

## **Importance of the Use of the Clinical Practice Guide in the First Level Medical Care Center**

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### **Abstract**

**Background:** Acute infection of the upper respiratory tract is one of the infectious diseases that affect from the nose to before the epiglottis, for a period of less than 15 days. About 80% of cases do not require antibiotics for treatment; They are short-lived and heal spontaneously. However, 50-90% of the cases seen in the medical consultation receive antibiotics. The purpose of the CPG-IMSS-062-08 is to establish a national reference to guide clinical decision-making based on evidence-based recommendations.

**Purpose:** Analyze and increase adherence to the "GPC-IMSS-062-08" in the care of patients from 3 months to 18 years of age, in the CS T-II Cuchilla Pantitlán from August 01, 2020 to May 31 of 2021.

**Materials and methods:** The evaluation of 108 medical notes was carried out using a "check list" and a database in Microsoft Excel, from which measures of central tendency and the percentage of adherence to the CPG were calculated.

**Results:** Currently the adherence of the medical note to the CPG is between 40-55%, increasing to 68% with proposals for improvement, achieving a decrease in unjustified antibiotic prescription by 32%.

**Conclusions:** The CPG is an instrument that allows improving the population's health status, which is why it is of great importance for the care of IAVRS, the main reason for consultation.

**Keywords:** Clinical Practice Guideline; Respiratory infection; Centor scale; Antibiotic.

### **Introduction**

According to the National Academy of Medicine (NAM-USA) the Clinical Practice Guidelines (CPG), are a set of recommendations based on the systematic review of evidence and risk/benefit evaluation, with the aim of optimizing the health care of the patients [1]; In addition to improving the quality of the National Health System, strategies have been implemented to standardize and systematize health care processes adequately and efficiently [2]. As part of the official Mexican standards, the general health law in chapter II, article 32 on medical care, stipulates that health service providers may rely on the CPGs and electronic means issued for this purpose by the Secretary of Health [3].

In particular, the Cuchilla Pantitlán Health Center (CS) is a government unit of the CDMX, of first level medical attention, based on the information presented in the last health diagnosis that includes: August 2020-May 2021, it is found that the main conditions for which medical care is requested are: Upper Respiratory Tract Infection (IAVRS) [4]. The present study fo-

uses on analyzing adherence to the CPG-IMSS-062-08, in the care of patients from 3 months to 18 years of age with a diagnosis of IAVRS; since its fundamental objective is to offer the doctor diagnostic and treatment resources; Likewise, that the consultation request be at the appropriate and justified time [5]. IAVRS are the first cause of disease and the main reason for seeking medical care; estimating in 2019, a total of 24 million cases in the country [5]; present in all age groups; However, two thirds of the cases observed in the general population occur in pediatric patients and of these, one third occurs in children under 4 years of age [5].

Furthermore, through the use of a system based on the clinical picture of the patients (Centor scale), it is sought to have an impact on the excessive use of antibiotics, avoiding complications associated with their unjustified use, due to their adverse effects and the increase in resistance. bacterial (5.7). Between 80-90% of cases of IAVRS have a viral etiology, are generally benign and self-limited in a short time [6]; However, the treatment of IAVRS is the main cause of administration of an-

tibiotics to children under 5 years of age, between 50-90% of the cases seen in the medical consultation receive antibiotics (unnecessary and even harmful) in the health services. health of developing countries [7,8].

**Materials and Methods**

**Sample selection**

A cohort study was carried out, by reviewing the daily outpatient sheets, in the period from August 1, 2020 to May 31, 2021; the inclusion criteria were: the diagnosis of IAVRS and age, later those who had a file number were selected and were requested from the clinical file, for review and location of the medical notes according to the date of consultation.

A "check list" was prepared in an Excel database considering the following key points of the CPG: symptomatology, Centor scale, evolution time, diagnosis, treatment and general measures. At the end of the review of each note, a score was assigned that provided us with an average to calculate the percentage of adherence.

**Training of primary care staff**

Starting in November, weekly educational presentations were made regarding the IAVRS, aimed at parents and guardians, accompanied by informative brochures. The infographics were placed within the medical unit at strategic points visible to the general public. Likewise, medical and nursing staff were trained by reviewing the content and analysis of each of the points described in the CPG-IMSS-062-08.

**Statistic analysis**

The results were analyzed based on their distribution and measures of central tendency were calculated.

**Results**

When reviewing the daily consultation/month sheets, a sample of 204 patients was obtained who met the diagnostic criteria and age, with an average of 20 consultations/month. 58 were occasional or without a file, the 146 with a file number were requested from the clinical file for review; however, 38 did not have a medical note, finally 108 were considered for review and further analysis.

During the study period, the highest number of consultations for IAVRS is referred to the August-October 2020 quarter with 15, 17 and 18% respectively (Figure 1A), with the lowest incidence in the December quarter (2020). )-February (2021), this may be attributable to the increase in COVID-19 cases in CDMX, since any patient with suspicious data was sent to the specific module and not to the general consultation.

The present study considered five age groups, the highest incidence of cases is found in patients from 1 to 10 years of age (66%), with a mean of 7 years, within 32% of the population and mode of 3 years in 34 %. In a smaller proportion are patients aged 16 to 18 years with 8% of consultations (Figure 1B).

The diagnosis with the highest incidence is rhinopharyngitis with 47%, followed by pharyngotonsillitis (28%), the antibiotic treatment that was granted according to the diagnosis, corresponds to 93% of probably bacterial infections, where it is indicated, instead it is also awarded 25% of conditions of viral origin (Figure 1C).

Of the registered diagnoses, 100% were obtained through clinical symptoms, without requiring laboratory tests, 71% are pathologies of viral origin and 29% of bacterial origin, accord-

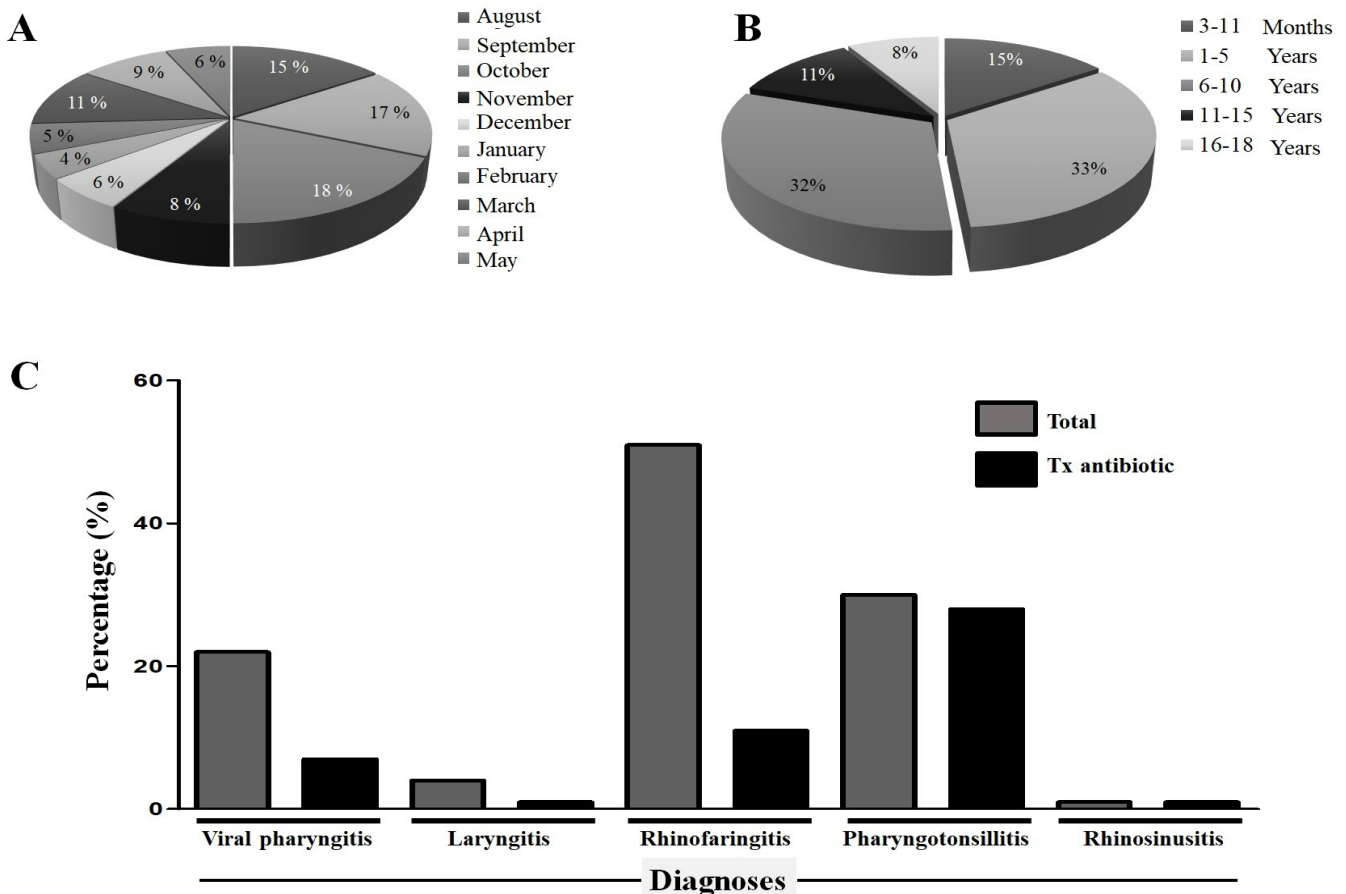


Figure 1: Record of daily leaves in outpatient clinic. A: Percentage of consultations with a monthly IAVRS diagnosis. B: IAVRS consultations by age group. C: Clinical diagnosis in relation to the prescription of antibiotics.

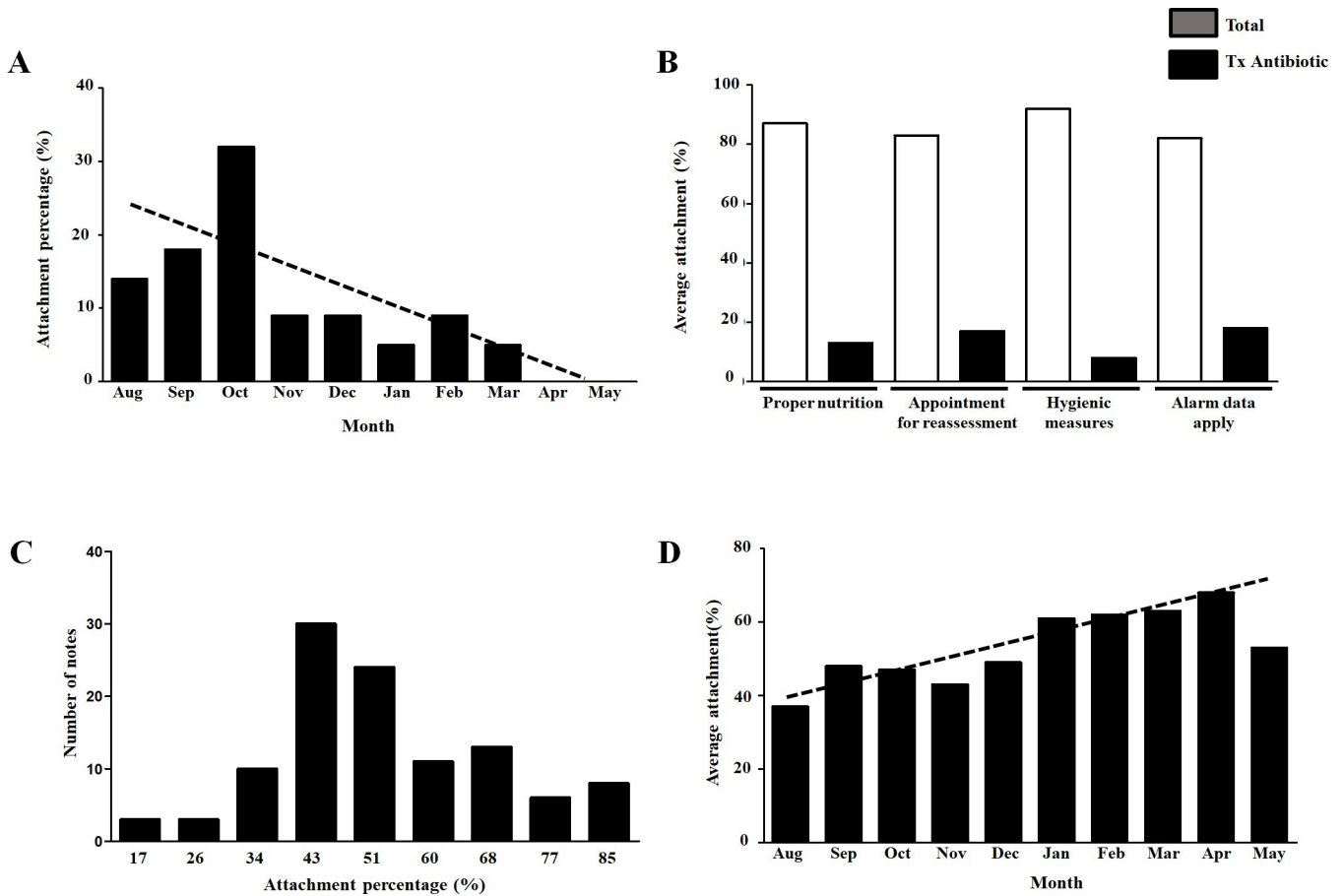


Figure 2: Application and monitoring of the CPG-IMSS-062-08 in the quality of medical care. A: Decrease in the unjustified use of monthly antibiotics. B: Percentage of medical advice given to parents and/or guardians of minors. C: Percentage of adherence to the Clinical Practice Guide. D: Average attachment of the monthly medical note.

ing to the symptoms and considering the Centor scale, it was observed that 45% present data of low probability of bacterial infection and 55% high probability, according to the Centor scale it has a mean and mode of 3, which justifies the use of antibiotics in these suspicious conditions (Figure 2A). Based on what is recorded in the medical notes, the diagnosis is not related to the symptoms, although as demonstrated by the Centor scale, the treatment is probably adequate.

65% of the parents and guardians of the patients received appropriate and complete guidance considering the following four items: food, hygiene and alarm data measures, in addition to the appointment for reassessment due to their own decisions, 35% received incomplete information, 18% were not indicated alarm data and 17% were not scheduled for re-assessment, data that are of great importance to avoid possible complications (Figure 2B).

However, unjustified antibiotic treatment decreased in 2021 by up to 32%, in relation to what was reported in 2020, in the months of April and May 2021, it was not indicated in any viral condition, considering that the training of updates to the medical staff were very useful (Figure 2C).

Considering the above, an average adherence of the medical note of 53% to that stipulated in the CPG was obtained, with a mode of 46%, fulfilling the majority with adherence of 40-55%, observing the average percentage of adherence per month, it was obtained an increase from the month of December (2020), which is maintained in the January-March quarter and increases in April (2021) reaching 68% (Figure 2C).

**Discussion**

Respiratory infection worldwide is a serious public health problem in children under 5 years of age [9], according to data obtained previously, in the CS T-II Cuchilla Pantitlán the main risk group for acute respiratory infection (ARI ) are pediatric patients from 1 to 10 years of age, during the general consultation by ARI, a process is not carried out that allows compliance with the CPG-IMSS.062-08 at 100% by the medical staff; In addition to this, the general population of the CST-II is unaware of the subject.

Previous studies have shown that the presence of pharyngotonsillar exudate, petechiae on the palate and/or exposure to a known case of streptococcal pharyngitis in the last two weeks, may be the elements that, according to the clinical picture, lead to bacterial infection [9]. On the other hand, since the unit does not have sufficient inputs to confirm suspicious diagnoses, the most reliable is the application of the Centor scale, which had not been respected either, according to the review of the medical notes, it is not considered for the prescription of antibiotic treatment; despite the fact that the clinical indicators analyzed did not show sufficient predictive power to safely include or exclude bacterial infection in this context.

Based on the CPG-IMSS.062-08, the treatment of IAVRS of viral origin is symptomatic, considering that these are the pathologies with the highest incidence in the population, a significant percentage continues to receive unjustified antibiotic treatment. It is worth mentioning that the diagnosis is not related to the symptoms described in some medical notes, since according to the clinical characteristics it is probably appropri-

ate. However, through the development of this work and the proposals for improvement, the following was obtained: An increase in adherence of the medical note to the CPG by 31%; Decrease in the use of unjustified antibiotics up to 32%; and the implementation of educational material to provide better guidance to parents, guardians and patients. Overall, an improvement in the quality of medical care was demonstrated.

There are studies that evaluate the efficacy of educational interventions aimed at patients and parents, concluding that health care education for patients results in appropriate self-care for IAVRS, which results in fewer visits to the doctor and cost care of the disease, having an impact on the reduction of unnecessary medical treatment.

Of equal importance is the adherence to the NOM-004 of the clinical file, since the evaluation of the quality of medical care depends on it, and likewise the registration of patients in the daily outpatient sheets, presenting complete data for their location where necessary

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