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Sickness certification in primary care

Summary

Objectives: Sickness certification is a common task, which is however insufficiently studied. Our objective was to describe, prospectively, prescription practices in sickness certification by primary care physicians.

Methods: We recorded patients receiving a sickness certificate during a six-week study period. The main outcome measures were: duration of sick-leave according to age, profession, diagnosis, nationality, somatic, or psychiatric comorbidity as well as co-factors related to the familial or professional environment.

Results: Out of a total of 6433 consultations, 602 patients received a sickness certification, and in 56% of these, sick-leave duration was ≥6 days. Multivariate analysis showed that presence of co-morbidity and co-factors, greater age and musculoskeletal, cardiovascular, psychiatric disease and injury were independently associated with a longer sickness certification duration.

Conclusions: Sickness certification is a complex task which entails not only consideration of the diagnosis but also of other factors such as co-morbidity, as well as familial and professional environment. Physicians should be aware of these elements and of situations, which might lead to a longer sick-leave period.

Key-Words: Sickness certification – Co-morbidity – Primary care – Switzerland.

Sickness certification is one of the most common tasks performed by primary care physicians. According to a review by Tellnes[1], 11–35% of medical visits end in sickness certification. The medical literature provides little systematic information on sickness certification from a biomedical point of view[2], this subject has mainly been studied in the industry[3–5] and by health insurance companies. Certification is a complex task in which the physician's role is to give a social interpretation to a medical diagnosis[6], without any given standard that would help him in estimating incapacity for work.

Besides the medical diagnosis itself, many other elements, which are both biomedical and non-medical, may contribute to the condition presented, and must be taken into account. Patients do frequently suffer from more than one medical problem at once and it is therefore important to take into account somatic and psychiatric co-morbidities in order to estimate fitness for work. It is well known, for instance, that the number of sickness days may be influenced by mood disorders[7], and repeated short-term sick-leave periods are known to be associated with lack of well-being[8]. Non-medical factors, which could be taken into account when issuing a sickness certificate, may be linked either to the professional environment or to the family context. In addition, the professional environment plays a role in sickness certification, especially in the context of sex integration[9] and unemployment[10]. Socio-economic status differences have been described in the medical literature, giving clear indication of an inverse relation between grade of employment and sickness absence[11]. Single parent families show a considerably higher level of absenteeism due to sickness[12]. Type and organisation of health and insurance systems may also be considered as determinants of sickness certification, but narrowing sick listing benefits does not seem to change the length of sick listing[13].

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0303-8408/01/060389-07 $ 1.50 + 0.20/0

The physician is facing the patient's subjective perception of his own illness and work incapacity representation, and must take this perception, which may widely differ from his own, into account. The agreement between work ability assessments made by patients and physicians is high[14], this agreement is possibly the result of a negotiation that takes place in the consultation. The patients' attitude towards sick-listing and the way they present their problems influences the physicians' certification practice[15]. Certification practice is still largely learned by trial and error[16], which may explain the variability observed between the various primary care physicians. This variability depends, to a large degree, on the age of the prescribing physician, the duration of post-graduate training, and on the possible part-time employment as an industrial medical officer[17].

The aim of the study was to describe current prescription practice in sickness certification by primary care physicians in the Western part of Switzerland; an additional goal was to explore determinants of longer duration of sickness certification.

Methods

The following definition was used: "A sickness certificate is a declaration made by a physician to a person entitled to sickness benefits, after this person has been diagnosed as temporarily unable to work because of disease or illness." [1]

Swiss sickness benefit system

Employees and unemployed people are insured for sickness benefit either from their employer or from the federal unemployment insurance authorities, for up to three weeks during the first year of employment, or for longer in proportion to the duration of employment or contract. A physician must establish a sickness certificate before sickness benefit can be claimed. No sickness certificate is ordinarily required for the first three days of absence due to sickness, and absence from work may be declared by self-certification during that period. Consequently there is no reliable information about patients with less than three days of absence who did not receive a certificate. Self-employed people and those who no longer qualify for unemployment benefit may be covered by a private insurance. People still unable to work one year after the initial certification may be entitled to receive rehabilitation measures or a disability pension.

Study population

Two groups of primary care physicians participated in the study: the first group included 17 residents (47% women, mean age 30 years) in training in general or internal medicine at a primary care facility, the Medical Outpatient Clinic of the University of Lausanne.* They were supervised by five senior registrars. The second group consisted of 13 board-certified primary care physicians (general internists and family practitioners; 30% women; mean age 46 years), established in private practices in the Western part of Switzerland for 13 years on average (range six to 18 years). These physicians belong to a group involved in teaching and research in primary care at the Faculty of Medicine of the University of Lausanne. Half of them work in an urban setting and the other half in a rural setting. The type of care was deemed to be comparable in both settings, although the absence of routine recording of diagnostic information did not allow any adjustment for differences in morbidity, co-morbidity or severity of disease; ante-natal care was rare.

After a one-week pilot testing of the process and questionnaire, the survey was conducted over three periods of two weeks (November 1994, January and May 1995). The physicians recorded prospectively the total number of patients aged 15 to 64 seen at their offices during the study periods. They filled out a standardised form concerning each patient presenting an incapacity to work at the end of the consultation, whatever the motive of consultation was. One year after the final period of data collection, medical records were checked for evidence of continuation certificates of short or undetermined periods of sickness. Patients with both an initial and a continuation certificate were included in this follow-up analysis. In the case of successive certifications, initial and continuation certificates were recorded as one sickness event. Patients who did not receive formal sickness certification, even though incapacity to work was discussed, as well as those in receipt of a disability pension, were not included. Patients for whom duration of sickness certification could not be determined were excluded from most analyses.

Recorded variables

Patients' age, sex, nationality, and profession (clustered as: manual, employee, executive and other) were recorded, as well as diagnoses (as written in the physician's clinical notes). Diagnosis and symptoms where grouped in organs or system involved. The group "Upper respiratory tract infections" included: common cold, sinusitis and pharyngitis. The dates of the first and last day of certification were collected and part-time incapacity for work was converted into full days. The physicians indicated whether or not they had treated the patient before, whether the patient was or not

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able to work according to their judgement and if sickness certification was because of an accident or a disease. Presence of somatic or psychiatric co-morbidity, as well as other factors related to the familial or professional environment were recorded as possible factors leading to interaction in the sickness certification process. We noted whether the certificate was obtained in a private practice setting or at the Medical Outpatient Clinic.

Statistical analysis

In addition to descriptive statistics and bivariate analyses, logistic regression analysis permitted the identification of independent variables associated with a longer duration of sickness certification. SPSS-X was used to perform the statistical analyses.

Results

A total of 6433 consultations, of patients aged 15 to 65 years, were considered. In 15.7% of these (1011), the question of fitness for work was encountered. Out of these 1011 consultations, 315 patients were not entitled to sickness benefits; 171 were in receipt of a disability pension and 144 did not receive sickness certification for various other reasons (e.g., duration of 3 days or less or refused certification). The duration of 94 sickness episodes could not be determined. The remaining 602 consultations were included for statistical analysis purposes. The overall proportion of patients aged 15 to 65 receiving sickness certification was 11 per 100 consultations, a proportion of 11.2% (256/2282 encounters) for residents and 10.6% (440/4151 encounters) for the independent physicians.

Descriptive variables and co-factors are presented in Table 1, according to the duration of sick leave prescribed (<6 days or ≥6 days). Leave duration was ≥6 days in 56% of the patients receiving a certificate. Older age, presence of at least one co-factor, manual profession, accidents, and certificates obtained in a private practice setting, were associated with a longer duration (≥6 days of sickness certification, Tab. 1) to a significant degree. No significant differences by sex or origin could be observed. The multivariate analysis was carried out with the aim of exploring which variables were independently associated with a longer duration of sickness certification (≥6 days). It showed that older age, musculoskeletal, cardiovascular, psychiatric, or injury diagnoses as well as the presence of co-factors, were independently associated with the duration of sick-leave (Tab. 2). Multivariate analysis did not confirm any difference between manual and non-manual workers. The role of co-morbidities and

Sickness certification		Total (n = 602)	<6 days (n = 264)	≥6 days (n = 338)	Chi² (P) [a]
Patient and setting related variables					
Sex	male	341	140	201	0.110
	female	261	124	137	
Age	15–34	339	180	159	0.000
	35–64	256	79	177	
Profession	manual	163	58	105	0.010
	non-manual	434	205	229	
Origin	Swiss	337	140	197	0.170
	non-Swiss	261	123	138	
Medical condition	disease	537	248	289	0.001
	accident	63	16	47	
Co-factors:					
Somatic co-morbidity	no	550	252	298	0.001
	yes	52	12	40	
Psychiatric co-morbidity	no	520	231	289	0.470
	yes	82	33	49	
Familial environment	no	555	248	307	0.150
	yes	47	16	31	
Professional environment	no	529	243	286	0.005
	yes	73	21	52	
Presence of at least one co-factor b					
...no		401	197	204	0.000
...yes		201	67	134	
Type/site of practice					
University Medical Outpatient Clinic		229	133	96	0.000
General practitioners		373	131	242	

[a] Chi² compared <6 with ≥6 days duration of sickness certification.
[b] At least one of the four co-factors.

Table 1 Characteristics of patients with sickness certification classified according to the duration

		Frequency (n)	Parameter estimate[a]	Standard error	Odds ratio	95% confidence interval
Predictors						
Age (years)	15–24	132	–	–	1.00	–
	25–34	195	0.596	0.270	1.81	1.07–3.08
	35–44	125	0.931	0.304	2.54	1.40–4.60
	45–54	86	1.131	0.352	3.10	1.55–6.18
	55–64	38	1.265	0.497	3.54	1.34–9.39
Diagnosis [b]						
Upper respiratory tract infections		152	–	–	1.00	–
Injuries		47	2.305	0.447	10.02	4.18–24.04
Musculoskeletal diseases		147	2.281	0.307	9.78	5.36–17.86
Other infectious states		28	2.192	0.514	8.41	3.07–23.03
Cardiovascular diseases		13	1.874	0.703	6.52	1.64–25.84
Psychiatric diseases		50	1.843	0.441	6.32	2.66–14.98
Others (including those of unknown origin)		27	1.688	0.485	5.41	2.09–13.98
Respiratory diseases		36	1.686	0.433	5.40	2.31–12.60
Neurological diseases		23	1.335	0.511	3.80	1.40–10.35
Digestive diseases		46	0.374	0.400	1.45	0.66–3.18
Urogenital diseases		7	0.046	0.903	1.05	0.18–6.15
Presence of at least one cofactor						
No		380	–	–	1.00	–
Yes [b]		196	0.7889	0.2373	2.20	1.38–3.50

[a] As written in physicians' clinical notes.
[b] At least one of the four co-factors (somatic, psychiatric, familial, professional).

Table 2 Predictors of the prescription of a sickness certification of 6 days or more duration. Logistic regression analysis (n = 576)

non-medical cofactors was underlined by the analysis: their presence was linked to a probability of sickness certification of ≥6 days at twice the normal level. Co-morbidity and other cofactors were present in 25% of the patients receiving short-term sickness certification. Moreover, one or more of these factors were present in about 40% of patients with a sickness certification of six days or more.

Discussion

Prescription of sick leave is a frequent task in primary care. In this study, physicians delivered sickness certification in more than 10% of encounters with patients aged 15 to 65 years. Such results are in accordance with data previously published elsewhere[1,2].

The prescription of a sickness certificate is a complex phenomenon: in addition to the disease itself, different variables, related to the physician, the patient, and to the setting, influence sickness certification as well as the determination of its duration. Concerning the co-factors, professional environment seems to play a role, as shown in the univariate analysis (Tab. 1). Reiso and al.[14] suggested that general practitioners and their patients tend to negotiate the duration of sickness certification on the basis of the medical conditions (for general practitioners) and the work demands (for patients). They suggested that "work-related problems might be easier to handle than more serious psychosocial problems and issuing sickness certificate can represent 'silent agreement' solutions to unrevealed problems". However, in our analysis the presence of psychiatric co-morbidity was not associated with a different duration of sickness certification. It is however unclear which role the existence of a psychiatric co-morbidity played for the physician as a promoter to prescribe a sickness certificate.

In this study, the multivariate analysis showed that age was an independent factor for longer duration of sick-leave certification. Other studies[2,18–20] have shown that older age is linked with longer duration of sickness certification. In a study in the industrial field, Chevalier et al.[5] demonstrated a link between age, severity of the disease, and the length of the sickness period, whereas frequency of prescription was more often linked to non-medical factors (professional, socio-economic).

Concerning the type of practice, we noticed a significant difference between residents and independent physicians in the

duration of sickness certificates. The private practice setting and the Outpatient Clinic practice could not be compared, as there were no data to permit adjustment for the different patients' populations in each setting. However it could be possible that physicians in private practice settings have a tendency to try to keep their patients, because they might fear that the patient may look around for a colleague who could deliver more easily a sickness certificate.

There are several limitations in the present study: the group of primary care physicians and registrars studied was not representative of the general practitioner population in general. The number of patients included and the number and types of variables recorded were limited in order to keep the study feasible for the participating group. Conversion of part-time to full-time incapacity of work may have influenced factors linked with part-time incapacity. The number of sickness certifications per patient could not be studied, because of the possibility that a patient might have received a certification from another doctor not participating in the study. The patient population was not entirely representative of Swiss patients in the sense that the proportion of non-Swiss patients was higher than in the general population. Indeed, the Medical Outpatient Clinic is treating a high proportion of non-Swiss patients.

We also noted that the presence of several diseases represented independent factors for the prescription of longer sickness certification: patients with cardiovascular, musculoskeletal, or psychiatric diseases as well as injury victims were found to have received significantly longer periods of sick-leave. In a study in Scandinavia, Tellnes[19] noted similar results and early rehabilitation was proposed for patients affected by one of these diseases.

Despite the fact that physicians issue sickness certifications daily, medical students and doctors receive little training in this task, which may have significant socio-economic consequences. Knowing that "at the beginning of the sick-listing period, the physicians do what they can to get the patients back to work, but when not successful in this task, they tend to motivate the sick-role medically" [15], physicians should be trained to recognise situations at risk for long sick leave duration. Also, physicians should improve their ability to propose adequate intervention such as early rehabilitation and psychosocial intervention in order to reduce the occurrence of long-term sick leave in their patients. Our study offers some clues to help physicians to identify patients at risk. Patients presenting with cardiovascular, musculoskeletal, or psychiatric diseases or injury victims require particular attention, as well as patients who are older or who present with somatic or psychiatric co-morbidities. Further experimental studies are however needed to examine which interventions are useful to improve physicians' practices in issuing sickness certificates.

Swiss sickness benefit system

According to the law (Art. 324 – Swiss legal obligation code): "If the worker is prevented from working, without fault from his part, because of a disease or an accident, the employer must pay his salary for a limited time". This time varies according to the previous duration of employment (three weeks for the first year of employment for instance). By contract it is possible to obtain a more favourable system. An individual loss profit insurance may allow a larger cover. The employer will be informed in each case of absence and ordinarily after three days he will receive a sickness certificate. For employed persons a loss profit insurance for accidents is obligatory and covers work incapacity during two years.

Zusammenfassung

Das Arbeitsunfähigkeitszeugnis in der hausärztlichen Praxis

Fragestellung: Täglich stellt der Hausarzt Arbeitsunfähigkeitszeugnisse aus, aber in der medizinischen Literatur finden sich darüber wenige Arbeiten. Das Ziel dieser Studie war es, die Praktik des Ausstellens des Arztzeugnis zu beschreiben.

Methoden: Während sechs Wochen füllte eine Gruppe von Hausärzten prospektiv für alle Patienten, die ein Arbeitsunfähigkeitszeugnis erhielten, Fragebogen aus. Folgende Outcome-Parameter wurden definiert: Dauer der Arbeitsunfähigkeit in Bezug auf Alter, Profession, Diagnose, Herkunft, Vorliegen einer somatischen oder psychiatrischen Co-Morbidität sowie von Co-Faktoren aus dem familiären oder professionellen Umfeld.

Ergebnisse: Während der Beobachtungsperiode wurden 6433 Konsultationen durchgeführt, wobei die Ärzte für 602 Patienten ein Arbeitsunfähigkeitszeugnis ausstellten. In 56 % der Fälle betrug die Dauer der Arbeitsunfähigkeit ≥6 Tage. Die multivariate Analyse zeigte eine unabhängige Assoziation zwischen Arbeitsunfähigkeitsdauer und Anwesenheit von Co-Faktoren und Co-Morbiditäten, Alter, dem Vorliegen einer muskuloskeletalen, einer kardiovaskulären oder einer psychiatrischen Diagnose sowie eines Unfalls.

Schlussfolgerungen: Das Ausstellen eines Arbeitsunfähigkeitszeugnisses ist ein komplexer Akt: Neben der Diagnose zieht der Arzt ebenfalls andere Faktoren wie die Co-Morbidität und Co-Faktoren in Betracht. Ärzte sollten diesen Elementen besondere Beachtung schenken, da sie die Dauer der Arbeitsunfähigkeit beeinflussen.

Résumé

La prescription d'arrêts de travail en médecine de premier recours

Objectifs: La prescription d' arrêt de travail (AT) est un acte fréquent, néanmoins il existe peu d'études consacrées à la prescription d'AT en médecine de premier recours.

Méthodes: Nous avons récolté, prospectivement, des données concernant la durée, l'âge, la profession, le diagnostic, la nationalité, la présence de comorbidités psychiatriques ou somatiques et liées à l'environnement professionnel et familial (co-facteurs) chez les patients recevant un AT.

Résultats: Sur un total de 6433 consultations, 602 patients ont bénéficié d'un AT. Dans 56 % des cas la durée était de six jours ou plus. Une analyse multivariée a montré qu'un âge plus élevé, la présence de comorbidités et co-facteurs, d'affections cardiovasculaires, ostéo-articulaires, psychiatriques et les accidents étaient associés de manière indépendante à une durée plus longue d'arrêt de travail.

Conclusions: La prescription d'un AT est une tâche complexe, qui nécessite non seulement la prise en compte du diagnostic, mais également des comorbidités et co-facteurs. Au moment de la prescription, les médecins devraient avoir conscience de ces éléments et des situations risquant de se prolonger.

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Soz.- Präventivmed. 46 (2001) 389–395