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Consultation among Peers in General Practice; from No Consultation to Peer Review

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The present study concerned several aspects of peer consultation by general practitioners, investigated in a group of 184 doctors (response rate: 83 %) who had their vocational training in the department of general practice of the University of Utrecht and practised for at least three years at the time of the study. Questionnaire responses indicated that consultation during and outside surgery hours and participation in case-discussion groups generally extended over more than two years, occurred frequently, and usually pertained to diverse problems associated with diagnosis and treatment. Participation in study and peer review groups extended usually over a shorter time (1 to 1$^1/_2$ years) and the problems dealt with were predominantly the same as for individual consultation. One-third of the general practitioners consulted colleagues frequently and continued to do so for long periods, dealing systematically with a variety of problems; one-third did so infrequently or unsystematically, and one-third did little or not at all. A relationship was found between the setting of the practice and consulting behaviour: 20 % of those who practised alone never consulted peers, whereas those in group practices and health centres were accustomed to do so regularly.

Key words: peer review, general practitioners, practice setting.

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In recent years it has become increasingly clear that traditional postgraduate training is an excellent way for physicians to keep up to date with respect to the diagnosis and treatment of disease. However, the knowledge and insight obtained in this way do not guarantee their proper application (1–6). Frequent feedback as a form of evaluation of how a doctor practises is much more effective, since "the most fruitful education derives from continually monitoring one's work, making judgements about success or failure and altering performance accordingly" (2). Fellow practitioners can play an important role in such processes (2, 5–9). This explains why increasing attention is being given in the field of medicine to peer auditing and quality control (10–14) whose application is based on variably structured audit activities called practice-linked medical education. But general practitioners also receive feedback informally, for example when they discuss problems connected with diagnosis or therapy with colleagues. Several authors have pointed to the value of informal communication and consultation for the quality of health care (15–17).

Consultation among peers has intrinsic value in the sense that it offers substantial support in difficult situations and it can lead to improved care if it occurs regularly, if it is continued sufficiently long, and if it concerns patients with different problems. Where these conditions are fulfilled, we refer to peer review of the provided care.

Under this term we understand *consultation among peers concerning the diagnosis and management of specific cases, the consultation being characterized by:*

(a) definition of the diagnostic process and of the problem(s) in question;

(*b*) evaluation of both;

(*c*) weighing of the positive and negative effects of possible forms of management;

(*d*) inclusion of a wide spectrum of problems, e.g. internal, gynaecological, and psychiatric problems;

(*e*) repeated consultation about the same or other problems after a certain interval.

On the basis of such considerations, we performed a study to determine whether and, if so, how general practitioners consult peers about problems associated with the diagnosis and treatment of specific cases.

For this investigation a group of subjects was selected; all general practitioners who had completed their vocational training in general practice at the University of Utrecht between 1975 and 1980 and who had practised for at least three years (n=222). With respect to their training, these physicians may be considered roughly equal. They had all been taught to accept discussion about their professional behaviour and to consult others when they encountered problems they could not solve. For this group the following points were determined:

- the degree to which they discussed their approach to diagnosis and management in specific cases, the situations in which they did so, and the extent to which these consultations fulfilled the criteria for peer review;
- whether a relationship existed between the practice setting and consultation among peers.

METHOD

To find out whether and, if so, how the general practitioners consulted peers about problems encountered in health care, we made use of a written questionnaire. Five forms of consultation were distinguished:

1. consultation during surgery hours;
2. consultation outside surgery hours;
3. discussion of cases with e.g. a group of locum tenens;
4. participation in project groups organized by the Dutch College of General Practitioners (*Nederlands Huisartsen Genootschap*, NHG), i.e., study groups meeting to analyse the results of their diagnostic methods and treatment for a given affection, e.g. low back pain, for the purpose of arriving at a protocol;

Table I. *Two examples of general practitioners' responses considered relevant on the basis of the criteria for peer evaluation*

Question in questionnaire: What kind of question do you submit and how?
GP 1: 'After giving a sketch of the problem, I wait till the colleague gives his opinion, and then there is a short discussion. During the surgery hour only as long as needed for the case or treatment at that moment. Later, we continue the discussion if necessary.'
GP 2: 'Would you take a look at this? What would you prescribe in such a case? What would you do if you were confronted with a situation like this?'

5. participation in formal peer review groups (which apply a highly structured approach to auditing, as recently described (14)).

In addition, the general practitioner could indicate the extent to which he consulted colleagues about specific patients in other kinds of situations. Concerning each of the foregoing forms of consultation, questions were posed as to how long the physician had done so, how often, what the nature of the consultations had been (i.e., about diagnosis, management, the doctor–patient relationship, and whether the problems had differed widely or been restricted to a few subjects). There were also questions about the way in which the problems had been discussed and the health care evaluated. Concerning consultations during or outside surgery hours, the physicians were asked to describe the types of problems about which they consulted a colleague. These descriptions were evaluated according to the criteria for peer review mentioned above. If the descriptions indicated that a general practitioner had given a good impression of his behaviour and problems, the consultations were considered relevant in terms of peer review (called relevant questions). This is exemplified by the answers given by two general practitioners shown in Table I.

With respect to the more structured forms of consultation (group discussion of cases, NHG groups, and peer review groups), precoded questions were used to determine whether the submission of problems and behaviour had been documented (e.g. audio- or video-tapes) and whether the approach to diagnosis and treatment had been systematically evaluated.

Table II. *Criteria for occurrence or absence of peer review, according to form of consultation*

Forms of consultation	Criteria				
	Minimal frequency	Minimal duration	Diversity of problems	Diagnosis and management	How problems are submitted
Individual					
During surgery hours	Once in 2 weeks	2 yrs	Yes	Yes	Relevant questions
Outside surgery hours	Once in 2 weeks	2 yrs	Yes	Yes	
More structured forms					
Peer case discussions	Once in 4 weeks	2 yrs	Yes	Yes	Documented description of patient's problems (video/tape/form. or patient's card) and systematic evaluation of this material
NHG[a] project group	Once in 4 weeks	2 yrs	Yes	Yes	
Formal peer review group	Once in 2 or once in 4 weeks	1 yr 1½ yrs	Yes	Yes	

[a] Dutch College of General Practitioners.

The criteria mentioned in the introduction were used to determine the extent to which the various forms of peer consultation bear the characteristics of peer review (Table II). Application of these criteria yielded four categories:

1. The general practitioner does not participate in this form of peer consultation (*none*);
2. The general practitioner consults colleagues but the consultation does not satisfy two or more of the criteria for peer review (*consultation; no peer review*);
3. The general practitioner consults peers but the consultations either does not satisfy one criterion, e.g. concerning the frequency or duration, or there are doubts as to the adequacy of the documentation or systematic presentation of the problems to colleagues (*consultation and limited peer review*);
4. The general practitioner consults peers satisfying all the criteria of peer review (*consultation and peer review*).

The questionnaire also included a number of general questions related to the nature of the practice and about associated activities and functions. The questionnaires were coded by the first author, and ten per cent of the data were also coded by the second author as well. The degree of correspondence was very high (94%).

Two weeks after the first questionnaire had been mailed, all of the general practitioners were sent a reminder. Four weeks after that, another copy of the questionnaire was sent to those who had not responded, and this was repeated four weeks later (18). A total of 222 general practitioners were approached, and 188 of them filled in the questionnaire and returned it (85%). For various reasons, four of these did not satisfy the criteria for subjects leaving 184 questionnaires for analysis (response: 83%). No difference in practice setting was found between the responding and nonresponding physicians.

RESULTS

Peer consultation

Half of the general practitioners consulted a colleague occasionally during a surgery period (Table III), outside surgery hours this was more common, being done by seven out of ten general practitioners. About half of the subjects participated in case-discussion groups, whereas participation in NHG project groups and peer review groups was low (9% and 7%, respectively). Consultation during or outside of surgery hours and participation in case-discussion groups proved to be a stable pattern: general practitioners making such consultations had done so frequently and for more than two years (Table IV). Discussion concerned diagnostic and

Table III. *Peer consultation in five forms, according to two groups of general practitioners (n=184), one working alone and the other in a setting including peers*

	Total		Solitary practice		A setting including peers	
Form	Abs.[a]	Rel.	Abs.[a]	Rel.	Abs.[a]	Rel.
Individual consultation						
During surgery hours	98	53%	22	25%	71	82%
Outside surgery hours	131	71%	47	53%	76	85%
More structured forms						
Case discussion	97	53%	50	56%	43	48%
NHG project groups	16	9%	8	9%	8	9%
Formal peer review groups	12	7%	2	2%	10	11%

[a] Some general practitioners participate in more than one form of peer consultation.

therapeutic aspects of the medical care they provided and a diversity of patient problems.

In most cases participation in NHG and formal audit groups had been relatively brief, usually concerning diagnosis or management. The NHG groups were usually restricted to one or two disease categories, whereas the formal peer review groups often dealt with a wide range of complaints and diseases.

One of the three general practitioners who consulted colleagues during or outside surgery hours raised questions considered relevant on the basis of the criteria for peer review (Table V). For more structured forms of consultation (case-discussion groups, NHG project groups, and peer review groups) it is noteworthy that only the formal peer review group dealt with documented material (tape/video or form/cards Table V). Systematic evaluation was mostly restricted to this groups.

The setting of a practice was found to be related to the way in which peer consultation is conducted. The general practitioners who practised alone consulted peers less often during and outside surgery hours compared with those working in a setting including peers (for instance a group practice or health centre) (Table III), as could be expected from the conditions of solo work. Roughly the same numbers of both types of general practitioner participated in case-discussion and NHG groups. Ten of the twelve general practitioners who participated in peer review groups worked in a setting including peers. Only two of the twelve practised alone. This is surprising, because the setting of the practice hardly is a limiting factor.

Table IV. *Data on some aspects of peer consultation on specific cases, according to form of consultatio (N=184)*

	Individual consultation				More structured forms	
	During surgery hours (*n*=98)		Outside surgery hours (*n*=131)		Peer case discussion (*n*=16)	
Frequency	Occasionally every week or once in 2 weeks	69%	Occasionally every week or once in 2 weeks	84%	Once in 3–4 weeks	75%
Duration	2 yrs	86%	2 yrs	79%	2 yrs	64%
Nature of patient problems	Wide spectrum	83%	Wide spectrum	90%	Wide spectrum	79%
Type of medical problems	Diagnosis and management	88%	Diagnosis and management	82%	Diagnosis and management	89%

Table V. *Mode of peer consultation on diagnostic and therapeutic aspects of patient care in specific cases (n=184)*

	Individual consultation			
	During surgery hours		Outside surgery hours	
	Abs.	Rel.	Abs.	Rel
Relevant questions	33	34	40	31
Irrelevant questions	14	14	27	20
Unclassifiable	13	13	30	23
Not indicated	38	39	34	26
Total	98	100%	131	100%

	More structured forms			
	Peer case discussion		NHG project group	Formal peer review group
	Abs.	Rel.	Abs.	Abs.
Degree type of care documentation				
Tape/video	7	7	2	3
Form/card	30	31	5	9
Verbal/with notes	60	62	9	–
Total	97	100%	16	12
Approach to evaluation				
Systematic	20	20	6	9
Neither systematic nor unsystematic	36	37	5	3
Unsystematic	41	43	5	–
Total	97	100%	16	12

Relationship between the various forms of consultation

A correlation was found between consultation during or outside surgery hours. A general practitioner who consulted colleagues during surgery hours was more likely to do so outside those hours (γ=0.46).

NHG project group (n=16)		Formal peer review group (n=12)	
At least once every 3–4 weeks	10	Once in 2 weeks Once in 3–4 weeks	4 8
1 yr	13	½–1 yr	7
Narrow spectrum	10	Wide spectrum	10
Diagnosis and management	14	Diagnosis and management	12

Furthermore, the twelve general practitioners who participated in peer review groups were all among those who consulted colleagues during surgery hours.

Informal peer review

As can be seen in Table VI, consultation in the various forms only satisfied the criteria for peer review to a limited degree. The next step in the study was to determine the extent to which the general practitioners consult colleagues in at least one of the five indicated ways (Table VII relating to n=176, because eight general practitioners in the series could not be categorized). One-third of the subjects satisfied all of the criteria for at least one of the forms of consultation (category 4), i.e. they evaluated the medical care they supply by frequent and sufficiently long consultation about a wide variety of problems on the basis of relevant questions and systematic evaluation. One-third of the general practitioners did not do this frequently or did

Table VI. *Degree of consultation among 184 general practitioners, according to five forms of consultation*

	Individual consultation		More structured forms		
	During surgery hours (n=184) (%)	Outside surgery hours (n=184) (%)	Case discussions (n=184) (%)	NHG project group (n=184) (%)	Formal peer review group (n=184) (%)
1. None	47	29	47	91	93
2. Consultation; no peer review	25	25	30	7	4
3. Consultation and limited per review	15	28	16	–	–
4. Consultation and peer review	13	18	7	2	2
Total	100	100	100	100	100

so very briefly, or raised doubts as to the quality of the documentation and systematic approach to the consultation and evaluation (category 3). The other third did not satisfy various criteria or did not participate in any way in peer review (categories 1 and 2).

The setting of a practice was found to be related to the degree of peer consultation (Table VII). General practitioners who worked alone showed a more differentiated pattern of peer consultation than did those who worked in a group including peers. Twenty per cent of the solo practitioners never consulted with colleagues in any way about the medical care they supplied, and one out of five satisfied all of the criteria for peer review.

Of those working in a setting including peers, all of whom consulted peers in one way or another, one out of two satisfied all of the criteria for peer review. Virtually no difference was found between general practitioners working in group practices or association and those belonging to a health centre. On the grounds of the foregoing findings it is concluded that the setting of a practice is an important variable. A general practitioner working together with other general practitioners in the same building finds it easier to discuss cases with colleagues. Nonetheless, some of those who worked alone consulted others often and had done so for a long time.

The last point investigated was the question of correlation with associated activities, i.e. educational activities, committee work, second jobs, and NHG membership. None of these associated activities was found to have any relationship with the degree of peer consultation.

DISCUSSION

The findings reported here are based on data concerning general practitioners who completed their training at the University of Utrecht between 1975

Table VII. *Degree of peer consultation of 184 general practitioners and according to practice setting (N=176)*

	All			Solo practice			A setting including peers		
	Abs.	Rel.	Cum. %	Abs.	Rel.	Cum. %	Abs.	Rel.	Cum. %
1. None	18	10	10	18	20	20	–	–	0
2. Consultation; no peer review	44	24	34	26	29	49	15	17	17
3. Consultation and limited peer review	62	34	68	26	29	78	32	37	54
4. Consultation and peer review	60	32	100%	19	21	99%	40	46	100%
Total	184	100%		89	99%		87	100%	

and 1980. Because of the relatively high response rate, they provide a rather complete picture of the way in which they consult peers about their cases. We think that these findings can be applied to the entire population of general practitioners who attended the medical schools in The Netherlands in the same period. Because there were no marked differences between the curricula of these schools with respect to attitudes and skills related to consulting colleagues about diagnostic and therapeutic problems. The findings presented here correspond in general with those presented by Wijkel (16), which are more general in nature.

From our findings it may be concluded that the setting of the practice can be a condition that determines whether peer consultation evolves easily or encounters obstacles. There are two reasons why solo practitioners talk cases over with colleagues less than those in groups. Firstly they have fewer opportunities and secondly because of the complex of attitudes related to the practice setting. Research in the United States has shown that physicians working in groups have a more positive attitude toward a certain degree of regulation and normalization of their medical behaviour than solitary practitioners (15, 19). This might explain the limited participation of solo practitioners in formal peer review groups.

Since one in every five solo practitioners has no professional contact with colleagues they form a riskgroup. When problems arise it is difficult for them to arrange such a contact. This can lead, for example, to unnecessary referral to a specialist. Over the long term, such behaviour can create an undesirable situation. Though this group may satisfy the criterion for 40 hours of postgraduate education, it seems probable that optimal health care requires close professional interaction as well.

The present findings indicate that general practitioners who participate in formal peer review groups also consult their peers in other situations i.e., usually in informal rather than formal situations outside the surgery hours. These are in all likelihood practitioners who tend to accept auditing or are prepared to analyse their own professional behaviour and function critically.

It will be extremely difficult to involve the most isolated group in this consultative development. Two conditions must be altered if this is to be achieved. The first is better preparation during the vocational training. The objectives defined by the Committee for the Construction of a (multi-year) Vocational Training for General Practice are encouraging in this respect. This national committee is asked to construct a new curriculum for an extended multi-year vocational training to replace the present one-year 'specialization'. The proposed programme will pay more attention to the teaching of 'adequate consultation of colleagues' and 'critical evaluation of one's own conduct and functioning', including the development of the attitudes necessary to achieve these aims (20). It would be most productive to combine this directly with training in diagnosis and treatment. Furthermore, a more positive attitude will have to be cultivated towards peer review, with the definition of norms and perhaps financial rewards.

In studies in this field it is customary to examine only the way in which a practice is conducted and not the nature and intensity of the peer consultation (21), but it is evident from the present study that both are different entities and equally important, and that this should be taken into account in future research. Consultation unquestionably consumes time, but this makes it even more urgent to establish whether they lead to better health care, which might be seen as better diagnosis, better management, and less unnecessary harm for the patient (22–24). In that case, more weight would have to be assigned to peer consultation as a criterion for the quality of medical care.

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