

# The Unexpected in Primary Care: A Multicenter Study on the Emergence of Unvoiced Patient Agenda

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## ABSTRACT

**PURPOSE** Within the time constraints of a typical physician-patient encounter, the full patient agenda will rarely be voiced. Unexpectedly revealed issues that were neither on the patient's list of items for discussion nor anticipated by the physician constitute an emerging agenda. We aimed to quantify the occurrence rate of emerging agendas in primary care practices and to explain the variation between patients and practices.

**METHODS** This observational cross-sectional study involved 182 primary care practices in 9 European cultural regions. Consecutive primary care consultations were videotaped and rated. Patients completed preconsultation and postconsultation questionnaires assessing their expectations and perceived care. Emerging agenda, determined by using 11-item preconsultation and postconsultation questionnaires, was defined as care perceived by the patient to be in addition to expected care, after adjustment for cultural variations of patient expectations.

**RESULTS** For consultations involving 2,243 patients (mean age, 44.8 years, 58.4% women), every sixth (15.8%) consultation revealed emerging psychosocial agenda. Biomedical agenda emerged in 14.5% of the consultations. Rates for unmet expectations were 13.6% and 10.3%, respectively, for psychosocial and biomedical problems. Practices showed considerable heterogeneity of occurrence of emerging agenda (biomedical, median 13%, range 0%-67%; psychosocial, median 14%, range 0%-53%). After controlling for region and patient baseline characteristics, variables significantly related to emerging agenda were patient expectations and biomedical or psychosocial discourse content, but not consultation time or sex of the patient. A large proportion of the variance attributable to physicians remained concealed in a practice dummy variable (explaining up to 8% of the variance).

**CONCLUSION** Unexpected agenda emerges in every sixth to seventh consultation in outpatient primary care visits.

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## INTRODUCTION

The core activity in primary care is consultation.<sup>1</sup> Whether patients consult for cure, services, counseling, prevention, or care, a widely accepted model views the consultation as a dialogue involving elements of negotiation<sup>2</sup> to create a common reality<sup>3,4</sup> to which agenda setting is paramount.<sup>5</sup>

Within the time constraints of a typical physician-patient encounter, however, the full patient agenda will rarely be voiced.<sup>6</sup> Eliciting the patient's agenda requires physicians to read cues.<sup>7</sup> The following case illustrates this point: A 33-year-old overweight woman with poorly controlled diabetes visits her physician for her regular checkup. In scenario A, the physician rapidly proceeds to discussing the unsatisfactory levels of glycosylated hemoglobin. He provides advice on her lifestyle and insulin regimen, probably

meeting her expectations. In scenario B, the physician takes her pensive mood upon receiving the latest levels of glycosylated hemoglobin as a cue for further exploration. During the consultation the theme of her concerns about a future pregnancy unexpectedly emerge. The physician offers support to find a common working strategy for achieving a low-risk pregnancy.

In both scenarios the patient would not have listed expectations concerning discussion of a future pregnancy. The agenda addressed in scenario B emerged unexpectedly to the physician and to the patient during the consultation. Hence, this patient's agenda does not fall into the dichotomization of met or unmet expectations. To fill this conceptual gap, we suggest the term *emerging agenda*. The example underscores the physician's professional role<sup>8</sup> of clarifying health issues in a biopsychosocial context.<sup>9</sup> Failure to do so has been related to adverse outcomes, patient dissatisfaction, or increased health care costs<sup>10-13</sup> occurring in a relevant proportion of consultations.<sup>14</sup>

Emerging agenda is distinct from the related but more ambiguous concept of *hidden agenda*. This term was introduced to characterize the unrevealed patient's psychosocial background.<sup>15</sup> More recently, hidden agenda referred to the patient's cues and the related physician's responses,<sup>16,17</sup> or to the patient's expectations that were expressed in preconsultation interviews but remained unvoiced during the consultation.<sup>6</sup>

We explicitly define emerging agenda as concerns or issues not expected to be on the agenda by either the patient or the physician before the consultation. Appropriately responding to and dealing with an emerging agenda may characterize an affective consultation style. Physicians adopting an affective consultation style are more effective than colleagues adhering to formal consultations.<sup>18</sup>

Although the issue of unmet expectations has been extensively addressed,<sup>10,19-23</sup> quantitative data regarding the emergence of unexpected themes in primary care are lacking. To address this shortcoming, we extended concepts of qualitative research<sup>6</sup> to a multicenter study. Using process domains of cure and care, we compared patients' consultation expectations with perceived physicians' performance. We considered perceived physician performance that exceeded patients' expectations as indicating emerging agenda. The aims of the present study were to quantify the occurrence rate of emerging agenda in contemporary primary care and to elucidate factors for facilitating emerging agenda.

## METHODS

The data were obtained from the Eurocommunication study,<sup>24,25</sup> a cross-sectional study conducted in 9 European

cultural regions on differences between European health care systems with respect to patient-physician communication. The study used multiple research methods, including extensive preconsultation and postconsultation questionnaires and video ratings of the consultations. The methods have been described in detail elsewhere.<sup>24,25</sup>

## Sample

In total, 190 primary care physicians enrolled 3,658 patients into the study. Recruitment of physicians differed between countries. In the Netherlands and in the Flemish-speaking part of Belgium (n = 51), physicians were randomly selected from the national registry. In the United Kingdom, Germany, and Switzerland (n = 112), physicians were recruited from ongoing research projects or by use of informal networks. In Spain (n = 27) physicians were employed in health maintenance organizations (HMOs). Except for holidays and the HMO practices, patients saw their personal physician on each visit.

Patient recruitment was as follows: on a preselected working day, consecutive patients were approached for enrollment into the study and informed consent. Patient refusal rates varied across practices and countries, ranging from 14% in Spain to 25% in Belgium. Patients were admitted until 20 patient consultations had been recorded. The first 3 consultations from each practice were excluded from the analysis. Also excluded were consultations with incomprehensible audio tracks or incomplete questionnaire data or video ratings, or when the patient and the physician left the room.

## Measures

We hypothesized that the occurrence of emerging agenda may be related to the following categories of variables: (1) characteristics of the health care system, (2) the patient's or physician's sociodemographic variables, (3) the history of the patient-physician relationship, (4) the patient's self-assessment, (5) the physician's perception of the patient's actual problem, and (6) the content and process of the physician-patient communication.

Measures assessing these variables were obtained as follows: physicians completed a general questionnaire at the beginning of the study and a consultation-specific questionnaire at the end of each consultation; patients completed a questionnaire before the consultation and a brief questionnaire after the consultation. Independent observers rated the consultation videotapes.

## Determining Emerging Agenda

Emerging agenda was defined as a positive difference between the preconsultation and postconsultation questionnaire scores, which occurred when patients perceived they had received more care than expected.

The wording of the 11 preconsultation and postconsultation items was aimed to make the patient consider value expectations concerning the process of care to be dealt with as agenda<sup>26</sup> rather than specific instrumental tasks. After the consultation, patients evaluated the extent to which their physician had addressed these domains using mirrored wording. A factor analysis with Varimax rotation revealed 2 identical factors in the preconsultation and postconsultation version. Seven items were aggregated to a biomedical factor (Cronbach's  $\alpha = .69$  on the preconsultation questionnaire) and 4 items were aggregated to a psychosocial factor (Cronbach's  $\alpha = .84$ ). (These questionnaire items are displayed online only in a supplemental appendix at: <http://www.annfammed.org/cgi/content/full/2/6/534/DC1>.)

From the 11 difference scores we derived a categorical dependent variable (emerging agenda yes/no) and a continuous variable (degree of psychosocial or biomedical emerging agenda).

### Consultation Variables

Communication variables and the duration of consultations were derived from video analysis using the Roter method of interaction process analysis (RIAS).<sup>27,28</sup> RIAS codes all communicative utterances by patient and physician using a hierarchical structure. The first level distinguishes between clusters of affective behavior and clusters of instrumental behavior. Raters were provided with detailed coding definitions for each of these clusters of behavior. All videos were independently assessed by 2 raters. The total duration of the consultation was determined from the videotape excluding interruptions (eg, telephone calls, etc). The interrater reliability of the RIAS scoring varied across countries and items. Reliability was reasonable to high for items used in the present analysis, eg, "asking life-style psychosocial questions" ( $r = .70-.95$ ). Further details on the reliability are provided elsewhere.<sup>24</sup>

### Data Analysis

By subtracting the 11 preconsultation scores from the postconsultation scores, we obtained raw-item difference scores ranging from -3 to +3. On the item level, difference scores in the range of -1 to +1 were considered to be expectation met, difference scores of -3 or -2 to be unmet expectation, and difference scores of +2 or +3 to be emerging agenda in the specific domain of care (Table 1).

For the categorical outcome (emerging agenda yes/no), emerging biomedical agenda required at least 3 of the 7 biomedical care items to score +2 or +3. Likewise, emerging psychosocial agenda required at least 2 of the 4 items to score +2 or +3. In a similar fashion we defined unmet expectations.

For the continuous outcome (degree of emerging agenda), the biomedical and psychosocial factors were aggregated from the 11 item-difference scores using region-specific standardized scoring coefficients. The latter were obtained from the factor analysis on patient expectations. This procedure provided for region-adjusted, normalized, and orthogonal difference factors (mean = 0, SD = 1,  $r = .03$ ). Positive values indicate emerging agenda; negative values are associated with unmet expectations.

Groups were compared by nonparametric tests or chi-square tests. All tests were 2-tailed at a  $P < .05$ . We used multivariable general linear models to explain the variance in the continuous biomedical and psychosocial factors. We entered stepwise variables related to (1) health care system, (2) patients' and physicians' sociodemographic characteristics, (3) physician-patient relationship, (4) patients' self-assessment, (5) physicians'

**Table 1. Percentage of Patients With Preconsultation and Postconsultation Questionnaire Difference Scores, Emerging Agendas, and Met and Unmet Expectations**

Items	Difference Score*		
	2 to 3	-1 to 1	-3 to -2
Biomedical factor			
Explanation of symptoms	14.9	76.5	8.6
Confirmation of diagnosis	21.1	70.7	8.2
Nature of problem	20.2	74.4	5.3
Physical examination	19.3	70.9	9.8
Explanation of test results	10.0	72.4	17.7
Explanation of prognosis	14.2	68.7	17.0
Explanation of severity	13.6	68.4	18.0
Psychosocial factor			
Help for anxiousness	23.7	70.6	5.7
Help for emotional problems	14.8	81.4	3.9
Explanation of emotional problems	9.8	84.0	6.3
Support for difficult times	18.0	78.1	3.9
	<b>Emerging Agenda<sup>†</sup></b>	<b>Expectation Met</b>	<b>Unmet Expectation</b>
Aggregated categorical score			
Biomedical factor	14.5	74.2	10.3
Psychosocial factor	15.8	70.6	13.6

\* Difference scores were obtained by subtracting the preconsultation item score from the postconsultation item score. In this way, positive difference scores indicate that the patient reports care exceeding expectations. Patients reported significantly higher levels of unmet expectations for explanation of test results, prognosis, and severity of their problem than for any other item ( $P < .001$ ).

† For emerging agenda, 10.4% of the patients had only biomedical emerging agenda, 11.7% of the patients had only psychosocial emerging agenda, and 4.1% of the patients had both.

perception of the patient and the consultation, and (6) the content and process variables of physician-patient communication. Parsimonious models were developed by backward removal of entered variables until Akaike's information criterion<sup>29,30</sup> no longer improved. Briefly, Akaike's information criterion adds a penalty for each included variable. Minimizing Akaike's information criterion protects against overfitting of a model. In a last step, we entered a practice dummy variable to account for the variance attributable to practices, which was not captured by our measures. To illustrate the effect size of significant variables, adjusted odds ratios comparing the highest to the lowest quartile of the predictor were obtained from logistic regression analyses. The analytic software used was SAS Version 8.2 (SAS, Inc. Cary, NC, USA).

## RESULTS

### Sample

From the 3,658 patients providing informed consent, we obtained complete data sets for 2,243 consultations

(182 practices). According to International Classification of Primary Care diagnoses, physicians related 85% of patient morbidity to somatic illnesses. In most consultations (94%) communication was the primary service offered. Patient characteristics between excluded and included consultations were similar, except for less consultation time for excluded patients (these data are displayed online only in a supplemental table, which can be found at: <http://www.annfammed.org/cgi/content/full/2/6/534/DC1>). We found significant heterogeneity across cultural regions in a variety of aspects. For example, mean consultation time was 7.7 minutes in Spain and Eastern Germany and 21.2 minutes in the French-speaking part of Switzerland. Consultation times also differed between gatekeeping and fee-for-service practices (8.7 minutes vs 12.3 minutes,  $P < .001$ ).

### Preconsultation-Postconsultation Differences

On the individual item level, most patients (range 68.4%-84.0%) reported that their expectations were met (Table 1). The rate of reporting emerging agenda varied significantly across items (range 9.8%-23.7%,  $P < .001$ ,

**Table 2. Variables Associated With Emerging Agendas**

Explanatory Variable	Explained Variance % (Partial R <sup>2</sup> )	Direction of Association*	Adjusted Odds Ratio (CI)†
Biomedical factor			
Full model	42.3		
Patient prior biomedical expectation	27.4	-	0.02 (0.01-0.04)
Patient prior psychosocial expectations	.3	-	1.8 (1.24-2.7)
Biomedical discourse content	1.2	+	2.2 (1.5-3.1)
Physician perceived psychosocial reason for encounter	0.6	-	0.8 (0.6-1.2)
Region	1.0	Variable	NA
Practice dummy variable nested within region	7.9	Highly variable	NA
Psychosocial factor			
Full model	29.3		
Patient prior psychosocial expectations	13.2	+ / -‡	3.3 (2.3-4.7)‡
Age	.1	+	2.0 (1.3-3.1)
Physical fitness	.2	+	1.3 (0.9-1.9)
Patient education	.1	-	0.7 (0.5-1.1)
Bothered by emotional problems	1.6	+	1.9 (1.3-2.8)
Patient perceived psychosocial reason for consultation	.2	+	1.1 (0.7-1.8)
Physician perceives underlying psychosocial problem	.8	+	2.0 (1.4-2.9)
Affective or psychosocial discourse	.8	+	1.5 (1.0-2.1)
Proportion of consultation time physician is listening	.2	+	1.1 (0.8-1.6)
Region	.9	Variable	NA
Practice dummy variable nested within region	7.4	Highly variable	NA

\* Direction of association: the - sign denotes a negative association, the + sign denotes a positive association. For region and for the practice dummy variable, associations varied.

† Adjusted odds-ratio (OR): To illustrate the magnitude of the effects, the adjusted odds-ratio for emerging biomedical or psychosocial agenda are computed for a patient scoring in the highest quartile on the respective scale compared with a patient scoring in the lowest quartile. Odds ratios are adjusted for all other variables that were significant in the multivariable analysis of the continuous outcome measure. The model predicting an emerging psychosocial agenda performed well (area under the receiver operating characteristic curve was  $\alpha = 0.76$ ) and the Hosmer-Lemeshow statistics showed an excellent fit with a  $P = .77$ . The confidence interval (CI) is provided in parenthesis. Odds ratios for region and practice dummy variables are not shown (NA).

‡ Comparison of the third quartile with the lowest quartile. Patients with very high psychosocial expectations were less likely to report emerging psychosocial agenda (adjusted OR = 0.66, 95% CI, 0.45 - 0.97), suggesting possible ceiling effects of the instrument.

Table 1), as did the proportion of patients reporting unmet expectations (range 3.9%-18%,  $P < .001$ ). Emerging agenda occurred most often regarding help for anxiety. According to our categorical definition, about every sixth to seventh patient reported emerging agenda in biomedical or psychosocial care. Patients reported unmet expectations most frequently regarding explanation of severity, prognosis, and test results (Table 1).

Regression analyses on the continuous outcome variable (degree of emerging agenda) revealed models explaining 42.3% of the variance in the biomedical difference factor ( $F_{185/2058} = 7.87$ ,  $P < .001$ ), and 29.3% of the variance in the psychosocial difference factor ( $F_{200/2042} = 4.06$ ,  $P < .001$ ). The most important determinants for emerging agenda were patient expectations ( $R^2 = 27.4\%$  for the biomedical, and  $R^2 = 13.2\%$  for the psychosocial factor). Further significant variables are listed in Table 2.

Although multiple physician and consultation-related variables were considered, they accounted for 19% only of the physician-attributable variance in the biomedical factor. The remainder eluded explanation and remained concealed in the practice dummy variable (Table 2). As to emergence of psychosocial themes, explanatory variables accounted for 20% of the physician-attributable variance. Post hoc analysis showed that physicians were more likely to exceed psychosocial care expectations if they perceived an underlying psychosocial problem, allowed the patient more relative speaking time, and engaged in psychosocial or affective discourse.

### Differences Across Practices or Health Context

The rate of patients reporting emerging themes differed considerably across practices. For biomedical issues the range extended from 0% to 67% (interquartile range [IQR] 0%-23%); for psychosocial issues the range was 0% to 50% (IQR 7.1%-23%). Whereas health care systems of regions varied considerably, regions accounted for less than 4% of the observed variability. Patients attending fee-for-service practices ( $n = 101$ ) reported results similar to those of patients seeing gatekeeping physicians ( $n = 81$ ) for the biomedical factor (standardized difference [ $d$ ] =  $-.1$ , 95% CI,  $-.24$ -. $037$ ,  $P = .15$ ). After considering consultation time and other covariates, however, fee-for-service physicians facilitated the emergence of psychosocial themes more often than gatekeepers ( $d = .26$ , 95% CI,  $.17$ -. $36$ ,  $P < .001$ ).

### Consultation Time and Sex of Patient and Physician

Although yielding significant univariate associations (data not shown), several a priori hypothesized variables, including duration of consultation, were no

longer retained in the final models once the number of psychosocial or affective utterances were considered. This finding also was true when number of utterances per unit of time were considered instead of absolute number of psychosocial or affective utterances. The final models also failed to retain patient or physician sex as significant. Post hoc analysis showed that the sex of the patient and physician exerted its effect by modifying patients' expectations and the discourse variables included in the model. For example, men seeing female physicians had fewer psychosocial expectations than did men consulting male physicians ( $P < .001$ ).

## DISCUSSION

In this study across 9 European cultural regions, involving 2,243 patients from 182 practices, we assessed the extent to which patients reported having received more care than expected, which served as a working definition for emerging agenda. Unexpected biomedical and psychosocial agenda emerged during about every sixth to seventh consultation. Although we inquired whether physicians provided distinct domains of care as opposed to whether physicians performed specific medical tasks, we observed a rate of unmet expectations (12.5%) similar to that found in a recent study (11.6%).<sup>14</sup>

How do our findings translate into everyday practice? If a primary care physician sees 30 patients per day, unvoiced biomedical themes or psychosocial issues emerge about 5 times daily. These rates varied considerably among physicians, however. In practices within the lowest quartile of rates, unexpected biomedical or psychosocial agenda emerged less than once daily, whereas other physicians facilitated emerging agenda about 8 times more often.

Considering the large array of variables included in our models and given the heterogeneity across physicians, it was surprising how little of the variance attributable to physicians could be explained. Much of the art of facilitating emerging agenda, therefore, remains elusive and could not be captured by our method of consultation—by video rating or by questionnaires.

Our study also provided some unanticipated insights on variables unrelated to facilitating emerging agenda. Within the constraints of a given health care system or cultural region, and once discourse variables are considered, the absolute consultation duration was no longer related to emerging agenda or unmet expectations. The data suggest a dominance of the ability to recognize underlying psychosocial issues and to provide specific communication features during the time spent with the patient. Key variables found by our analysis were the proportion of time spent listening, the time spent on building emotional rapport, and

the time devoted to medical explanations. Our findings underscore the notion that part of the skill of being a successful physician is making the most of available time in complex situations.<sup>31</sup> A second surprising finding was that emerging agenda did not relate to sex of the patient or physician once patient expectations and the communication style were considered. Apparently these variables capture most of the effect attributed to gender found in the unadjusted analysis.

Several caveats of our study require consideration. First, our calculations are based on the assumption that differences between preconsultation and postconsultation questionnaire item scores allow inferences of emerging agenda or unmet expectations. At present, we consider this definition a first reasonable attempt to obtain a proxy for emerging agenda in the context of a quantitative study. Second, the questionnaire contained a ceiling effect whereby patients with high expectations were less likely to report having received more care than expected. This effect reduced the possibility to detect emerging agenda in this subgroup of patients. Third, inquiring about expectations before the consultation may have introduced a bias by encouraging patients to become more conscious of their concerns. This redefining of the patient agenda may also have reduced the chance of detecting differences. Fourth, we cannot exclude a reporting bias or pleasing-the-investigator bias. We consider the possible distortion of results due to this bias as minimal given not only the marginally positive means on both continuous outcome factors but also the similar occurrence rate of unmet expectations reported in an independent contemporary study.<sup>14</sup> Fifth, 39% of the patients were excluded from being fully videotaped. These patients had a slightly higher proportion of visits (+3.8%) for psychosocial reasons, which may have impeded our ability to show associations of explanatory variables with the psychosocial factor score. Finally, the nonrandom sampling of practices in some countries prevents inferences about the specific cultural regions. The observed differences attributable to region were small, however, suggesting that our core findings remain robust across a considerable heterogeneity of cultural and health care settings. Because the study focused on the patient as the arbiter of perceived care,<sup>32</sup> it did not provide an objective comparison of physicians' delivery of care.

Bearing these limitations in mind, our data suggest the existence of unvoiced latent agenda in a considerable proportion of patients consulting primary care physicians. The macrolevel health care context does not appear to explain differences between physicians in meeting the patients' need to know and understand and to be known and understood. Throughout all the regions and health care systems, we found physicians

who facilitated the emergence of unvoiced themes in a large proportion of their patients, and physicians who, while acting within the same constraints, failed to do so. Our data underscore the practical relevance of appropriate agenda setting as put forward by the patient-centered movement.<sup>5,32,33</sup> If physicians recognize cues pointing to these latent issues, and if they aid the voicing of these issues, the emerging agenda may foster the patient's sense of empowerment and satisfaction. A first step is to acknowledge that good communication skills do not come naturally; they require training and practice, just as other medical skills do.

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**Key words:** Primary health care; patient acceptance of health care; patient satisfaction; physician-patient relations; communication; patient-centered care

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