

Are internists in a non-prescriptive setting favourable to guidelines?

A survey in a Department of Internal Medicine in Switzerland

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Summary

A cross-sectional anonymous postal survey was carried out in a Department of Internal Medicine in order to assess physicians' knowledge about and attitudes towards clinical practice guidelines and to evaluate the role of age in determining their use and opinions. The study took place in a Swiss University Hospital where exposure to guidelines had been limited. The questionnaire was sent to the 174 physicians of the Department. The response rate was 67% (116/174). The spontaneous definitions of guidelines were heterogeneous and referred to information of uncertain validity. Most participants, especially the younger groups of junior and senior residents, reported using guidelines and were favourable to their development. Less favourable attitudes were observed among senior staff physicians and consul-

tants. For instance, the latter more often held the opinion that guidelines are too rigid to apply to individual patients, were likely to decrease physician reimbursement and to hamper research (respectively, 32% *vs* 24%, 50% *vs* 31% and 18% *vs* 7% when compared with the opinions of residents). In conclusion, in a non-prescriptive hospital setting, where the development, dissemination and implementation of guidelines are emerging, the concept of 'guideline' was heterogeneous. Despite generally positive attitudes towards guidelines, the opinion of senior staff physicians constitute a barrier to their dissemination and implementation.

Key words: clinical practice guidelines; attitudes; knowledge; survey; physicians

Introduction

Rapid changes in the organisation of health care, large regional variations in medical practices [1] and the sometimes inappropriate use of medical interventions [2-6] have stimulated the development of guidelines. Guidelines should help doctors in making the right decisions. As several thousand guidelines are published each year and probably many more developed but not published [7], doctors are widely exposed to them.

The general situation regarding guidelines in Switzerland, as in several other European countries (e.g., Germany, Italy) differs from that of countries such as the United Kingdom, the Netherlands, the USA or Canada, where guidelines are more widespread and have been more systematically developed and used. Whereas guidelines do exist in Switzerland and are probably used, they do not formally play a role in the medical decision

making process. Moreover, an unpublished analysis (by one of the co-authors) indicated that the quality of national or local guidelines currently available in Switzerland is poor; indeed, few of them have been published.

To date, nothing has been published about the opinion of Swiss physicians towards guidelines. Within the framework of the implementation of an evidence-based policy in the Department of Medicine of the University Hospital of Lausanne – accompanied by the development or adaptation, and implementation of evidence-based guidelines – a postal survey was carried out in the Department to evaluate physicians' definition(s) and use of guidelines, their related attitudes and opinions and the role of age – as a surrogate for professional position – in determining use and opinions.

Method

The 174 medical doctors (unit, service or department heads, consultant specialists, senior and junior residents) employed at the time of the survey (January to March 1998) in the Department of Medicine of the University Hospital of Lausanne were contacted for participation in the survey. The questionnaire aimed at examining three a priori hypotheses: (1) the concept of 'guideline' is not homogeneous among physicians; (2) there is regular use of guidelines, but this often involves unpublished and thus unevaluated guidelines; (3) the overall opinion towards guidelines is favourable, especially among younger and less experienced physicians.

The questionnaire was anonymous and sought information about: (1) the use of guidelines, the types and forms of guidelines used and preferred, the estimated impact on medical practice and the wish for further guideline development (multiple choice questions); (2) physician attitudes towards guidelines (12 statements, most of which were derived from a previous publication [8]); (3) demographic characteristics including gender, year of birth, year of diploma, current professional position (1: junior

resident, 2: senior resident, 3: senior staff, i.e., consultant or, head of a unit, service or department) and number of weekly hours directly related to patient care. Age was strongly associated with current professional position (Spearman rho coefficient: 0.86) and was thus considered a valid surrogate for professional position. In addition, two open-ended questions were submitted to a subgroup of 64 persons regarding the definition of 'clinical practice guideline' and awareness of published guidelines. The questionnaire was pilot-tested at another hospital.

Data were entered and analysed using Epi Info 6.0, Excel 7.0a and Stata 5.0. The responses to the 12 statements concerning physician attitudes towards guidelines were dichotomised into yes versus no (including no opinion). A chi-square test or a Kruskal-Wallis test were used for the subgroup analysis. Multiple logistic regression was performed to explore the relations between physician characteristics and reported use of guidelines as well as responses to the 12 attitudinal statements. P values lower than 0.05 were considered statistically significant.

Results

The response rate after one written and several general (i.e., at grand rounds) oral reminders was 67% (116/174). Distribution of age, gender and current professional position was similar between respondents and the entire population of physicians in the Department. Basic characteristics of participants are presented in table 1. The subgroup of respondents (n = 64) to the two open-ended questions were significantly less experienced (10.5

years *vs* 15.4 years, P = 0.007) and less often among senior staff (22.6% *vs* 49.0%, P = 0.01).

Use of guidelines

Most participants (91%) (table 2) indicated using guidelines. Published guidelines were by far the most widely used type. Guidelines were preferentially stored as "filed articles" and as "pocket books". Nearly all participants reported being in

Table 1
Demographic data
by gender.

Variables	all*	men	women	P value
N	116	89	22	
Age [years, mean \pm SD]	39.0 \pm 8.9	40.4 \pm 8.7	33.7 \pm 5.6	0.0001 ^a
Professional experience [years, mean \pm SD]				0.0003 ^a
Total	12.6 \pm 9.1	14.0 \pm 9.3	7.0 \pm 6.2	
Clinical	10.8 \pm 8.7	11.9 \pm 8.9	6.0 \pm 6.2	
Non clinical	1.8 \pm 3.3	2.0 \pm 3.6	1.1 \pm 1.7	
Current professional position ^b [%]				0.002 ^c
Juniors	38.1	30.3	68.2	
Seniors	27.4	29.2	22.7	
Chiefs (consultant and heads)	34.5	40.4	9.1	
Weekly time directly related to patient care [%]				0.01 ^c
<10 hours	15.9	14.8	22.7	
10–20 hours	31.0	36.4	9.1	
21–30 hours	13.3	15.9	4.5	
>30 hours	39.8	33.0	63.6	

* 5 missing for gender

^a Kruskal-Wallis test for difference between gender.

^b Specialty areas in the Department of Medicine include internal medicine, cardiology, pneumology, gastroenterology, infectious diseases, emergency unit, intensive care unit, endocrinology and metabolic diseases, neurology, immunoallergology, dermatology, onco-haematology, nephrology, hypertension and angiology, clinical pharmacology, radiology, alcoology, palliative care and various smaller sections.

^c Chi square test for difference between gender

Table 2

Knowledge and use of clinical practice guidelines (CPG) [%].

Do you use CPG in your practice? (n = 113)	
Once a week or more	44
Less than once a week	26
Less than once a month	21
Never	7
No opinion	2
Which kinds of CPG do you use? (n = 108)	
Published	85
Personal*	44
Ward	40
Others	2
In which form do you keep your CPG? (1 or 2 responses) (n = 111)	
Filed articles	66
Pocket books	45
Memorised	23
Computerised	18
Separate sheets	16
Others	2
Did the use of CPG change your medical practice during the last 12 months? (n = 114)	
Yes	23
Rather yes	30
Rather no	24
No	21
No opinion	3
In general, would you be favourable to the development of good quality CPGs? (n = 114)	
Yes	65
Rather yes	29
Rather no	3
No	3
No opinion	1
Which kinds of CPG do you prefer? (several responses possible) (n = 115)	
Published	77
Local	49
From professional societies	37
Personal	11
From insurance companies	4
Governmental	3

* CPG written on the basis of personal experience and/or reading and/or from a presentation, but not published.

favour of the development of quality guidelines. One half of the respondents indicated having changed their practice in the past year as a result of a guideline. In multivariate analysis, older age [OR = 0.89 (CI95: 0.84–0.95) per year, P = 0.001] was a determinant of a less frequent use of guidelines after controlling for gender and the amount of time directly related to patient care. Replacing age by years of experience or current professional position gave similar results.

Physician attitudes and opinions about guidelines

On the whole opinions on guidelines were favourable (table 3). Respondents' opinion about the possible financial consequences of guidelines was somewhat less favourable. The multivariate analysis showed that increasing age was inversely related to the opinion that guidelines tend to enhance efficacious procedures [OR: 0.90 (CI95: 0.83–0.99) per year, P = 0.05] and that guidelines are good educational tools [OR: 0.89 (CI95: 0.81–0.98) per year, P = 0.02]. Moreover, increasing age was associated with the opinion that guidelines result in contradictory recommendations

Table 3
Attitudes and opinions of medical doctors (internal medicine ward) toward CPG, comparison between current professional positions*. [%]

Clinical practice guidelines:	total		yes			p value [#]
	yes	no opinion	junior residents	senior residents	senior staff	
(N)	(115)	(115)	(43)	(31)	(38)	
Favourable statements						
Usually enhance efficacious procedures	93	4	93	94	95	0.75
Generally are a good educational tool	90	1	98	94	82	0.01
Are likely to improve quality of care	90	4	91	90	92	0.83
Are likely to decrease health care costs	66	8	56	74	71	0.14
Non favourable statements						
Are likely to decrease physician reimbursement	37	27	28	35	50	0.04
Result in oversimplified or 'Cookbook medicine'	35	3	33	23	47	0.18
Are usually too rigid to apply to individual patients	27	0	19	29	32	0.20
Result in contradictory recommendations	24	11	16	26	30	0.15
Are a challenge to physician autonomy	21	2	19	19	24	0.58
Are likely to decrease research activity	10	10	7	6	18	0.10
Are likely to decrease physician satisfaction	10	6	5	10	16	0.09
Generally tend to increase medical costs	5	10	7	0	5	0.68

* 3 missing responses for current professional position

[#] P calculated with χ^2 test for trend (according to current professional position) between those answering "yes" and those not answering "yes" (i.e., no and no opinion) to the proposed statements.

[OR: 1.07 (CI95: 1.00–1.14) per year, $P = 0.04$] and that guidelines are usually too rigid to apply to individual patients [OR: 1.07 (CI95: 1.01–1.13) per year, $P = 0.02$].

Physician knowledge of guideline definitions and existing guidelines

We compared the responses to the open-ended question ("in your opinion, which definition best corresponds to clinical practice guidelines") with the definition of the Institute of Medicine ("systematically developed statements to assist practitioner and patient decisions about appropriate health care for specific clinical circumstances" [9]). In general, the proposed definitions were heterogeneous and vague. None precisely matched that of the Institute of Medicine. Only 6% of respondents mentioned the idea of a guideline assisting practitioners' decisions and no one indicated that guidelines might assist patients in

making decisions. One fifth put forth the notion of appropriateness of care. Few physicians spontaneously brought up negative aspects of guidelines (e.g., simplistic approach to medicine or mandatory character). Only twice was the French word "recette" (literally "recipe", corresponding to "cookbook medicine") used. Among the spontaneously reported aims of guidelines, improving quality of care ranked first (16%), followed by standardisation of health care practices (6%) and decrease in health care costs (3%). Senior physicians did not provide more precise or accurate definitions than less experienced colleagues.

Responses to the open-ended question ("Which guidelines published in the medical literature are you aware of?") were very vague, most often without any mention of the source and date of the guideline. Only four respondents cited Swiss medical societies and two cited locally produced guidelines.

Discussion

Physician adherence to evidence-based, high-quality recommendations is crucial, though not sufficient, to influence patient outcome. Several studies [8,10–24] have analysed physician knowledge and opinions about clinical practice guidelines and most of them described generally positive attitudes. Most of these studies also took place in settings with a high and/or long exposure to guidelines, such as the USA [8, 15, 20–23] or England [17, 19, 24].

In Switzerland, the development of guidelines constitutes a relatively new process. No formal

guidelines programme exists other than the general recommendation of the Swiss Medical Association for medical specialty societies to develop high quality guidelines [25, 26]. Indeed, the Swiss healthcare setting is not prescriptive in matter of guidelines development and use nor are the dissemination and implementation of Swiss guidelines widely and systematically conducted [27]. This postal survey was done just prior to the introduction of guidelines in the internal medicine wards of the University Hospital of Lausanne, Switzerland [28].

We did not define what constitutes a clinical practice guideline in our questionnaire because we were interested in ascertaining the spontaneous definitions proposed by survey participants. We chose the widely used definition of the Institute of Medicine as a reference for the purpose of analysis. However, no definition currently enjoys unanimous acceptance and inconsistent terminology is found throughout the literature. The heterogeneity of the set of definitions of guidelines that we received might reflect the confusion of physicians in the absence of international and national consensus. The vague description of known published guidelines, with few identifiable examples, lead us to think that although awareness of guidelines might be high, familiarity with them is probably low, as noted by others [29].

Regular use of guidelines was reported in the Department of Internal Medicine. We cannot exclude that respondents' self-reported frequency of use was either an over- or an underestimation of their actual use. Physicians favourable to guidelines were on average younger and the two factors "younger age" and "less clinical experience" behaved similarly in all analyses. Older age was associated with the opinions that guidelines are too rigid to apply to individual patients and do not increase quality of care nor effective practices. Older age and the corollary of being senior staff could therefore represent a "barrier" to the use of guidelines. A complementary explanation could be that junior residents lack time for reading and therefore view guidelines as a quick way of assimilating information and as good educational tools. However it is not possible to determine if the differences in opinions between younger and older

physicians are mainly due to an age effect (i.e., physicians will become less favourable to guidelines as they grow older) or a cohort effect (i.e., younger physicians will remain more favourable to guidelines as they become older). Wolff [23] and Watkins [30] also found younger age to be associated with more positive attitudes toward guidelines. American family practice residents [22] were found to be less likely to perceive guidelines as rigid and "cookbook" medicine than the more experienced practising internists [8] or family physicians [23]. When looking at physician responses to one specific guideline, those with less experience found the guideline most helpful [21].

In conclusion, in a particularly non-prescriptive hospital setting where the development, dissemination and implementation of guidelines are emerging, physicians reported frequent use of guidelines and generally positive attitudes towards them. However the definition of guideline rarely matched that of the Institute of Medicine and was sometimes assimilated with types of information of uncertain quality and validity. The opinion of older physicians (senior staff and consultants) could represent a barrier to the dissemination and implementation of guidelines.

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