from the state of health, it indicates that self-medication can produce a deviation of the health status, since the individual becomes dependent on chemical substances, passes from the situation of agent from self-care to that of the recipient of these cares. At the same time add

the acquisition of medicines within the workplace, either by the daily handling of medications and sometimes medical samples, will influence your decision to self-medicate.

The practice of self-medication is associated with the presence of signs and minor symptoms of acute characteristics, such as pain or common cold. However, chronic diseases that, in general involve medical accompaniment, favor the use of previously prescribed medications. Self-care is to achieve maturity for their own care, often health professionals say they do not have the time to perform an appropriate medical evaluation, in addition to considering that they have the ability to identify the health problem or re-use the treatment indicated above. The important thing for the professional is that the medicine has the quick result for the discomfort that afflicts him and assuming this decision causes that the self-care deficit occurs in a therapeutic under inadequate conditions: without laboratory examination, or relevant medical evaluations. These attitudes have often caused the individual non-adherence to treatment and even the resistance of the effect of the medication due to inaccurate combinations of doses and schedules.

In support of the theory and the studies found, which affirm that analgesics and anti-inflammatories are the most used drugs at international and national level by nursing professionals, it has been determined that they consume the drugs to alleviate the symptoms they may present to the perform their care work, despite the excessive use of analgesics may be a reflection of poor working conditions (with minimal rest and fatigue at the end of the shift), leading to the need for the use of drugs and, consequently, self-medication.

The frequency of drug use. The results obtained in the population of nurses who self-medicate are sometimes 93% of the total number of respondents, while those who almost always self-medicate are 6%, and never 1%. These results allow us to deduce that nurses, because of their knowledge of pharmacology, choose to self-medicate; when the symptoms are pain or a cold. Highlighting a form of self-care.

Many times their recommendations with respect to medications are correct; since it is usually products with which he works on a day-to-day basis, he knows its effects and pharmacological contraindications, but also generate unhealthy behaviors. Although it is true that the nurse is aware that medical evaluation and complementary analyzes are necessary for medical prescription, they promote behaviors that do not follow the monitoring and monitoring of health conditions, which are vital for the treatment and recovery of the person.

It is there that we can assume that the deficit of self-care is a responsibility issue assumed from the use of self-medication in nursing professionals, conceived in a natural way by the knowledge and experience in the daily work of the nurse in the treatment they provide the patients, this gives him full confidence and confidence that self-medication will meet the expected objectives according to the health problem.

Regarding the determination of the dose to be consumed, the results obtained indicate that 43% find the information of the dose that should be taken in the literature of the drug, while 38% do so following the indications of a previous medical consultation, the 15% use their personal criteria, in 4% they search the internet. Similarly, in the Burgos study, Garcia & Gonzales (2010) mentions that 53.3% read the indications of the medications and in turn asks for help if they do not know any term of the medication indications. Findings found in the study of Palomino (2005) indicate that 34% of the nursing professional uses the personal criterion to self-medicate, while in 25% he reads the medication literature, and 18% uses the previous medical prescription.

In the present investigation it was obtained that the reasons for which the nurse of the National Hospital of study has self-medicated are: 40% for the lack of time to go to a medical consultation, 37% due to the knowledge to be prescribed only, 14% affirm that it is for other reasons (eg: the lack of money and the time that is lost in a service) while 9% manifest an overload of tasks. In the

study by Burgos, García & Gonzales (2010), it is stated that 73, 33% of respondents believe that self-medication never decreases expenses.

In comparison with the results of Palomino (2005), there are also differences with respect to what nurses think, in their study the conditioning factors of self-medication are work overload and economic income in 60.8%, while 72.38 % consider that they know the indications, contraindications, adverse effects and dosing of the drug before self-medication. These results differ from the present study, where 37% claim to have the knowledge to prescribe themselves, which means that more than a third of nursing professionals rely on reading the medication to self-medicate, giving importance to the indications and contraindications of the same.

There are no investigations concerning the lack of time of the professional to go to the medical consultation. We can point out in this section pointing out that most of the nursing professionals have a second job, which means that the time dedicated to their personal life is limited, especially to take care of their own health. Another reason that can be deduced, and that occurs on a daily basis, is that when a health condition occurs, the nursing staff simply goes to the doctor in their work area; however, most do not perform a formal evaluation, obviating some components in their evaluation, causing the condition to be disguised and longer.

In conclusion, it is important that health professionals educate the population in general about the importance of comprehensive assessment with the aim of promoting the prevention of self-medication behaviors. Nurses who are specialists in the science of care have to take a position of prevention and self-care in health, in order to preserve, maintain, recover and rehabilitate the health condition of people, family and community that depends on their extensive experience Professional in care.

It should be noted that this study highlights the need to design and implement health control policies in the distribution and sale of medicines inside and outside health facilities. The consequences of the almost generalized practice of self-medication have led to the generation of resistance to antibiotics, as in the treatment of diseases such as tuberculosis, endemic in low-income populations, which leads to an increase in the cost of treatment, in addition to the danger to health public (Bennadi, 2013).

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