

## International exchange

# The potential role of primary care in the management of common ear, nose or throat disorders presenting to the emergency department in Greece

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### ABSTRACT

**Background** The aim of this study was to assess the prevalence of common ear, nose or throat (ENT) conditions presenting to emergency departments that could be managed by a primary healthcare system

**Method** Between January 2001 and January 2006 a total of 33 792 patients attended the ENT emergency department of one hospital. All cases were included in this retrospective study. The registry of ENT emergency department was analysed; age, sex

and clinical diagnosis were tabulated. All patients were evaluated by a specialist. Classification of the cases was based on the main symptom seeking care.

**Results** A total of 33 792 patients visited the otorhinolaryngology emergency department. Of these, 17 775 patients (52.6%) were men and 16 017 (47.4%) were women. Over 40% of the cases were classified in eight major groups of diagnosis. Acute tonsillitis (12.5%) and acute pharyngitis (11.4%) followed by acute otitis externa (5.9%) were the most

common causes of all ENT emergency department visits. The admission rate was 1.2 % and only 0.6% (84) of patients were referred to other specialties.

**Conclusion** Most common ENT disorders presenting to the emergency department in Greece could be managed at the level of primary health care. Incorporating ENT expertise into educational

and training programmes of general practitioners may be successful in managing ENT problems in primary care in future.

**Keywords:** ENT disorders, general practitioners, primary care

### How this fits in with quality in primary care

#### What do we know?

Ear, nose or throat (ENT) symptoms are perceived as common reasons for seeking care in the emergency department in Greece.

#### What does this paper add?

Most common ENT disorders presenting to an emergency department in Greece could have been managed in primary care, which would decrease the burden of hospital care and improve the quality of care.

## Introduction

Improving quality, care and performance of health services is an important challenge for many governments in Europe.<sup>1,2</sup> The concept of primary health care has been articulated for well over a decade, but it has not yet routinely become part of the Greek health system. In Greece, primary care is not yet fully developed, especially in urban areas.<sup>3</sup> Due to lack of primary care settings in cities, people with a variety of disorders seek advice from hospitals or private specialists in order to seek a diagnosis and access treatment.<sup>4</sup> The burden of hospital care is high and the financial impact is considerable. Additionally, there is a lack of continuity of care since every hospital visit does not become a part of an individual's medical record.

Over the past few years, attempts to improve and modernise national healthcare services in Greece have taken place. The Health Care Reform Act aimed to enhance quality improvement and co-ordination of outpatient and hospital services on a regional level through the enhancement of primary care.<sup>3</sup> Ear, nose or throat (ENT) symptoms are common causes for seeking care in the emergency department of Laiko University Hospital, which is one of the largest public hospital units and is on duty every four days.

The aim of this study was to assess the prevalence of common ENT conditions presenting to the emergency department, in order to help primary care providers to focus on them and plan essential reform of the healthcare system.

## Method

All patients who attended the ENT emergency department (ENT ED) of Laiko University Hospital during the on-call days, between January 2001 and January 2006, were included retrospectively in this study. From the registry of the ENT ED, data on medical history, clinical examination and laboratory investigations were collected. An ENT specialist evaluated all patients. Sex, age, region, common ENT disorders and their frequency were recorded. The clinical diagnosis, used for classification of the cases, was based on the main symptom or clinical sign of every patient seeking care.

Patients who visited the ENT ED were stratified into eight groups according to the infectious disease that they suffered: (a) stomatitis, (b) acute pharyngitis, (c) acute tonsillitis, (d) acute laryngitis, (e) sinusitis, (f) otitis externa, (g) rhinitis or (h) otitis media. Symptoms and treatment administered were examined, and hospitalisation rate was calculated.

The study conformed to the principles outlined in the Declaration of Helsinki; ethical approval was not deemed necessary as this was an evaluation.

## Results

The total number of patients who visited the ENT ED during the study period was 33 792; 17 775 (52.6%) of these were men and 16 017 (47.4%) were women. Of these, 13 990 patients (41.4%) suffered from infectious

diseases. The most common was acute tonsillitis observed in 1749 patients (12.5%), followed by acute pharyngitis (1595, 11.4%), otitis externa (825, 5.9%), otitis media (364, 2.6%), acute sinusitis (586, 4.2%), acute laryngitis (252, 1.8%), rhinitis (266, 1.9%) and stomatitis (154, 1.1%). It was felt that all these 13 990 (41.4%) patients could have been managed by a GP without the need for referral to a specialist.

Hospitalisation occurred in 1.2% (168). Consultations were performed with other specialties in the emergency department for only 0.6% (84). In 1707 patients (12.2%), a second-look (follow-up) examination was recommended. X-ray examination was performed in 1357 (9.7%) patients. Antibiotics were administered in 4099 (29.3%) patients. Interestingly, it was observed that 3889 (27.8%) patients were already taking antibiotics without prescription at the time of the visit to the ENT ED.

Acute pharyngitis, tonsillitis, laryngitis, otitis media and otitis externa were most commonly observed in younger patients aged 14–20 years, and were seen far less frequently in patients aged over 50 years. Stomatitis, rhinitis and sinusitis were mainly observed in older patients aged over 30 years.

Antibiotics were the most common treatment given to patients suffering from tonsillitis, pharyngitis and laryngitis. Patients being diagnosed with otitis media and externa were treated with antibiotics orally and topically. For stomatitis, oral cavity antiseptics were used and antibiotics combined with antihistamines were used for acute rhinitis. Finally, laryngitis was also treated with resting the voice.

## Discussion

ENT problems were among the commonest reasons for attending Laiko University Hospital, and infections accounted for 41.4% of cases attending the ENT ED. Similar rates have been shown in previous studies.<sup>5</sup> Our findings demonstrate that general practitioners could provide a first appropriate contact care for patients with common ear, nose and throat disorders.

One of the limitations of this study is the fact that the data were drawn from only one hospital and it was not possible to assess community health needs without evidence from primary care settings or large community-based surveys.<sup>6</sup>

High consultation rates may sometimes have an underlying psychological cause.<sup>7</sup> Discrimination between streptococcal and non-streptococcal pharyngitis is important in assessing the requirement for antibiotics. Diagnosis of sinusitis may be difficult due to facial tenderness, postnasal drip or other features

being unreliable.<sup>8</sup> Otoscopy skills are needed for diagnosis of ear infections, and false-negative observations are low.<sup>9</sup> More involvement with ear, nose and throat problems in vocational training, or attendance during continued education is suggested.

At the time of visit to the ENT ED, most patients were already on antibiotic treatment without a doctor's prescription, which may be partly explained by the public perceptions that ENT inflammatory diseases are common health problems of minor importance, in combination with the trend towards overuse of antibiotics. Moreover, many patients may not be aware of the natural history of upper respiratory tract infections and that overuse of antibiotics causes bacterial resistance, side-effects and unnecessary healthcare costs.<sup>10</sup>

The hospitalisation rate was extremely low, reflecting the fact that few patients in the ENT ED were real emergencies and most needed access to primary care.<sup>11</sup> These data could be used to discriminate which conditions should be managed in a secondary care environment.

Our results support the need for better primary care access for ENT disorders.

## Conclusion

Many common ENT disorders presenting to the hospital emergency department could be managed in primary care. General practitioners in Greece should be trained and have the skills to deal with the most frequently observed ENT problems. Incorporating ENT skills into the educational and training programmes of general practitioners might help to achieve this in future, which may decrease the burden on hospitals and improve quality of care.

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#### PEER REVIEW

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#### CONFLICTS OF INTEREST

None.

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