

## Consultation in general practice: a standard operating procedure?

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Abstract.

The objectives of this study was to describe the features of consultation within general practice with special attention to the differences between short, moderate and long consultations.

An analysis of 2801 videotaped consultations of 183 General Practitioners from 6 countries participating in the Eurocommunication Study was made. The communicative behaviour was gauged by means of the Roter Interaction Analysis System. The consultation can be seen as a “standard operating procedure” consisting of 8 % social behaviour, 15 % agreement, 4 % rapport building, 10 % partnership building, 11% giving directions, 28 % giving information, 14 % asking questions and 7 % counselling. A short consultation can be described as an encounter with a little bit of social behaviour to set the contact, medical questioning, giving directions for the further consultation and advises in order to solve the problem(s) mentioned. In a long consultation doctors take more time for a social talk, they give more attention to the relation or contact with the patient, they listen more extensively, especially to psychosocial problems, and they give more information.

Keywords: Communication, consultation length, general practice.

## 1. Introduction

Nowadays, longer consultations are more frequent in primary care in several countries (1, 2, 3). Although there is no real evidence that longer is better, some benefits of longer consultations have been mentioned. Research showed that in longer consultations doctors prescribe less (4, 5), listen better to their patients, identify more problems, explore more psychosocial problems and provide more health promotion (3, 6). When we take these measures as a proxy for quality, longer consultations seem to be better (5, 7, 8). Howie and others (8, 9) showed that two major characteristics of primary care, holism and patient centredness, are both promoted by longer consultations. Ridsdale and colleagues (10) found in longer consultations doctors and patients to show significantly different behaviour. Doctors asked more questions and gave more psychosocial leads; they tended to more adequately explain the problem and its management to the patient. Doctor and patient had more social exchange, patients made more statements to present their problem, asked and answered more questions and expressed more ideas about their condition. In longer consultations, the amount of emotional expressions of patients did not increase. Although patients mostly are satisfied, they tend to be more satisfied with longer consultations (11). Other observations seem to contradict the statement that longer is better. Murrell (12) found no correlation between emotional and informational support by the doctor and the length of the consultation. Even the severity of the symptoms presented was not significantly associated with the duration of the consultation. Longer consultations do not warrant better communication. Aliboretus and Bremberg (13) found that consultations, which both doctor and patient had a positive feeling about, took less time than consultations about which they had negative feelings. Concerning patient centeredness, Henbest and Fehrsen (14) found patient-centred consultations to be no longer than others. Observational studies revealed no difference in duration of the separate components of consultations, like history taking, examination, giving advice and social behaviour, in long versus short consultations (15). In shorter consultations doctors speeded on every component.

One can conclude that thus far no evidence has been found that longer consultations are better; there seems to be no clear-cut correlation between quality and time. (16, 17)

One thing we do not find in literature is a real description of the behaviour of GPs in short, moderate and long consultations. In this study we try to identify the nature of consultations with different duration. We studied the following questions.

- Is a GP-patient consultation a “standard operating procedure”?

- Does the doctor's communicative behaviour change with changing length of the consultation?
- Is there a threshold under which some communication aspects disappear?

## 2. Method

The data used were derived from the Eurocommunication study (18). Doctor-patient communication was compared in six European countries: the Netherlands, United Kingdom, Spain, Belgium, Germany and Switzerland. The NIVEL (Netherlands Institute for Health Services Research) institute carried out the co-ordination, analyses and reporting. National co-ordinators from universities and research institutes were responsible for implementing the study and collecting the data in their country.

### 2.1. Study design

The study was cross-sectional. For this study 183 GPs were included: from the United Kingdom 24 GPs, from Spain 27 GPs, from the Netherlands and from Belgium each 30 GPs, from Switzerland 29 GPs and from Germany 43 GPs. National ethical committees approved the study and patients and doctors gave written consent.

GPs completed a general questionnaire at the beginning of the study and a short questionnaire after each consultation. The patient filled in questionnaires at the beginning of the consultation.

In each doctor's surgery patients were asked to participate until a minimum of 20 patients had completed the questionnaires and their consultation videotaped. Home visits were excluded because of logistic problems. Generally the first 3 consultations were not coded to avoid bias, possibly caused by the doctors' adaptation to the presence of the video camera. Starting from the fourth, consecutive consultations were analysed until at least 15 could be included.

### 2.2. Observation protocol and measurement instruments.

The duration of the consultation, including the physical examination was measured by means of a stopwatch. Interruptions (e.g. when somebody entered the room, when the GP left the room or received a non-related phone call) were subtracted from the total length of the consultation.

### 2.3. Analysis of the videotapes

Communicative behaviour was measured according to the Roter Interaction Analysis System (RIAS) (19). This system is well documented and widely used in the USA (20, 21) and has been

validated for use in other languages (22, 23). The system is designed to code the communicative behaviour of both doctors and patients. It distinguishes affective (socio-emotional) and instrumental (task-oriented) behaviour, reflecting the care-cure distinction. The unit of analysis is the smallest meaningful string of words. All utterances were assigned mutual by exclusive categories. The RIAS contains 16 categories, 7 for affective and 9 for instrumental behaviour. For analysis in this study, categories were clustered into 4 categories for affective behaviour namely “social behaviour”, “agreement”, “partnership building” and “rapport building” and 4 categories for instrumental behaviour namely “gives directions”, “asks questions”, “gives information” and “counsels or directs behaviour”. Within instrumental behaviour categories were also clustered in medical talk and psychosocial talk contending respectively the biomedical and lifestyle or social content aspects of “asks questions”, “gives directions” and “counselling”. The category “other” included not-understandable or not quotable utterances (see appendix 1).

All communicative behaviours were expressed in percentages of the total utterances. Four observers were trained until they reached sufficient identical ratings of the videotaped consultation.

#### 2.4. Statistical methods

Multilevel analysis was performed discerning three levels: consultation-, doctor- and country-level. Consultations were clustered according to their doctors, doctors according to their country. The country level has only 6 items; as a consequence the variance in communicative behaviour attributable to this level has a large standard error. Statistical analyses were performed using SAS software (24). The distribution of most outcome variables turned out to be strongly non-Gaussian due to the fact that some elements of communicative behaviour were found to be absent in a considerable number of consultations. The resulting violation of the normality assumption in most cases invalidated traditional linear multilevel modelling. To overcome this problem we chose to dichotomise all outcomes and to fit non-linear logistic mixed models using the SAS macro GLIMMIX. This macro iteratively fits a set of estimating equations by invoking the PROC MIXED procedure (restricted maximum likelihood estimation method) to generate a generalised linear mixed model (25). In order to allow for polynomial effects, consultation length was subdivided in three categories: short (< 5 minutes, 16 % of the total number of consultations), average (5-14 minutes, 64 % of the consultations) and long ( $\geq$  15 minutes, 20 % of the consultations). Although one could argue to take the mean plus or minus one standard deviation as division point, for two reasons this was not done. First we chose to have comparable numbers in the group of short and of long consultations. Taking standard deviations as cut off point would have negative implications on the power of the study since the group of short and of long

consultations would contain small numbers. The second reason was rather subjective. We tried to give clear messages, consultations less than 5 minutes or longer than 15 minutes contribute more to the reality of daily life than 4.1 respectively 17.3 minutes do.

With this characterisation of consultation length, odds ratios and surrounding 95% confidence intervals were derived from the estimated regression coefficients in the multivariate models with the group of average consultations as reference category. As covariates we took into account country (level 3), age and sex of the GP (level 2) and patient's age, sex and educational level (level 1). The relation between consultation length and a 'high' versus a 'low' degree of a communicative cluster was studied. The relative contribution of a communicative cluster in a specific subgroup of consultation length was judged to be 'high' if it exceeded the upper quartile of the distribution of that item across all consultations taken together. The contribution of a communicative cluster was defined as 'low' if its value was less than the lower quartile for that item across all consultations.

### 3. Results

#### 3.1. Preliminary analysis

The representativity of the study was documented in a previous publication (18, 26), showing that on average, the workload of the general practitioners in our study was lower, more female doctors and more city practices were included as compared to the country of origin.

After subtraction of incomplete forms 2801 patients of 183 GPs from 6 countries were included. Each country accounted for minimum 24 and maximum 43 GPs; each GP accounted for approximately 15 patients.

The inter-rater reliability of the video observers was measured by calculating Pearson's correlation coefficients between the ratings of pairs of observers, for 20 consultations (per country) of different GPs. The mean inter-rater reliability was .71 (range .40 to .98) (18).

#### 3.2. Variation attributable to the different levels

For all variables the variation attributable to the lowest level (consultation) was the largest (range from 61 % till 92 % of the total variance). The variation attributable to the second level (the GP) ranged from 9 % till 26 %. The variation range of the highest level (country) was 1 % till 16 %. In other words, the variation in communicative behaviour of the GP is predominantly determined by the differences among the consultations and less by doctor variables or country differences.

#### 3.3. Consultation length

The mean consultation length was 10,72 minutes (SD. 6,66). The shortest consultation lasted 1 minute, the longest 59 minutes.

#### 3.4. Percentage of utterances of doctors

The mean percentage of utterances of the doctor on the total number of utterances was 54,57 % (SD 8,27). Analysis showed a significant negative association between consultation length and the percentage of utterances of the doctor.

Comparing the three groups, the doctor spoke the most in the group of short consultations (56 % of all the utterances), in the group of long consultations he/she spoke less (53.2 %). In the group of moderate consultations the mean utterances of the GP was 54.6 %.

Looking at the changes in communicative behaviour of the patient, not a topic of this study, we saw that this increase was associated with an increase in the cluster giving info more specific in the subheading information about lifestyle and social context (14% in short, 17% in moderate and 26% in long consultations), giving information about medical therapeutical condition did not change.

#### 3.5. Communicative behaviour of doctors

The doctors' mean percentages of the communicative clusters in all consultations was: 8 % social behaviour, 15 % agreement, 4 % rapport building, 10 % partnership building, 11% directions giving, 7 % counselling, 28 % information giving and 14 % asking questions.

Although there were differences, the picture of the communicative behaviour in the three conditions (short, moderate and long) resembled. Task oriented behaviour and socio-emotional behaviour accounted for respectively 59,3 % and 36,6 % of the total utterances of the doctor. The category "other" accounted for 4 %.

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Insert table 1

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The proportion of "giving information" and "psychosocial talk" increased significantly when the duration increased . Although the proportion of "agreement" increased, only the difference between short consultations and both the other categories was significant. On the contrary, the proportion of "partnership building", "giving directions" and "counselling" decreased significantly when consultation time increased. "Social talk" decreased but only the difference between short consultations and the other categories was significant. " Rapport building" was not associated with the consultation length. The proportion of "asking questions" and "biomedical talk" was not

linearly associated with the consultation length, although differences between some categories were significant (see table 1).

### 3.6. Analysis of long and short consultations

Long consultations were characterised by a significantly higher chance to have a high percentage of “psychosocial talk”, “giving information”, “agreement” and “partnership building” as compared to consultations of moderate length (table 2). In long consultations “giving directions” and “social behaviour” had a higher chance to have a low rate as compared to consultations of moderate length. Short consultations were characterised by a significant higher chance to have a high percentage of “social behaviour” and “giving directions” as compared consultations of moderate length (see table 2). In short consultations “rapport building”, “giving information”, “biomedical talk” and “psychosocial talk” had a higher chance to have a low rate as compared to consultations of moderate length.

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Insert table 2 and 3

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## 4. Discussion and conclusion

### 4.1. Discussion

Based on video observations of 2801 consultations it is possible to make a blueprint of the communicative behaviour of the GP irrespective of the consultation length. During the consultation about 37 % of the utterances of the doctor can be described as affective or care oriented, consisting of 8 % social talk, 15 % looking for agreement, 4 % rapport building and 10 % partnership building. About 59 % of the utterances were instrumental or cure oriented, consisting of 10 % giving directions, 7 % counselling, 28 % information giving and 14 % asking questions. In long consultations doctors give significant more information and perform a lot more psychosocial talk than in short consultations.

One can argue that dividing the communicative behaviour into clusters always gives some “standard procedure”. Nevertheless in the picture of the three time conditions the resemblance is striking. The first conclusion is therefore that the communicative behaviour of doctors within consultations with different lengths is some kind of blueprint.

The longer the visit, the more the patients talk relative to the doctor. In longer consultations the patient gives more information, especially about lifestyle and social content. In another study (27) a comparison between the communicative behaviour of Belgian doctors' and patients' was made. One remarkable conclusion was the difference between doctor and patient concerning giving information, especially about lifestyle and social content. The patient gave significantly more information than the doctor did. Could it be that this difference increases with increasing consultation length? This hypothesis surely deserves further investigation.

Although the global pattern of the communicative behaviour is the same, some differences were identified in short versus long consultations. In long consultations, agreement and rapport building dominate the affective behaviour. These communicative behaviours refer the most to the relationship between doctor and patient. Although in long consultations the percentage of affective behaviour is somewhat fewer, doctors seem to spend more time at building a good relationship and their affective behaviour seems to be more balanced. Taking care of the relation with the patient seems to be a core element in long consultations. In short consultations social talk and partnership building get more attention as compared to long consultations. Social talk refers to the start of every human encounter. Partnership building is a communicative category that refers to mutual understanding. In short consultation affective behaviour is used in order to get clear and understandable communication.

Within their task-related behaviour in long consultations extra time is spent on giving information and asking questions, especially on psychosocial issues. Consultation length is probably related to the content of the consultation. In another publication on the same study group (26) we argued that a diagnosis related to psychological or social problems is a determinant of consultation length. In longer consultations the communicative behaviour of the doctor is adopted to more a psychosocial content. Short consultations can be described as efficient and task related. The doctor asks questions but takes less time to give information. For strictly medical problems or with well-known patients a short consultation can be time sparing. Nevertheless the relation between doctor and patient is of extreme importance in primary care and doctors must be aware that in short consultations these aspects can fade away.

Is consultation length related to quality? In short consultations doctors economised on exploring the patients' view of the problem, on patient centeredness. Does this lead to less quality? Or, is there a quick agreement between doctor and patient so that no further exploration is required? Howie (7) defines short consultations as simply medical. This is in line with our own study about the determinants of consultation length (26). One can imagine that in some short consultations, with a



simple medical problem, exploring is less necessary. In long consultations doctors explain a lot, talk and listen to patient's view and story, take time for contextual issues and even spend a lot of time on medical talk or activities. One can also raise the question if every patient really wants a long consultation. From literature we know that patients tend to be more satisfied with longer consultations. But can it be that some patients want a simple answer to their questions, in which case a short consultation could be a good answer? From this research, it is clear that time in most cases cannot be a proxy for quality: the standard communicative pattern is an argument against the idea that "long is good and short is bad". Doctors have to be aware of their communicative behaviour and choose which best fits them and their patient in a particular consultation for a particular problem (28).

Some differences between long and short consultations are obvious. Every encounter between two people starts with some social talk in order to make contact. Although this is limited in a medical consultation, it requires some utterances. In a short consultation of less than 5 minutes two or three utterances already represent a substantial proportion of the whole interaction.

The same applies for "giving directions". In every medical encounter the doctor has to give directions to the patient in order to structure the consultation. These directions were quite limited in all conditions. But again, in short consultations small numbers of utterances represent large percentages. The question can be raised if in real short consultations, the doctor has enough time left for the medical issues like exploring and giving advise.

Counselling diminished when time increased. Counselling stands for advises in order to solve the problem mentioned. Advises and tips have only a limited contribution to problem solving. Given the fact that in long consultations this activity diminishes, could mean that doctors did not use simple solutions for complex problems, which is quite acceptable.

The proportion of interventions dedicated to affective behaviours of doctors like paraphrasing, asking for understanding or repetition diminishes when time increases. Once doctor and patient are on the same wavelength, doctors do not feel the need for affective behaviour.

#### 4.2. Limitations of the study

Some limitations of the study have to be pointed out. Although the patients in our study were representative for the population of the participating countries, the group of GPs was not. They had a lower workload than the average doctor in the same country, there were more city-practices in the study group and more female doctors took part. Some of the results have to be handled with care.

We did not include the health status of the patient, which can be seen as another limitation. It is known for studies that patients' health status (physical as well as emotional) is associated with the length of the visit (29). Not using the health status as a covariate may be confounding the results. Nevertheless in this study we were looking at the possible differences in communicative behaviour of the doctor related to consultation length. Patients' health status may be connected with the length of the consultation but it does not mean that this is really influencing the behaviour of the doctor. In order to get a more thorough answer on the question whether consultation length is related to quality, a correlation with patient centeredness could be made. Although there is some discussion about the relationship between patient-centeredness and consultation length, studying this relation can be a suggestion for further investigation.

#### 4.3. Conclusion.

In answer to our research questions we can say that consultation in general practice can be seen as a standard operating procedure. The communicative behaviour of general practitioners changes in relation to consultation length, but this change is rather limited. There is no threshold under which some communicative behaviours disappear. Our results demystify some myths on a direct relationship between consultation length and doctor-patient interaction. "Long is good and short is bad" is probably not true.

#### 4.4. Practice implication

Two implications can be point out.

Although this study does not provide evidence for the relationship between time spend in the consultation and quality, in short consultations some cure oriented behaviour seems to fade away. Doctors must be aware of the implication on the relationship with the patient if they choose to have a short consultation.

Secondly, the findings of this study suggest that doctors adopt a general pattern of communicative behaviour that only shows to some degree a relationship with consultation length. Knowing that changing patterns can be very difficult, it is important to train young doctors to adopt good communication skills.

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Appendix 1. RIAS communicative clusters, operationalization and examples.

Categories	Operationalization	Examples
<b>Affective behaviour</b>		
- Social behaviour	Personal remarks, social conversation. Approvals, compliments, showing respect	“How are you doing” “See you, take care” “You are looking good today”
- Agreement.	Signs of agreement or understanding, apologies, back-channel responses	“I see” “Yes, that is right” “hmm”
- Rapport building.	Empathy, showing concern, reassurance, showing optimism	“this is stressing for you, I understand” “You must be worried” “strange” “I hope you’ll feel better next week”
- Partnership building	Paraphrase, asking for clarification	“So it is very high?” “You said a bit earlier that you’re been having trouble sleeping” “Did you say the white pills?” “What do you think could have caused this?”
<b>Instrumental behaviour</b>		
<u>Cluster 1</u>		
- Gives directions.	Transitions. Giving orientation, instructions	“Oh, well..”, ”Would you get up on the examining table, please”
- Asks questions.	Medical, therapeutical.	“How often do you take your blood pressure medicine”
- Gives information.	Lifestyle, social context Medical, therapeutical. Lifestyle, social context	“Why do you worry about your job” “Your blood pressure is 100 over 70” “Sport has a good effect on the overall health”
- Counsels or directs behaviour	Medical, therapeutical. Lifestyle, social context	“Take your medicine 3 times a day” “You need to go out and meet more people”
<u>Cluster 2</u>		
- Gives directions.	Idem as cluster 1	
- Medical talking.	Medical/therapeutical utterances of the categories “asks questions”, “gives information” and “counsels or directs behaviour”.	
- Psychosocial talking.	Utterances about lifestyle/social context of the categories “asks questions”, “gives information” and “counsels or directs behaviour”. not understandable, not quotable	
<u>Cluster other.</u>		“Today it is the 14th”, “Did you give me your card?”

**Table 1: Means of communication clusters in short, moderate and long consultations in percentages of utterances.**

Means	Consult > 5 min N = 440 % (SD)	5 min ≤consult≤ 15min N = 1793 % (SD)	Consult ≥ 15 min N = 568 % (SD)	All N = 2801 % (SD)	F
Social behaviour	9.3 (8.3) <sup>(2,3)</sup>	7.7 (7.5) <sup>(1)</sup>	7.1 (7.2) <sup>(1)</sup>	7.8 (7.6)	10.9**
Agreement	13.4 (9.6) <sup>(2,3)</sup>	15.1 (9.9) <sup>(1)</sup>	16.0 (9.8) <sup>(1)</sup>	15.0 (9.7)	8.0**
Rapport Building	4.3 (5.3)	4.2 (4.8)	4.6 (4.6)	4.3 (4.8)	n.s.
Partnership building	10.8 (7.4) <sup>(2,3)</sup>	9.8 (6.0) <sup>(1,3)</sup>	7.4 (5.4) <sup>(1,2)</sup>	9.5 (6.2)	47.3**
<b>Total Affective behaviour</b>	<b>37.8 (13.5)</b>	<b>36.8 (13.1)</b>	<b>34.1 (14.0)</b>	<b>36.6 (13.4)</b>	<b>n.s.</b>
Giving directions	12.6 (7.4) <sup>(2,3)</sup>	10.5 (6.6) <sup>(1,3)</sup>	9.2 (6.1) <sup>(1,2)</sup>	10.6 (6.7)	34.5**
Counseling	8.2 (7.5) <sup>(3)</sup>	7.4 (6.4) <sup>(3)</sup>	5.3 (4.6) <sup>(1,2)</sup>	7.1 (6.3)	32.7**
Giving info	22.6 (14.2) <sup>(2,3)</sup>	27.7 (12.9) <sup>(1,3)</sup>	31.6 (14.0) <sup>(1,2)</sup>	27.7 (13.6)	57.8**
Asking questions	15.5 (10.7) <sup>(2,3)</sup>	13.5 (7.7) <sup>(1)</sup>	14.0 (8.1) <sup>(1)</sup>	13.9 (8.5)	10.5**
<b>Total Instrumental behaviour</b>	<b>58.9 (13.1)</b>	<b>59.1 (13.6)</b>	<b>60.1 (13.9)</b>	<b>59.3 (13.8)</b>	<b>n.s.</b>
Medical talk	38.2 (17.2)	39.6 (15.1) <sup>(3)</sup>	37.6 (16.0) <sup>(2)</sup>	39.0 (10.4)	3.7*
Psychosocial talk	8.0 (10.9) <sup>(3)</sup>	9.0 (9.4) <sup>(3)</sup>	13.3 (12.5) <sup>(1,2)</sup>	9.7 (5.0)	43.3**

\* p < .05

\*\* p < .01





**Table 2: Odds ratios of high and low values of GPs' communicative clusters within short and long consultations (moderate consultations as reference group).**

	Consult ≤ 5 min N = 440		5 min <consult< 15min N = 1793	Consult ≥ 15 min N = 568	
	High	Low		High	Low
Social behaviour	2.35 (1.82-3.05)	0.55 (0.42-0.74)	1	0.77 (0.59-1.01)	1.39 (1.07-1.80)
Agreement	0.90 (0.67-1.22)	1.12 (0.85-1.49)	1	1.46 (1.12-1.89)	0.64 (0.48-0.86)
Rapport building	0.94 (0.70-1.25)	1.99 (1.53-2.59)	1	1.29 (0.98-1.69)	0.73 (0.55-0.97)
Partnership building	0.90 (0.67-1.22)	1.12 (0.85-1.49)	1	1.46 (1.12-1.89)	0.64 (0.48-0.86)
Giving directions	1.32 (1.02-1.72)	0.64 (0.48-0.87)	1	0.66 (0.50-0.87)	1.65 (1.28-2.12)
Counselling	1.25 (0.97-1.62)	1.85 (1.41-2.43)	1	0.54 (0.40-0.74)	0.88 (0.68-1.14)
Giving info	0.71 (0.52-0.96)	1.89 (1.47-2.43)	1	1.07 (1.34-2.20)	0.59 (0.44-0.79)
Asking questions	1.20 (0.91-1.57)	0.98 (0.74-1.30)	1	0.93 (0.71-1.22)	1.03 (0.79-1.34)
Biomedical talk	0.87 (0.65-1.15)	1.31 (1.01-1.70)	1	1.08 (0.84-1.41)	1.35 (1.05-1.73)
Psychosocial talk	0.71 (0.53-0.94)	1.49 (1.16-1.91)	1	1.94 (1.53-2.47)	0.42 (0.31-0.57)