

Referral protocols to general pulmonology consultation: Yes we should



An analysis of referrals to General Pulmonology consultation is extremely pertinent in today's world. There is increased demand and the clinical information available is at times limited, meaning that the whole process could be optimised, which could potentially impact on respective waiting periods.

The standard and pace of referral varies and depends on the individual patient, the nature of the physician's approach and the organisational system concerned, the access to hospital specialists and the relevance of the case^(1, 2). Around 5% of patients seen in General Practice (GP) are referred to secondary care.² The act of referral is not a simple, mechanical process, but a complex interaction, in which the GP should know what is required or expected for that particular referral.¹

Studies developed in the area of referrals have shown that there is great potential for improving quality in this context.¹ Over-referral has costs and can expose patients to unnecessary risks; under-referral may deprive them of possible beneficial treatment.³ The aim of referral management is to reduce the number of requests as well as influence the endpoint or improve the characteristics of the referral.⁴

We conducted an analysis of all referrals made by GPs from Primary Care Providers (PCPs) of the central region of Portugal, for General Pulmonology consultation at the Centro Hospitalar e Universitário de Coimbra - Hospitais da Universidade de Coimbra, between January 1st and December 31st 2016. For each referral there was an evaluation of demographic data, the time between referral and appointment, and the situation of the patient on the date these data was collected. Research included: signs/symptoms, physical examination, pulmonary auscultation, personal and family history, regular medication, allergies, environmental/professional exposure, smoking habits, respiratory care, complementary diagnostic tests (CDTs) and the diagnosis which led to the referral (confirmed or suspected).

There were 308 referrals (average 1.2 referrals per working day) from 38 distinct institutions (Personalised Healthcare Units – UCSP and USF – Family Health Units), with an average waiting time between the request and the initial appointment of 64 days (Table 1).

The results are presented in Table 2.

In terms of follow-up of patient care up to the date of this analysis, 41.2% ($n=127$) continued to attend consultations, 7.2% ($n=22$) were referred to a sub-specialist consultation and 1.3% ($n=4$) died. A total of 18.2% (56) failed to attend consultation, 11% ($n=34$) the initial one

Table 2 Referrals data.

Characteristics	Sample ($n=308$)	
	%	N
<i>Signs/symptoms</i> ^a	69.8	215
<i>Physical examination</i> ^b	14.3	44
<i>Lung auscultation</i> ^c	7.2	22
<i>Signs/symptoms and physical examination or lung auscultation</i>	18.2	56
<i>Imaging test (total):</i>	67.2	207
Chest teleradiography	36.7	13
Chest computerised tomography	44.2	136
Both	13.6	42
<i>Pulmonary function test</i>	34.1	105
<i>Imaging and pulmonary function test</i>	23.7	73
<i>Other exams</i>	18.2	56
<i>Specific or suspected diagnosis</i>	32.1	99
<i>Personal history</i>	50	154
<i>Family history</i>	2.9	9
<i>Regular medication</i>	35.1	108
<i>Smoking habits</i>	21.1	65
<i>Environmental/professional exposures</i>	8.4	26
<i>Respiratory care</i> ^d	3.9	12

^a Or mention of absence of symptomatology.

^b Including reports that it was normal.

^c With or without alterations.

^d Oxygen or ventilation therapy.

and 7.2% ($n=22$) follow-up. The remaining 32.1% ($n=99$) were discharged, on average 4.3 months after the start of the follow-up; 29.3% ($n=29$) were discharged shortly after their initial consultation.

Analysing these results we can conclude that for fewer than 20% of requests, there was a description of the main complaint which motivated the referral along with an objective examination or pulmonary auscultation – foundation blocks in patient assessment, and that, up to the date of consultation, only around 24% had had an imaging test, together with a pulmonary function test. Curiously, 50% of requests included the patient's personal history and 35% their regular medication use, a fact that may be associated with being able to transcribe this information on the referral system. Only 32% of referrals mentioned the known or suspected diagnosis. It has already been reported that the reasons for referral, socio-psychological factors or follow-up plans, as well as clinical findings, test results or previous treatment were often missing.⁵

It is worth noting that 18% of patients missed initial or follow-up appointments, a fact which can be linked to travel-related or economic difficulties, barriers to mobility or patients not taking responsibility for their state of health. It should be noted that around 32% of patients were discharged on average 4.3 months after the initial consultation, while approximately one third of these were discharged

Table 1 Characterisation of study participants.

Characteristics	Sample ($n=308$)
Gender	157♀ 151♂
Age (mean \pm SD) (years) ^a	65.7 \pm 14.9

^a Predominantly in their 8th decade of life [28.9% ($n=89$)].

after the initial consultation. This raises questions about the pertinence of some of the referrals.

Some studies suggest that a combination of peer revision, the use of structured protocols and feedback from the specialist could be effective in reducing the referral ratio.⁴ Strategies aimed at changing referral behaviour by GPs may be effective both in reducing these, and improving the characteristics of the referrals.³

In our unit the existing referral system does not allow requests for additional information about the referred patient and so there are no refusals based on lack of clinical data. Nevertheless it is important to reflect that referral procedures which are properly informative and directed, may lead to the improved screening of submitted requests, optimising existing hospital resources. Taking this into account, models or protocols to this effect may be useful, facilitating the process, and providing an interaction with the requester in order to improve a good referral assessment, minimising the lack of essential information, and enriching our patient safety.

The purpose of protocols is to obtain all necessary information based on "obligatory items" for each parameter so that urgency of the requests is better stratified, time to precise diagnose improved and more appropriate treatment achieved. This will contribute to a safer and faster patient approach.

Therefore, this strategy appears to be something which needs to be developed and implemented, with a subsequent evaluation of its effect and safety, in order to estimate the impact of the measures taken for all the elements involved.

Conflicts of interest

There were no conflicts of interest.

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Hospital admissions in children with acute respiratory disease in Portugal



KEYWORDS

Asthma;
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Children;
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Administrative data

Bronchiolitis, asthma and pneumonia are leading causes of hospital admission for acute illness in pediatric population,¹ ranking among the top 10 of inpatient costs.^{2–4}

Level of hospital care, both clinical and nonclinical procedures and length of hospital stay (LoS), represent targets for resource use optimization.⁵

The identification of trends through administrative data sources provides relevant information to understand the epidemiology related to disease burden and interventions, and to optimize resources use and standards of care.^{2,6,7}

We aimed at analyzing central administrative data of acute pediatric hospitalization trends in Portugal for bronchiolitis, pneumonia and asthma, both as primary or secondary diagnosis, over the decade that preceded the publication and implementation of national guidelines for these diseases and the introduction of pneumococcal vaccines.

We collected administrative data (January 2002–December 2012) from the Diagnosis-Related Group database of the Portuguese Central Health System Administration (ACSS) as age-restricted codes from the International