Practical experience with ICPC in Belgium

MARC JAMOULLE

Introduction

Wallonia, where French is the main language, has clear attachments to the Latin, 'southern' cultural background. If anything is characteristic, it is the ability to practice the art of structural disorganization. This also applies to the curious but rather well-functioning health care system which is the result of complicated social security regulations. Primary health care is almost exclusively guided by the principle of free enterprise and has consequently been described as a 'no system system'.[1] A general practitioner may start a practice when and where he or she wishes: 93 per cent of the GPs work in a solo practice.[2] As for the GP–patient ratio: Wallonia has around 16 general practitioners per 10 000 inhabitants.[3]

General practitioners in Belgium are in direct competition with specialists and hospitals where patients can go without referral or any other administrative restriction. Patients pay their general practitioner on a direct fee-for-service basis. Some multidisciplinary primary care teams exist, based on voluntary associations between physicians, nurses, physiotherapists, social workers, and other professionals. As a complication, seven health centres in Wallonia apply a new remuneration system, based on capitation. Patients from all of the organizational forms mentioned above are included in the study described in the second part of this chapter. Quantitative data from different primary care settings are highly relevant for planning and for better protection of the integrity of patients who can easily feel lost in this system.[4] It could also support the start of quality assessment.[5] It is against this background that eleven general practitioners decided to field test the French version of the international classification of primary care (ICPC).[6]

Methods

A small advertisement, published in two controlled circulation medical newspapers, was sufficient to recruit 20 general practitioners who were interested in our field study, and after three meetings, 13 of them decided to participate. Eleven general practitioners in fact completed the study. The group decided to focus on a global approach and to pay no attention to specific interventions, diseases, or age groups. Each participant was to contribute up to 500 encounters, continuously registered during a maximum period of six weeks, during June and July 1989. In all encounters, the reasons for encounter (RFE), diagnoses, and procedures would be coded with ICPC. In addition, the doctors indicated, for all encounters, the amount of empathy felt for the patient (the 'empathy factor').

Results

The average number of encounter forms per participant was 315 (range 149–540). Several participants were unable to register the 500 encounters, due to the fact that during the six-week period of the study the number of patients was too small, or since they could not register continuously because of their heavy workload.

Data were collected during 4371 encounters with 3166 patients, of which 58 per cent was female (Fig. 1). The high percentage of house calls is typical for Belgian general practice (36 per cent). The average number of RFE per encounter is 1.5 $(n = 6762)$ which is similar to the results of other studies.[7,8]

Figure 1 presents the sex and age distribution of the patients and the encounters. The distribution of the patients shows an under-representation of the young (5–20 years) and a slight over-representation of patients between 30 and 35 years, which is typical for Wallonia. In the older age groups women are over-represented, which is in agreement with the general demographic situation. ICPC provides approximately 700 classes in the first and seventh component, of which 594 were used in the diagnostic mode and 575 in the reason for encounter mode.

The distributions of the reasons for encounter and the diagnoses included in the first and the seventh component of each chapter are presented in Figs 2 and 3. It is evident that patients mostly formulate their reason for encounter in the first component (symptoms and complaints), whereas doctors mainly tend to label the patients' problem with a disease label from the seventh component. This confirms the results from earlier studies and stresses the importance of acknowledging the difference in language usage between patients and physicians when they are discussing the same thing: the patient's problem.

The relative distribution of the reasons for encounter (Fig. 4) and the diagnoses (Figs 4 and 5) over the chapters of ICPC support the conclusion that internationally, general practitioners show more similarities than differences in their work. Also, in Wallonia, general practitioners see a lot of patients with digestive, musculoskeletal, cardiovascular, and respiratory problem. The Belgian social security system adds to the relatively high proportion of both reasons for encounter and diagnoses in chapter A in which several compulsory administrative procedures are
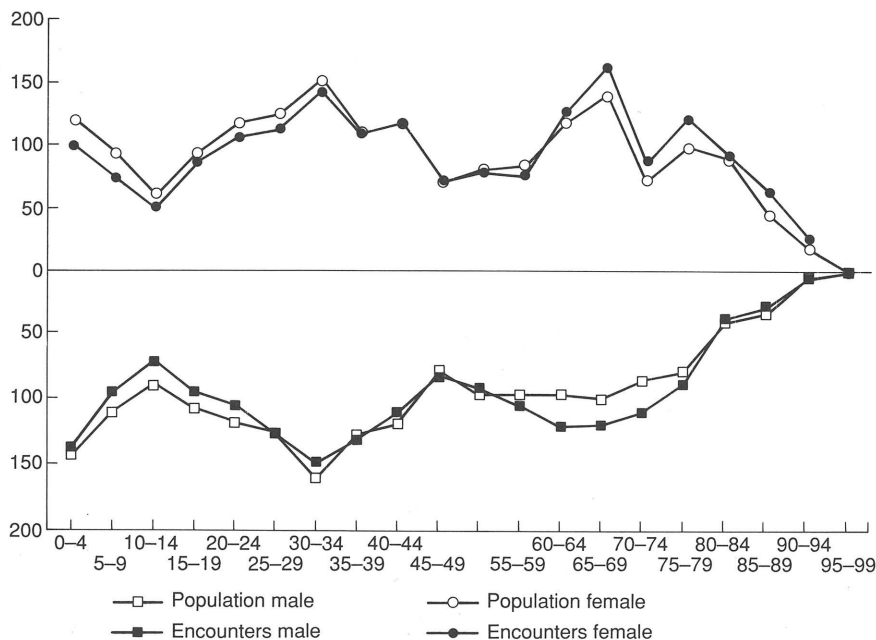
Fig. 1 Age/sex distribution (3166 patients, 4371 encounters); absolute numbers per age group.
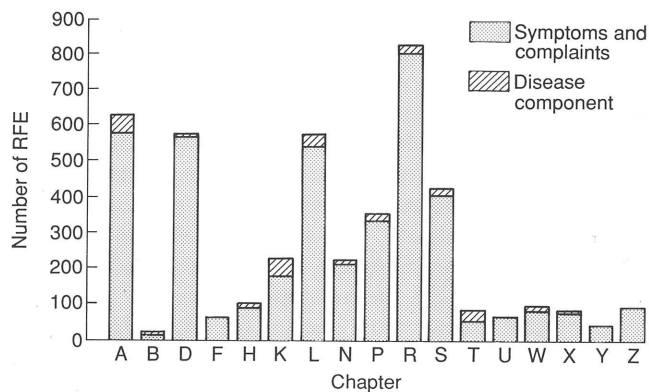

Fig. 2 Absolute numbers Reasons for Encounter per chapter.
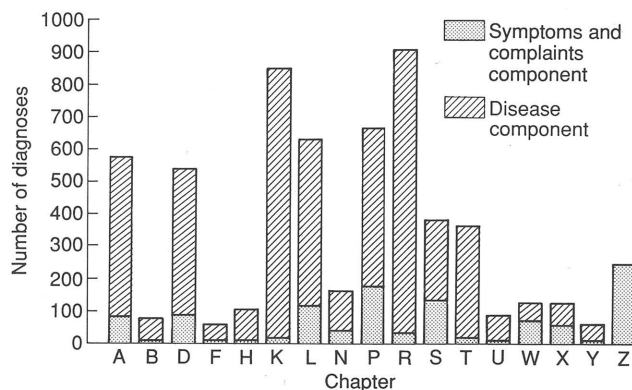

Fig. 3 Absolute numbers of diagnoses by ICPC chapter.

coded. It is also evident that psychological problems play an important role. In fact chapter P deals with approximately 12 per cent of all diagnoses which is reflected in the top 20 reasons for encounter and diagnoses (Tables 1 and 2).

The distributions in Tables 1 and 2 show important similarities with data from other studies but there are also several important differences. For example, the coding doctors often chose the code 'follow-up encounter unspecified' as a description of the reason for encounter. In retrospect this should have been avoided, as it is a coding artefact. Cough, fever, and general weakness together with symptoms/complaints of the throat and anxiety typically belong to the top 20 reasons for encounter in general practice. Reasons for encounter which refer to an intervention, like the results of a test, medication, or an administrative procedure are also important. The important positions of upper respiratory tract infections, 'no disease' and uncomplicated hypertension in the top 20 diagnoses (Table 2) are no surprise. However, the high position of depressive disorder and anxiety is surprising in comparison with the data from The Netherlands and Flanders.[7,8]

General practitioners expressed outspoken empathy in 43 per cent of the encounters; 53 per cent of the encounters was considered 'neutral', and only during 4 per cent of all encounters did general practitioners consider their feelings explicitly non-empathic. The variation between the participants is considerable: having a neutral feeling during an encounter varied among the doctors from 16 to 83 per cent, empathy from 8 to 80 per cent, whereas non-empathic feelings rated from 1 to 11 per cent of all encounters. It is
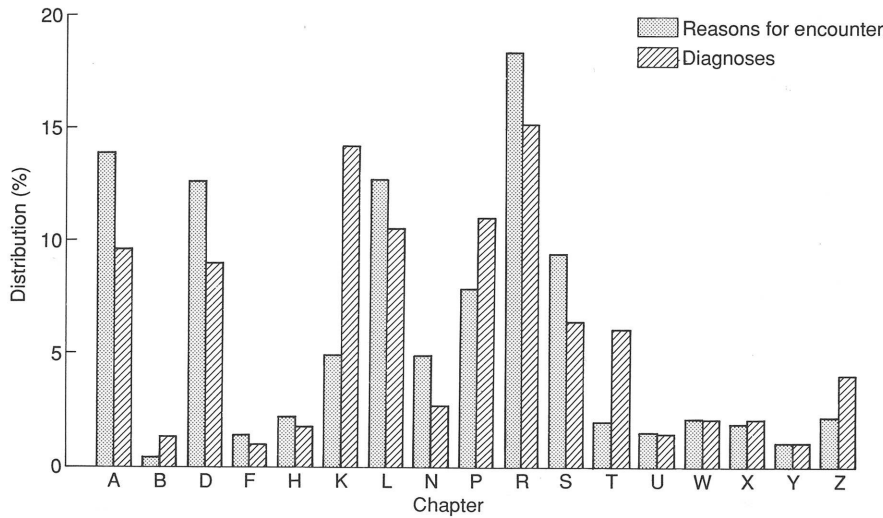
Fig. 4 Distribution in per cent of the Reasons for Encounter and diagnoses by chapter.
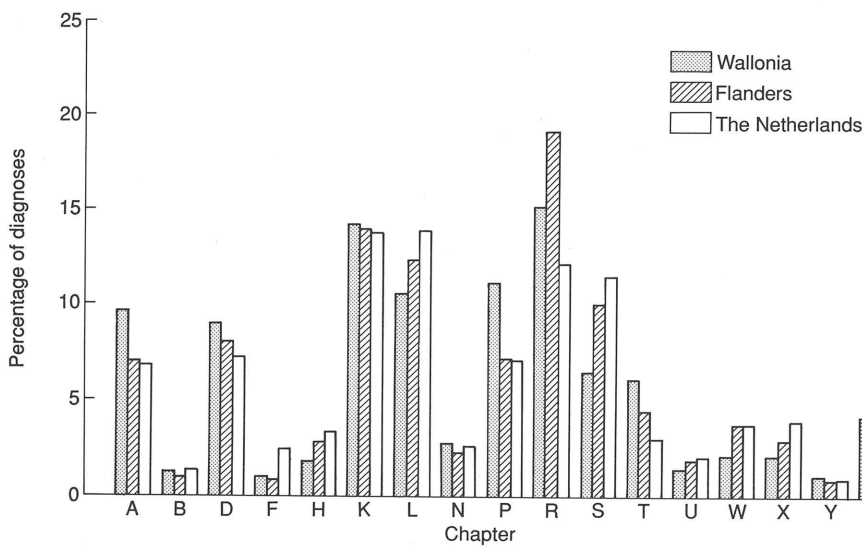

Fig. 5 Distribution in per cent of diagnoses by ICPC chapter. Comparison between Wallonia and Brussels (5950 diagnoses), Flanders (6879 diagnoses) and the Dutch Transition Project (109 118 episodes).

evident that these observations prompt the need for further studies.

Discussion

This pilot study deals mainly with the activities of general practitioners and is not to be regarded as a real patient-oriented study. The goal of the participants was to deal first with the sense of the 'inevitability of the information era' that prompted this study. ICPC proved to be very well suited for the introduction to the participants of a new way of thinking about information systems in medicine. The SOAP approach especially, in its realistic way of simultaneously coding the reason for encounter, its diagnostic interpretation, and the interventions performed, has turned out to be a new discovery and not merely an abstract idea. Lively debates focused on the complexity of the

information needed for structuring a patient database during single encounters and over a longer period of time. These meetings helped to clarify problems inherent to the work of general practitioners. The denominator problem, which arises from the fact that patients do not 'belong' to a single practice, was raised repeatedly and its solution is one of the important incentives for a capitation system.

The participants identified several limitations of the classification system and of the manual for its use. The struggle between wanting to specify at the level of the individual patient and wanting to condense information at the level of the practice was central to our discussions. For instance, ICPC offers only one rubric for prescribing (-50), which is not sufficient to classify the drugs frequently used in general practice.

The group also experienced a loss in the sense of reality which is the result of the application of a classification system to the identification of human conditions. Real communication between people cannot be divided into

Table 1 Top 20 reasons for encounter and their frequency

ICPC code		Number	Percentage
− 63	Follow-up encounter unspecified	896	13.3
R05	Cough	311	4.6
− 64	Encounter/problem initiated by provider	302	4.5
− 60	Results test and procedures	259	3.8
− 50	Medication–prescription/request/renewal/injection	257	3.8
A03	Fever	196	2.9
A04	General weakness/ill-feeling	183	2.7
R21	Symptoms/complaints: throat	169	2.5
− 62	Administrative procedure	168	2.5
P01	Feeling anxious/nervous/tense	125	1.8
D11	Diarrhoea	106	1.6
D01	Generalized abdominal pain/cramps	95	1.4
L03	Low back complaint w/o rad. symptoms	94	1.4
P03	Feeling depressed	90	1.3
R02	Shortness of breath/dyspnoea	90	1.3
− 61	Results examination/test/record/letter	86	1.3
R07	Sneezing/nasal congestion	84	1.2
N01	Headache (excluding sinus pain R09/migraine N89)	79	1.2
L15	Knee symptoms/complaints	74	1.1
S02	Pruritus, skin itching	70	1.0

Table 2 Top 20 diagnoses and their frequency

ICPC code		Number	Percentage
R74	URI (head cold)	291	4.7
A97	No disease	239	3.9
K86	Uncomplicated hypertension	200	3.2
P76	Depressive disorder	183	3.0
T90	Diabetes mellitus	165	2.7
P74	Anxiety disorder/anxiety state	112	1.8
R78	Bronchitis/bronchiolitis acute	96	1.6
L86	Lumbar disc lesion with radiation	84	1.4
R76	Tonsillitis acute	82	1.3
D70	Infectious diarrhoea, dysentery	79	1.3
K76	Other and chronic ischaemic heart disease	77	1.2
K77	Heart failure	76	1.2
R95	Emphysema/chronic, obstructive, pulmonary disease	74	1.2
T82	Obesity (BMI > 30)	72	1.2
K74	Angina pectoris	67	1.1
A85	Adverse effect medical agent proper dose	67	1.1
P75	Hysterical/hypochondriacal disorder	64	1.0
K87	Hypertension with involvement target organs	64	1.0
L99	Other disease musculoskeletal system	59	1.0
L84	Osteoarthrosis of spine	57	0.9

chapters or components and some also felt that the rubrics available to identify psychological and social problems were inadequate.

The participants were not in a position to study episodes of health problems over time but in the future, they look forward to studying the alterations in health status caused by a disease, and the resolution of the disease as a dynamic process which can be defined by a variety of factors. ICPC is, of course, limited in its capacity to describe and rationalize all the factors explaining variability in the course of episodes over time.

The participants hoped to gain insight into new factors such as the patients' perception[9] and 'body culture', the accessibility and acceptability of the health care system, the way in which general practitioners perceive their patients as people, GPs professional skills, and their perceptions of health. Evidently the selection of the participants implies a strong selection bias which is reflected in the use of certain rubrics.

Because the numbers are small, and the coding conditions were insufficiently controlled, it is impossible to decide whether the differences between the general practitioners in the use of codes from chapter P reflect professional differences or a coding artefact (Fig. 6).
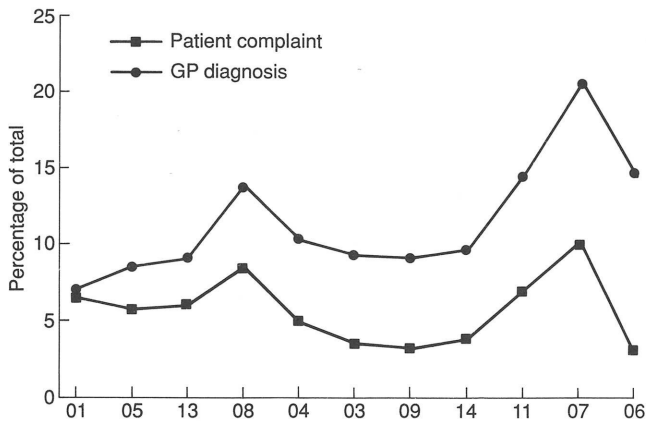
Fig. 6 Interdoctor variation ordered according to amount of difference. Patient's complaints: P expressed by the patient (RFE) in per cent of the total of each participant. GP Diagnosis: P expressed by the GP's (diagnosis) in per cent of the total of each participant.

Further study into this matter is needed to evaluate whether there is a real tendency to psychologize patients' problems. Since a French translation of the manual was not available, and probably also as a result of deficiencies in the training of the coding physicians, the use of −63 ('reason for encounter unspecified'), the difference between −31 (partial examination) and −30 (complete examination), and also of −64 (encounter initiated by provider) led to confusion. The concept 'clarification of the reason for encounter' (−48) was not found useful and the code 'no disease' (A97) needed a lot of additional discussion. Codes for iatrogenicity appeared to be too limited, being restricted to side-effects of drugs and medical procedures. The group was uncertain as to how medical audit and the assessment of quality could be based on the analysis of patient records when they were coded with ICPC.

The striking similarity of the results to those obtained in Flanders and The Netherlands together with several typical differences was considered to be very important. Even the global data reflect the complexity of clinical reality in the work of general practitioners, and this small study helped to re-establish the self-esteem and image of general practice and to define more clearly the identity of primary health care versus hospital care. The fact that psychological and social problems proved to be so prevalent in this study supports the premise that medical faculties should acknowledge the existence of good clinical medicine outside the hospital and outside the academic arena.

The results collected in this pilot study are far beyond original expectations, and the opportunity to work with GPs from other European countries broadened the scope of group discussions. Also the incipient computerization of medical records now seems more manageable. The daily work of the general practitioner is insufficiently known to the Belgian public and all efforts to emphasize its importance and relevance with the help of quantitative data must be encouraged.

Acknowledgements

Participating doctors

Berquin Manu, Brussels; Delvoye Jean-Marie, Liège; Dufrasne Patrick, Romsée; Gillet Pierre, Ougrée; Jamoulle Marc, Co-ordinator, Gilly; Lambrechts Thierry, Charleroi; Leleux Francis, Antheit; Piquard Didier, Brussels; Roland Michel, Brussels; Vanderoost André, Haine St. Pierre; Van Reeth Patrick, Couthuin.

References

1. Crombie, D. L., Van der Zee, J., and Backer, P. (eds) *The interface study*. Occasional Paper 48. The Royal College of General Practitioners. 1990.
2. Berghmans, L. *La Prévention en médecine générale*. Ecole de Santé Publique, Brussels. 1990.
3. *Annuaire 1984 de l'institut national de statistique*. Bruxelles. 1985.
4. Jamoulle, M. *Information et traitement de l'information en médecine générale. Les inform-g-iens, troisième journée de réflexion sur l'informatique*. Presses Universitaires de Namur, Namur. 1986.
5. Berg, O. A., Gordon, M. J., and Cherkin, D. C. *Practice-based research in family medicine*. American Academy of Family Physicians, Kansas City. 1986.
6. Jamoulle, M. and Roland, M. *Classification internationale des soins primaires (CISP)*. Alexandre Lacassagne, Lyon, 1992.
7. Lamberts, H., Brouwer, H., and Mohrs, J. *Reason for encounter and episode- and process-oriented standard output from the transition project*. (2 volumes). Department of General Practice/Family Medicine, Amsterdam. 1991.
8. De Maeseneer, J. *Huisartsgeneeskunde: een verkenning*. (General practice: an exploration) (Ph.D. thesis). University of Ghent, Ghent. 1989.
9. Wright, A. F. A study of the presentation of somatic symptoms in general practice by patients with psychiatric disturbances. *B. J. Gen. Pract.* (1990) **40**, 459–63.