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Reducing the costs of headache: an Italian approach

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Abstract Headache is the most frequent reason for neurological consultation, but also a comorbidity often encountered by GPs. The costs of headache are considerable: direct and indirect costs contribute to varying degrees to the overall definition of costs in different countries. DRGs related to headache account for a large percentage of hospital admissions (7.67% in 2000 in Lombardy). A recent Italian law defined certain DRGs as "at risk" for frequent inappropriateness of admission: some of these are groups that embrace the various forms of headache. A task force, comprising the Pavia local health authority (ASL), a representative of local GPs, and several neurologists from the General Hospital and specialist Headache Centre of the city of Pavia, has been formed with the aim of defining the appropriateness of neurological investigations, diagnostic skills, and hospital admissions.

Key words Headache • Clinical pathways

Headache affects many aspects of a sufferer's life. The more frequent and more severe the attacks, the more quality of life and ability to work are affected. The cost of the disease, both to the individual and his family, can be considerable.

Prevalence rates – prevalence is, of course, a fundamental parameter for defining the weight of a disease in the population – of migraine, measured after the publication of the International Headache Society (IHS) classification [1], ranged, in different countries, from 3.4% to 7.4% in men, and from 12.9% to 21.9% in women. The age-related prevalence of the disorder differs for migraine and tension-type headache. The prevalence of headache seems to be lower in high-income brackets and among the more highly educated.

Headache is the most frequent reason for neurological consultation, but it is also a comorbidity often encountered by general practitioners (GPs): an Italian survey showed a frequency of 11.6% within a sample of outpatients [2].

The costs of headache are considerable: direct and indirect costs contribute in varying degrees to the overall definition of costs in different countries. The greatest direct costs are often those related to hospital admissions, diagnostic investigations and therapies, while the most important indi-

rect costs are those related to the loss of work days through headache or related medical investigations.

Many studies have been conducted investigating the costs of migraine, concentrating in particular on the indirect costs (absence from work, reduced productivity at work, and other similar variables), but the direct costs related to migraine are also considerable. In The Netherlands [3], the indirect and direct costs (for 1988) amounted to 541 and 133.7 million guilders, respectively (a ratio of 4:1). In Ontario (Canada) in 1990 [4], the indirect costs relating to migraine totalled CAN $31 023 528, while the direct costs reached CAN $1 938 619 (a ratio of 16:1).

The DRG system of reimbursement has been applied in Italy since 1995. DRGs 24 (headache and convulsions with CC, age >17 years), 25 (headache and convulsions without CC, age >17 years), and 26 (headache and convulsions, age <17 years) account for a large percentage of hospital admissions (7.67% in 2000 in Lombardy) but these data do not provide meaningful information with regard to hospitalisations for headache alone.

Patients at our institute are often be classified in DRGs 24, 25 and 26: in 2001 these groups accounted for 21.62% of total admissions and 36.94% of patients cared for in our day hospital (DH) regimen. Headache was diagnosed in 18.3% of all patients discharged, and was a main diagnosis in 59.24% of all those discharged with a headache-related DRG diagnosis.

The use of a variety of headache-related diagnosis codes has given rise to numerous different DRGs (Table 1).

A recent Italian law (DPCM 29/11/01) defined certain DRGs as "at risk" for frequent inappropriateness of admission: some of these, in particular DRG 25, are groups that embrace the various forms of headache.

In Italy, as in other European countries and in the USA, a hospital admissions control system, based on the appropriateness evaluation protocol (AEP) proposed by Gertman and Restuccia in 1981 [5], is becoming increasingly widespread. The Italian protocol is named PRUO (protocol for the revision of hospital use) and it has recently been adapted for use in the region of Lombardy.

The demand for medical interventions for headache has made it necessary to take a rational look at the way headache services are used. A task force, comprising the Pavian local health authority (ASL), a representative of local GPs, and several neurologists from the General Hospital and specialist Headache Centre of the city of Pavia, has been formed with the aim of defining the appropriateness of neurological investigations, diagnostic skills, and hospital admissions. The study method is based on knowledge of the relevant literature in this field, and on awareness of all the diagnostic and therapeutic options available locally (neurological, radiographic, neuroradiological, and chemicoclinical services). All the categories represented in the task force express their point of view and propose a clinical pathway for headache sufferers. On the basis of a final consensus, the role of each of them, and the main criteria for the admission of headache sufferers to specialist services will be defined. The pathway will be put to and revised in collaboration with patient associations. The agreed protocol will then be made available to all the interested parties.

Table 1 DRGs for various headache diagnoses

18	Cranial nerve disorders with CC
19[a]	Cranial nerve disorders without CC
24	Headaches in subjects aged >17 years with CC
25[a]	Headaches in subjects aged >17 years without CC
26	Headaches in subjects aged 0–17 years
243[a]	Cervical spine diseases
434	Drug dependence, detoxification with CC
435	Drug dependence, detoxification without CC
436	Drug dependence with rehabilitative therapy
437	Drug dependence, combined rehabilitative and detoxification therapy

[a] Potentially inappropriate DRGs
CC, Complications or comorbidities

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