

Correlates of family-oriented physician communications

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Background. Family orientation in patient care has long been one of the primary tenets of the practice of family medicine. Yet we know surprisingly little about how frequently family-oriented transactions occur in actual doctor–patient encounters, or about what other aspects of physician communication patterns might be associated with increased family orientation. The purpose of this study was to investigate both frequency and correlates of family orientation in a residency-based practice.

Methods. Sixty videotapes representing 38 second and third-year residents interviewing a range of multiethnic patients over a 2-year period at a community clinic were analysed for evidence of family-oriented communications, as well as other interaction behaviours such as information exchange and partnership building. Inter-rater agreement was 78%.

Results. Asking for medical information, clarifying patient information, and giving medical information and explanations were the most common types of resident actions. Family orientation was much less common, but was more frequently observed than the eliciting of a patient-centered agenda or suggestion of a psychosocial intervention or referral. Family orientation was associated with longer interviews, non-interpreted interviews, more physician questions and clarifying behaviours, and greater tendency to elicit the patient's agenda.

Conclusions. Findings of this investigation suggest that family orientation in the medical interview is enhanced by having more time and a shared language, as well as a generally probing, clarifying, patient-centered style on the part of the physician.

Keywords. Doctor–patient communication, family-oriented health care.

Background and related research

One of the primary tenets of the specialty of family medicine is that patient care ideally occurs within the context of the family.^{1,2} Family physicians are presumed to have expertise pertinent to family-oriented care,³ and training of family practice residents requires both academic and clinical preparations in this area.^{4–6} Furthermore, although the degree of family-orientation activity in any given physician–patient encounter should be influenced in part by the nature of the presenting problem and the patient's desire for such activity, the philosophical assumptions of the specialty dictate that there should be some evidence of family orientation in virtually every interview.

Doherty and Baird⁷ made a valuable contribution to the conceptual literature on family-orientation by identifying specific Levels of Family Involvement in the physician–patient encounter.⁸ These levels proceed sequentially. Level One, defined as a minimal emphasis on family, includes only baseline data-gathering about family required for medical/legal reasons. Level Two is achieved when the physician communicates appropriate medical information and advice to family members, solicits information from family members, and is aware of gross family dysfunction. Level Three incorporates dealing with family members' feelings and concerns related to the patient's condition and the effect of the patient's condition on the family. Level Four requires the ability to assess systematically and use brief interventions with families to improve coping and family functioning. Level Five consists of actual family therapy with resistant or dysfunctional families.

Marvel and Morphew³ adapted the Doherty and Baird Levels for use in a content analysis of resident-patient videotapes, and identified a subset of Level One

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(1A) in which the physician discusses family issues, but only with the individual patient, with no family members present. This study concluded that any kind of family orientation occurred in only 59% of the interviews where it was indicated, and only 45% of the time in all interviews. Also, the levels of family involvement exhibited by residents tended to be minimal rather than substantive. For example, in 55% of the interviews there was no family involvement, in 16.7% Level 1A involvement and in 24.7% Level Two involvement. Activity at Levels 3–5 was almost non-existent.

A recent Finnish study,⁹ using both an experimental and a control group of GPs, demonstrated that a 2-week training course in family systems medicine resulted in a significant shift away from symptom and individual patient orientation to family and systems orientation for the intervention group. This finding held true both in comparison to the experimental group's own baseline data and to the control group, which demonstrated no such movement. This study defined family orientation as behaviours which caused the physician to focus on the patient in the context of the family (i.e. eliciting how the patient's diagnosis is viewed by family members, or how the sickness of one family member will affect others in the family), and was regarded as comparable to Level 3 in the Doherty–Baird scale.

Two earlier studies^{10,11} appear to confirm the existence of a range of family-oriented material in the doctor–patient interaction. In these studies, residents frequently asked for baseline information about family health history (Level 1). Falling in a middle range of frequency was requesting information about the health and well-being of the family (Levels 1A–2). Least frequent of 42 measured behaviours were in-depth discussions of the impact of the patient's disease on family members, while involving the family in treatment plans was almost as infrequent (Levels 3–4). These latter behaviours were categorized by authors as infrequently and poorly performed complex psychosocial skills that needed additional emphasis in training.

In assessing physician–patient communication patterns, one approach is to focus on the function of different communications, i.e. what goal the communication is attempting to achieve.¹² Following this model, two important physician communication approaches in the doctor–patient encounter consist of information exchange between physician and patient, and what has been referred to as partnership-building skills.

The information-soliciting/information-giving model is a more traditional doctor–patient interaction paradigm. It involves what has been identified as one of the primary purposes of medical communication, i.e. the exchange of information,¹³ but often emphasizes the physician's agenda (i.e. the need to arrive at a differential diagnosis) at the expense of the patient's agenda.¹⁴ Information exchange tends to be characterized by high levels of physician dominance and control,¹⁵ as well as by

a more traditional biomedical orientation on the part of the physician.¹⁶ A meta-analysis of empirical communication studies¹⁷ found that information-giving was the most frequent and information-request was the second most frequent physician behaviour. By asking many questions (as well as interrupting frequently), the physician is able to keep tight control over the interaction.¹⁸

Partnership building, on the other hand, is represented by physician actions that attempt to engage the patient more fully in the medical dialogue.¹² While partnership building obviously is a process that must occur over time, nevertheless it is possible to identify partnership-building behaviours that occur in a single doctor–patient encounter. Direct partnership statements convey the physician's explicit alliance with the patient in terms of help and support, decision-making or the development of a therapeutic plan:¹⁹ "I'd like to work with you to solve this problem with your medications." Indirect examples of partnership-building include asking for the patient's opinion, reflecting or clarifying patient statements, facilitating the patient response, and acknowledging the patient through feedback and reinforcement. Partnership behaviours may also include personal disclosures as well as patient-centered efforts to probe the patient's reality to understand what their fears and expectations may be.²⁰ All of these behaviours develop partnership by treating the patient with respect, expressing interest in the patient's opinions and ideas, and equalizing the power differential between patient and physician by making the physician more vulnerable (i.e. sharing personal information) and treating the patient as an authority about his or her illness (i.e. trying to grasp the underlying reason for the patient's visit). Partnership-building skills have been demonstrated to be associated with increased patient satisfaction for female, but not male, patients.²¹

Research question

Owing to the paucity of existing research, after examining factors associated with increased family-oriented activity, no specific hypotheses were formed. Rather, the study aimed to explore associations between family orientation and the two categories of physician activity listed above, i.e. traditional question/response activity and partnership-building, as well as the relationship of family orientation to potentially relevant demographic variables such as sex and ethnicity.

Method

Subjects

The subjects were 28 male and 12 female second and third-year residents enrolled in the University of California Irvine family medicine residency training program over a 2-year period, 1993–1995. First-year

residents were excluded because the residency curriculum included a working-with-families seminar introduced in the second year of training, and it was felt that participation in this educational experience would produce consistent differences in family orientation between first-year trainees and their more advanced counterparts. Theoretical models of family involvement have also differentiated between skills required of beginning and graduating residents.⁵ Furthermore, previous research suggests significant performance differences between first and third-year residents.^{10,11} The final sample consisted of 38 residents, two residents having been eliminated from the study owing to special difficulties that resulted in their tapes being atypical. Of the 38 residents, 22 were videotaped once, 10 were videotaped twice and 6 were videotaped three times. Scores were averaged for residents with multiple tapes.

Patients' presenting problems covered a wide range of chronic and acute diagnoses, including hypertension (nine patients), peptic ulcer disease (six), skin rashes (six), vaginitis/cervicitis (six), headache (five), diabetes (five), as well as one or two patients each for family planning, pre/post-natal care, health maintenance, sprains/strains, arthritis, upper respiratory infection and back pain. This range of medical conditions and complaints is consistent with other studies of doctor-patient communication patterns.²² All visits were new visits, in the sense they were all first-time encounters between resident and patient, although the patients may or may not have been new to the family practice clinic. Urgent care visits were excluded from the study.

Patients were 65% Hispanic, 20% white, 10% Vietnamese and 5% other, and were primarily indigent self-pay or Medicaid (government insurance) patients. Sixty-three per cent of the patients were female. Both residents and patients consented to being videotaped.

Procedures

Two undergraduate students were trained as raters using a modified version of an analysis interaction instrument developed by the author.¹⁰ The version used in this study scored the number of times a resident made any of nine verbal utterances (see below), and then it summed these into a total score for each category. The unit of measurement consisted of a complete sentence ("Is the pain sharp or dull?" is an example of a sentence that would be coded as 'Asking for Information') or a portion of a sentence ("How often?" is a sentence fragment that would also be coded as 'Asking for Information'). Interrater reliability on a subset of 20 tapes was calculated using a point-by-point agreement,²³ and achieved 78%. It is worth noting that processes such as 'information exchange', 'partnership-building' and 'family orientation' cannot be satisfactorily reduced to a few categories of verbal utterances, but rather are the product of a complex network of verbal and non-verbal behaviours and feeling states created between doctor and patient.

However, in this study, this reductionistic approach was adopted in order to define the communication processes of interest according to objectively measurable criteria and to achieve adequate inter-rater reliability.

'Demographic' variables for each tape were also noted, including length of encounter, patient diagnosis, whether the interview was interpreted or not, year of training, sex of physician, sex of patient, physician ethnicity and patient ethnicity.

The nine variables assessed were categorized as either traditional information exchange or partnership building. Traditional information exchange variables included the following: (i) Asking for Medical Information: "How long have you been feeling sick?" "What medications are you currently taking?"; (ii) Giving Medical Information related to diagnosis and treatment to the patient: "Your physical examination is consistent with acute bronchitis", "Because you have developed diabetes, you'll have to go on a special diet"; (iii) Asking for Psychosocial Information: "How has your mood been lately?", "Are you still working in the auto parts factory?"; (iv) Giving Psychosocial Information to the patient about psychosocial or psychological problems: "I'd like you to think about seeing a counselor", "Here is a telephone number for Alcoholics Anonymous."

Because there were so few direct statements of partnership building in our sample, we chose four variables that were judged to facilitate indirectly a therapeutic alliance by demonstrating respect for the patient and a desire to incorporate the patient's perspective into assessment and treatment.²¹ These four variables were as follows: (i) Using Active Listening skills to paraphrase and clarify patient communications: "Let me see if I understand. You've had a sore throat for three days, and yesterday you started running a fever and coughing." "You're feeling concerned about being so tired"; (ii) Giving Feedback and Reinforcement to validate the patient's perceptions or opinions: "You have a very good understanding of diabetes", "You have a point that giving your son this antibiotic four times a day might be hard to remember"; (iii) Making a Personal Disclosure: "I've tried dieting myself, and I know it can be very hard to stick with it", "My mother also died of breast cancer, so I have some sense of what you're going through"; and (iv) Eliciting a Patient Agenda (NOT the stated purpose of the visit, but probing for underlying concerns or expectations): "Are you worried about something more serious being wrong?", "You'd like to be sure that you don't need to be treated with an antibiotic for this sore throat."

The final category, Adopting a Family Orientation, was identified as the dependent variable of interest. Using Marvel's hierarchy of physician family involvement,³ this latter category was defined as occurring whenever any of the following behaviours was noted: (a) family medical history and information were discussed with an individual patient: "Is there anyone else in your

TABLE 1 *Correlates of family-oriented resident-patient interaction*

| | Asking psychological | Asking medical | Listening | Agenda |
|--------------------|----------------------|----------------|-----------|--------|
| Family orientation | 0.77** | 0.46* | 0.44* | 0.33* |

* $P < 0.01$; ** $P < 0.000$.

family with heart disease?”, “So most of your family is still in Mexico”; (b) family members were involved in the communication of ongoing medical information and advice: “It’s important that you discuss your high cholesterol with your wife, so she can help you make some changes in your diet”, “Now that you are pregnant, this might be a good time for your husband to stop smoking”; (c) feelings and reactions of family members regarding patient health or family issues were addressed: “How is the family handling your mom’s diagnosis of Alzheimer’s disease?”, “Is your husband able to help you take care of the baby?”; (d) systematic assessment of and intervention with family members occurred: “I think Mikey is so disruptive because you pay attention to him when he’s causing trouble and ignore him when he’s quiet. Try ignoring his temper tantrums and praising him when he’s playing quietly”; and (e) actual family therapy took place. Based on previous research indicating low frequency of all of these behaviours,^{3,10,11} a decision was made to combine the above five categories into a single coding response. In fact, subsequent videotape analysis revealed that there were no examples of levels (d) or (e) on any of the 60 tapes.

Utterances that could not be categorized into one of the above categories were not coded. However, the wide-ranging nature of the categories meant that 87.3% of all utterances were included in the analysis. In particular, ‘tracking’ utterances (i.e. ‘uhuh’, ‘okay’, ‘I see’) were coded separately and not included in analysis. Roter considers these responses as a subset of agreement¹⁹ which she distinguishes from partnership-building using a more complex coding schema than we employed. While it was logically possible to categorize ‘tracking’ as a partnership-building behaviour, the high frequency of this grouping would have artificially inflated the frequency of partnership-building.

Data analysis

Time-adjusted frequencies (i.e. total number of utterances in each category per minute) were calculated for each utterance variable. This is a standard approach in the literature on communication analysis.²⁴ Analysis of variance and chi-square tests were used to assess relationships between demographic variables and family orientation, and correlational analyses were used to determine associations between other utterance variables and family orientation.

Results

Demographic variables

The mean length of interviews was 17.46 minutes (SD = 10.04, range = 5–50). Patients consisted of 22 males and 38 females. In 24 of the tapes, patients were non-Hispanic whites; in 26, patients were Hispanic, with the remainder of patients being either Vietnamese, African-American, Native American or other. In 47 interviews, the patient was an adult, while in 13 of the interviews, the patient was a child.

Communication variables

When adjusted for length of interview, the most common types of resident actions were as follows: (i) asking for medical information (2.00 actions/minute); (ii) active listening (1.29 actions/minute); (iii) giving medical information and explaining (1.13 actions/minute) and (iv) giving the patient feedback and reinforcement (0.41 actions/minute). Less common actions were adopting a family orientation (0.18 actions/minute), asking psychosocial questions (0.16), making personal disclosures (0.11 actions/minute), eliciting a patient agenda and suggesting a psychosocial intervention or referral (both 0.05 actions/minute).

Correlates of family orientation

See Table 1. Family orientation was associated with both longer interviews ($\bar{x} = 20.7$, s.d. = 12.2, versus $\bar{x} = 13.8$, SD = 4.8; $P < 0.01$) and non-interpreted interviews ($P = 0.03$). In a related finding, interviews with non-English-speaking patients were significantly shorter than interviews with English-speakers ($P < 0.0002$). Family orientation was also correlated with more psychosocial questions ($r = 0.77$; $P < 0.000$); more medical questions ($r = 0.46$; $P < 0.01$); increased active listening behaviours ($r = 0.44$; $P < 0.01$); and greater tendency to elicit the patient’s agenda ($r = 0.33$; $P < 0.01$). Neither diagnosis, ethnicity of physician or patient, sex of physician or patient, year of resident training nor other utterance variables were related to family orientation.

A *post-hoc* analysis of the four partnership-building variables revealed that these variables demonstrated a consistent and significant pattern of relationship to both sex of the physician (see Table 2) and to a sex-matching variable (comparing combinations of sex of physician and sex of patient within the doctor–patient dyad) (see

TABLE 2 Physician sex differences in frequency of partnership-building communications

| Communication variable | \bar{x} female | \bar{x} male | <i>f</i> | d.f. | <i>P</i> |
|------------------------|------------------|----------------|----------|------|----------|
| Self-disclosure | 0.39 (1.0) | 0.04 (0.09) | 4.96 | 1.58 | 0.03 |
| Active listening | 0.29 (0.54) | 0.01 (0.07) | 11.29 | 1.58 | 0.001 |
| Patient agenda | 0.12 (0.29) | 0.02 (0.04) | 4.29 | 1.58 | 0.04 |
| Reinforcement | 0.90 (2.2) | 0.24 (0.50) | 3.57 | 1.58 | 0.06 |

TABLE 3 Differences among physician–patient sex-matched dyads in frequency of partnership-building communications

| Communication variable | \bar{x} male physician–male patient | \bar{x} male–female | \bar{x} female–male | \bar{x} female–female | <i>f</i> | d.f. | <i>P</i> |
|------------------------|---------------------------------------|-----------------------|-----------------------|-------------------------|----------|------|----------|
| Self-disclosure | 0.05 (0.13) | 0.04 (0.07) | 0.84 (1.6) | 0.05 (0.08) | 4.67 | 1.58 | 0.006 |
| Active listening | 0.01 (0.03) | 0.01 (0.08) | 0.23 (0.46) | 0.10 (0.24) | 3.03 | 1.58 | 0.04 |
| Patient agenda | 0.02 (0.03) | 0.03 (0.04) | 0.26 (0.44) | 0.01 (0.02) | 5.22 | 1.58 | 0.003 |
| Reinforcement | 0.27 (0.70) | 0.23 (0.39) | 1.8 (3.4) | 0.22 (0.32) | 3.49 | 1.58 | 0.02 |

Table 3). This pattern indicated that women physicians engaged in significantly more partnership behaviours with patients of both sexes than did male physicians, and that partnership-building communications were most common in female-physician–male-patient dyads.

Discussion

Physician adoption of a family orientation during the patient interview was significantly more likely to occur during non-interpreted and longer interviews, two variables that also had a strong interrelationship. Other studies examining problems in cross-cultural medical communication, while not focusing on family issues *per se*, have concluded that physician–patient dyads that are culturally and/or linguistically incongruent perform less well on key interactive dimensions than do congruent pairs.^{25,26} These findings considered together suggest that it may be especially difficult for a family physician to adopt a family orientation when working through an interpreter.

No other demographic variables, including sex of patient or physician, diagnosis and or year of training, were related to family orientation. Earlier studies also have found no gender difference in frequency or skill in employing a family orientation.^{11,27} Other research²² has found significant associations between patient-perceived health status and physician communication styles, although not with severity of illness or chronicity of illness *per se*. Our research did not assess health status;

however, consistent with Hall *et al.*'s finding, we found no family-oriented differences when comparing patients diagnosed with acute versus chronic illnesses. Finally, analyses indicated that residents did not appear to improve their family orientation skills between their second and third years of training. Although during this interval some formal and informal curriculum time was devoted to developing skills in working with families, the bulk of this training occurred in the second year, which may explain the lack of difference between PGYIIs and PGYIIIs. Unfortunately, this finding is not unique in the literature, but rather parallels Marvel's result of non-significance between first, second and third-year residents in their use of family involvement skills.³

Family orientation was also associated with greater number of physician questions, both medical and psychosocial, with a higher frequency of active listening behaviours, and with a greater likelihood of eliciting a patient agenda. It was not associated with other utterance variables of information-giving, self-disclosure, or feedback and reinforcement to the patient. Seeking a common denominator of these behaviours yields conclusions which suggest that family orientation is less a function of either information exchange or partnership building, and more the result of a probing question-framing style.

By definition, the two information-exchange categories associated with family orientation, asking for medical information and asking for psychosocial information, were interrogatory. Similarly, the two partnership-building categories associated with family orientation,

eliciting the patient agenda and clarifying patient statements, are often structured through the use of questioning. Speculating further, it is possible that family orientation depends on an inquiring, exploratory approach that seeks to gain as much information as possible about the patient on a variety of dimensions. By contrast, physician activities that involved holding forth, whether through medical, psychosocial or personal information-giving or through supportive statements, did not seem to promote a family orientation.

It is most likely that the more questions and the more probing that occur in the interview, the greater the chance that some of these behaviours will be directed toward family issues. Wide-ranging question-asking, both biomedical and psychosocial, and traditional and partnership-building, appears likely to stimulate family-oriented questions, which in turn will lead to more family-related utterances overall. Because the study combined several levels of family-oriented behaviour into one coding category, it is impossible to determine whether minimal family orientation was associated with traditional question-and-answer patterns and more complex orientation associated with partnership building. Further studies are necessary to address this question.

In terms of the two constructs of information-exchange and partnership-building, our results indicated overall almost twice as many information-exchange (3.34 actions/minute) as partnership-building (1.86 actions/minute) utterances among residents. However, while the most frequent utterance was one of information exchange (asking for medical information), the next most frequent category was one of partnership building (active listening). It is noteworthy that in a busy residency training programme, residents so frequently make use of skills of paraphrasing and clarifying.

The sex-linked finding regarding partnership-building variables is consistent with a 1991 study²⁸ of 537 medical visits as well as with a 1994 study²⁹ of 100 routine visits, both of which concluded that female physicians engaged in significantly more partnership-building than did male physicians. In our study, these partnership skills occurred most frequently in female-physician-male-patient dyads. In other studies, this particular dyad has been identified as being less friendly, less interested in using less technical language than other physician-patient combinations,²⁹ and deriving less satisfaction from the use of partnership-building statements and from the encounter in general.³⁰ Hall speculates that in these mixed dyads, female physicians are trying to communicate the message of "I'm on your side and I take your problems really seriously" while also making "extra efforts at reaching out to a male patient . . ." and a "striving for acceptance." Building on Hall *et al.*'s discussion of performance in mixed dyads, it is possible that female physicians, like their male patients, also feel the disequilibrium of the power balance most acutely in these dyads (i.e. women have higher status, men lower status, in contrast to

many social interactions), and engage in more equalizing behaviours in an effort to put both themselves and the patients at ease. Hall *et al.*'s research suggests that, unfortunately, these partnership building statements may not have the desired effect of creating greater satisfaction in the male patients.

Several limitations must be noted in this study, notably the small sample size, the fact that the sample was restricted to residents in training rather than experienced physicians, the limited range of the patient diagnostic codes and the assumptions made in defining the utterance variables. Further studies are necessary to clarify predictors of family orientation in family physicians, including additional variables not examined in this study such as patient desire to address family-related issues and physician beliefs about the importance of such issues. However, the preliminary findings of this present study point to possible approaches for maximizing family orientation in physician-patient encounters, including reasonable time allotted for the interview, sensitivity to language and possibly cross-cultural issues, and use of a patient-centred interrogatory speech pattern.

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