



ORIGINAL ARTICLE

Antibiotics prescription and complementary tests based on frequency of use and loyalty in Primary Care^{☆,☆☆}



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KEYWORDS

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Abstract

Objective: To assess whether there is a relationship between the prescription of antibiotics and the performance of complementary tests with frequency of use and loyalty in Primary Care.

Methods: Analytical descriptive study performed through a network of Primary Care sentinel paediatricians (PAPenRed). Each paediatrician reviewed the spontaneous visits (in Primary Care and in Emergency Departments) of 15 patients for 12 months, randomly chosen from their quota. The prescription of antibiotics and the complementary tests performed on these patients were also collected.

Results: A total of 212 paediatricians took part and reviewed 2,726 patients. It was found that 8.3% were moderate over-users (mean + 1–2 standard deviations) and 5.2% extreme over-users (mean + 2 standard deviations). Almost half (49.6%) were high-loyalty patients (more than 75% of visits with their doctor).

The incidence ratio of antibiotic prescriptions for moderate over-users was 2.13 (1.74–2.62) and 3.25 (2.55–4.13) for extreme over-users, compared to non-over-user children. The incidence ratio for the diagnostic tests were 2.25 (1.86–2.73) and 3.48 (2.78–4.35), respectively.

The incidence ratios for antibiotic prescription were 1.34 (1.16–1.55) in patients with medium-high loyalty, 1.45 (1.15–1.83) for medium-low loyalty, and 1.08 (0.81–1.44) for those with low loyalty, compared to patients with high loyalty. The incidence ratios to perform diagnostic tests were 1.46 (1.27–1.67); 1.60 (1.28–2.00), and 0.84 (0.63–1.12), respectively.

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PALABRAS CLAVE

Hiperfrecuentación;
Agentes
antibacterianos;
Uso de
medicamentos;
Técnicas
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Pediatria;
Atención Primaria

Conclusions: Antibiotics prescription and complementary tests were significantly related to medical overuse. They were also related to loyalty, but less significantly.

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Prescripción de antibióticos y realización de pruebas complementarias en función de la frecuentación y de la fidelización en Atención Primaria

Resumen

Objetivo: Valorar si existe relación entre la prescripción de antibióticos y la realización de pruebas complementarias con la hiperfrecuentación y la fidelización de los pacientes.

Métodos: Estudio descriptivo que se realizó a través de una red de pediatras centinela de Atención Primaria (PAPenRed). Cada pediatra revisó las visitas espontáneas (en Atención Primaria y en centros de urgencias) durante 12 meses de 15 pacientes escogidos aleatoriamente de su cupo. También se recogió la prescripción de antibióticos y las pruebas complementarias realizadas a estos pacientes.

Resultados: Participaron 212 pediatras que revisaron a 2.726 pacientes. Un 8,3% fueron hiperfrecuentadores moderados (número de consultas entre +1 y +2 desviaciones estándar) y 5,2% hiperfrecuentadores extremos (número de consultas > 2 desviaciones estándar). Un 49,6% fueron pacientes de alta fidelización (más del 75% de visitas con su pediatra).

La razón de tasas de prescripción de antibióticos para hiperfrecuentadores moderados fue 2,13 (1,74-2,62) y la de hiperfrecuentadores extremos 3,25 (2,55-4,13) respecto a no hiperfrecuentadores. Las razones de tasas de realización de pruebas complementarias fueron 2,25 (1,86-2,73) y 3,48 (2,78-4,35), respectivamente.

Las razones de tasas de prescripción de antibióticos fueron 1,34 (1,16-1,55) en pacientes de fidelización media-alta, 1,45 (1,15-1,83) para fidelización media-baja y 1,08 (0,81-1,44) para los de baja fidelización respecto a los de alta fidelización. Para la realización de pruebas complementarias las razones de tasas fueron 1,46 (1,27-1,67); 1,60 (1,28-2,00) y 0,84 (0,63-1,12), respectivamente.

Conclusiones: La prescripción de antibióticos y la realización de pruebas complementarias se relacionaron significativamente con la hiperfrecuentación. También se relacionaron con la fidelización, pero de manera menos importante.

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Introduction

Frequent attendance to health care facilities is a problem associated with a substantial consumption of resources. In Spain, it is estimated that 14%–15% of paediatric patients are high-frequency (HF) users of health care services and that this subpopulation consumes more than one third of the working time of health professionals.¹ For this reason, numerous studies have been investigating the factors that may lead to this excessive use with the aim of intervening and optimising health care quality.^{2–6} Several factors have been described in relation to high-frequency use, such as age or the presence of certain disease patterns.^{1–3,7,8}

High-frequency use of health care services raises concerns as to the pressure that these users exert on health professionals to prescribe treatments more frequently,^{9,10} even in the absence of a disease that clearly indicates their use. There is also evidence that pressure from family members and recurrent visits may be associated with an increased use of diagnostic tests (DTs).¹¹ In addition

to causing discomfort or potentially being hazardous to patients, these DTs do not appear to reassure users regarding the disease,¹² so they could be dispensed with in many instances. There is also evidence that the likelihood of DTs being ordered for any given condition varies depending on the level of care of the facility (hospital/primary care) or the type of professional managing the patient (general practitioner/paediatrician/resident physician).^{11,13,14}

When it comes to pharmacological treatment, antibiotic prescription is particularly important in paediatrics, as these drugs are used frequently in the early years of life. It is well known that their indiscriminate use may pose a public health problem due to the development of antimicrobial resistance.^{15,16} As is the case with DTs, the use of antibiotics varies widely between countries,¹⁵ levels of care¹⁴ and types of prescribing professionals.^{17,18} There is also considerable variation in the antibiotics prescribed and the degree of adherence to clinical practice guidelines.^{18,19} The current evidence suggests that despite the differences between countries, health care outcomes

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