

The Effect of a Secondary Patient on the Family Practice Visit

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BACKGROUND. This study describes how the provision of care to a family member other than the identified patient affects the outpatient family practice visit.

METHODS. Research nurses directly observed consecutive patient visits on 2 separate days in the offices of 138 practicing family physicians. Patient visits during which another family member's problem was addressed were identified. Differences in patient and visit characteristics, patient satisfaction, delivery of preventive services, and time use, measured with the Davis Observation Code, were compared for visits with and without the provision of care to a family member.

RESULTS. Care was provided to a secondary patient during 18% of observed outpatient visits. The secondary patient was present during only half of these visits. When another family member's problem was discussed, patients were more likely to report that their expectations for the visit were met. There was no difference in patient report of satisfaction with the visit, the delivery of preventive services, or the level of billing for visits at which another family member's problem was addressed. Visits during which another family member's problem was discussed were an average of 1.3 minutes longer; with less time spent chatting, providing feedback, and conducting physical examinations, and more time spent counseling, taking history, gathering family information, and delivering preventive services.

CONCLUSIONS. The provision of care to a second family member is relatively common in family practice, and affects the care of the index patient in identifiable ways. This care of another family member represents an important added value of family practice.

KEY WORDS. Physician's practice patterns; office visits; physicians, family; patient satisfaction. (*J Fam Pract* 1998; 46:429-434)

Family physicians have been shown to use fewer resources while providing equal quality of care compared with specialists.^{1,2} The mechanisms that enable family physicians to deliver low-cost, high-quality care have not been identified. Focus on the family as the unit of care could be one important factor that allows family physicians to provide high-quality care with lower resource utilization.^{3,6} Previous work³ has indicated that physicians vary on the degree to which they emphasize the family as the unit of care and use family history as an important source of contextual information about the patient. Medalie et al³ also report that 70% of family practice patients have other family members who see the same physician.

Not only is it common for other family members to see the same physician, another family member is often present during a visit.^{7,8} This is especially common for

the elderly and for children.^{3,9,10} The literature suggests that office encounters in which another person accompanies the patient (triad visits), change the content of the visit depending on what role the third person fills, (advocate, antagonist, or passive participant⁹) and how the patient, the third person, and the physician establish alliances to accomplish the goals of the visit.¹¹ It is likely, however, that the visit goals are perceived differently by the three individuals. A few studies have evaluated the effect of the presence of a family member on the communication between an elderly patient and the physician,^{9,10,12} but none has reported if care was delivered to the third person. One study of children did report that during 21% of parent-accompanied visits for children up to age 16, the parent voiced an independent medical complaint.¹³

Competing demands during an office visit have been identified as an inherent aspect of primary care practice.¹⁴ Addressing another family member's problem during a visit takes time that might have otherwise been spent caring for the index patient's needs and concerns. Regardless of whether the other family member is present or not, the content of the visit has changed. Although the secondary patient most likely benefits from this impromptu care, what are the effects on the primary patient? Is there a decrease in the primary patient's level of satisfaction with the visit or in the

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degree to which his or her expectations are met? Does such an activity take time away from caring for the patient's illness and from delivering preventive services?

The purpose of our study is to determine how often care of a family member other than the identified patient occurs in community family practice, and to describe factors associated with visits during which care of this second family member occurs. We also investigated the effect of secondary patient care on important health outcomes for the primary patient, including patient satisfaction and the delivery of preventive services.

METHODS

This study was part of the larger Direct Observation of Primary Care (DOPC) study, which examined the content of 4454 outpatient visits to family physicians in northeast Ohio. The methods of the DOPC study have been described in detail elsewhere.^{15,16} Briefly, research nurses directly observed consecutive patient visits to 138 participating physicians in 84 practices between October 1994 and August 1995. Patients were informed about the study in the waiting room before meeting with their physicians, and were enrolled if they gave verbal informed consent.

DATA COLLECTION

The research nurses collected data on the content and context of consecutive office visits using the following methods: direct observation of the patient visit, patient exit questionnaire, and medical record review. Billing data on Current Procedural Terminology (CPT) codes¹⁷ and ICD-9-CM diagnoses for the observed visits were obtained from the office staff on a day subsequent to each observation day.

MEASURES

The main variable of interest for our study was whether another family member's problems were discussed during the patient's visit. This was measured by the research nurse during the direct observation portion of the visit. Other visit characteristics measured by direct observation included the reason for visit (classified as acute illness, chronic illness, well-care, or other), and the presence of another family member. The way time was spent by physicians during patient visits was measured using a modified version of the Davis Observation Code (DOC), which classifies time use during every 20-second interval into 20 different behavioral categories.^{16,18} The DOC was also used to measure the total duration of the visit. The number of problems addressed was ascertained by medical record review. Evaluation and management CPT billing codes for each visit were determined from the billing data provided by the practice. These codes were rank-ordered from 1 (minimal visit complexity) to 5 (extended visit). Data on patient characteristics, includ-

ing sex and race (classified as white or nonwhite), were assessed by direct observation by the research nurse. Patient age was ascertained from the medical record. The patient exit questionnaire was used to measure a number of patient characteristics, including health status (assessed with a modified version¹⁵ of the Medical Outcomes Study [MOS] 6-item General Health Survey¹⁹), educational level attained (measured as \leq high school graduate or $>$ high school), marital status (measured as married or unmarried), and whether family members are patients of the observed physician.

In addition, a number of patient outcomes were assessed, including two measures of satisfaction. A single item on the patient exit questionnaire asked patients to rate, on a 5-point Likert-type scale, the degree to which their expectations for the visit were met. In addition, a measure of the patient's global visit satisfaction was constructed using the MOS 9-item visit rating form.²⁰ The doctor-patient relationship was assessed with three items from the patient questionnaire that measure the interpersonal relationship and communication between the patient and the physician.

The final patient outcome, the preventive services delivery rate, was measured as a summary score for screening, counseling, and immunization services delivered during the observed visit. The methods used to create the summary scores have been described elsewhere in detail.²¹ Briefly, patient eligibility for services recommended by the US Preventive Services Task Force Guidelines was determined from medical record review.²² Direct observation was used to determine the delivery of services for which patients were eligible during observed visits. Patient eligibility was determined from medical record review. Summary scores of the rates of delivery of screening, health habits counseling, and immunization services were generated.

ANALYSES

Univariate statistics were used to determine whether patient and visit characteristics differed between visits in which another family member's problems were and were not discussed. Chi-square tests were used to test the differences for categorical variables, while *t* tests were used to compare means for continuous variables. Patient outcomes were compared using analysis of covariance to test the differences in means for the patient outcome while controlling for potentially confounding patient and visit characteristics. Differences in time use were analyzed by comparing the mean proportion of time spent on each activity, using analysis of covariance to control for the potential confounders.

RESULTS

The characteristics of participating physicians and patients have been previously described.^{15,16} They are

TABLE 1

Association of Patient and Visit Characteristics with the Discussion of Another Family Member's Problems

Variables	Family Member's Problem		P
	Not Discussed (n=3528) Mean or %	Discussed (n=769) Mean or %	
Patient Characteristics			
Age, y			
≤17	18.9	32.8	<.001
18-64	59.6	47.4	
≥65	21.5	19.8	
Sex, % female	61.4	63.2	NS
Race, % nonwhite	12.2	10.7	NS
Marital status, % married*	60.3	73.0	<.001
Education level attained, % <high school*	50.4	49.5	NS
Health status†	3.8	3.8	NS
Insurance			
Medicare	23.0	21.7	NS
Medicaid	6.4	8.5	
Managed care	36.5	33.7	
Fee for service	19.6	21.8	
Other	7.2	8.1	
None	7.3	6.2	
Family members also see this physician, % yes‡	68.0	82.3	<.001
Visit Characteristics			
Other family member present, % yes	27.8	50.8	<.001
Reason for visit			
Acute illness	58.5	55.4	.034
Chronic illness	23.6	22.6	
Well care	11.7	13.1	
Other	6.2	8.8	
No. of problems addressed	1.8	1.9	NS
Length of visit, minutes	9.7	11.0	<.001
CPT billing code§	2.9	3.0	NS

*Only applicable to patients 18 years of age and older.

†Measured on a 5-point Likert-type scale, where 1=poor and 5=excellent.

‡Because of the 75% patient response rate for the patient exit questionnaire and missing data on this particular item, n=2823.

§Adjusted by patient age, reason for visit, presence of another family member and health status.

largely similar to the physician characteristics of members of the American Academy of Family Physicians, and to patient characteristics reported in the National Ambulatory Medical Care Survey.¹⁵ The physician sample slightly over-represents female physicians and residency graduates. Of 4994 patients presenting for care to their family physicians during the 2 observation days, 4454 (89%) agreed to have their visits observed; they constitute the study sample.

Another family member's problem was addressed during 18% of the observed office visits. For half of these visits, the other family member was present. As indicated in Table 1, few patient characteristics were associated with discussion of another family member's problems. Such problems were more likely to be discussed during visits for children and adolescents. Married patients and patients whose other family members see the same physician were more likely to have another family member's problem discussed during the visit. The provision of care to a second family member did not vary with the sex, race, educational level, health status, or insurance status of the index patient.

Having another family member present during the visit was associated with nearly a twofold increase in another family member's problem being discussed. Acute, chronic, and well-care visits were equally likely to have another family member's problem discussed, but other types of visits (eg, immunizations, administrative, and prenatal) were slightly more likely to have another family member's problem discussed. The total number of index patient's problems addressed was similar between those who did and did not have another family member's problem discussed.

The length of the visit was an average of 1.3 minutes longer for visits at which another family member's problem was discussed. Physicians did not increase the billing code for visits during which a second family member's problem was addressed. This finding held true even when potentially confounding patient and visit characteristics were included as covariates: patient age, the

presence of another family member, reason for visit, patient health status, and length of the visit. This analysis was adjusted for patient health status because patient health status has been shown to be associated with the intensity of resource use.¹

Based on these analyses of patient and visit characteristics, three potentially confounding variables were included as covariates for analyses of the outcome measures: patient age, the presence of another family mem-

TABLE 2

Association of Discussion of Another Family Member's Problems with Outcomes for the Index Patient's Visit

	Family Member's Problem		P
	Not Discussed (n=3528)	Discussed (n=769)	
Satisfaction (on a scale of 1=poor, 5=excellent)*			
Expectations met	4.39	4.47	.031
Global satisfaction†	4.26	4.33	NS
Patient reported (on a scale of 1=strongly disagree, 5=strongly agree) that			
Physician addressed main concerns during visit‡	4.7	4.7	NS
They would talk to physician about emotional problem‡	3.9	4.2	<.001
There were issues they wanted to bring up but were not able to	1.7	1.7	NS
% of USPSTF eligible services delivered			
Screening services	15.3	15.1	NS
Counseling services	3.7	3.7	NS
Immunization services	3.3	4.1	NS

Note: Outcomes adjusted by patient age, reason for visit, presence of another family member, and length of visit.

* Decreased sample size because not all patients returned questionnaires and answered every question (minimum n=2724).

† Measured using MOS 9-item Visit Rating Form.²⁰

‡ Measured in second round of data collection only (minimum n=1483).

USPSTF denotes US Preventive Services Task Force.

TABLE 3

Differences in the Proportion of Time Spent During Visits in Which Another Family Member's Problems Were Discussed*

Category	Proportion of Time Spent When		P
	Problem Not Discussed (n=3528)	Problem Discussed (n=769)	
History-taking	55.1	59.5	<.001
Planning treatment	32.3	30.9	.026
Physical examination	23.3	22.0	.016
Health education	19.4	19.1	NS
Feedback on evaluation results	14.2	12.9	.001
Family information	8.2	18.7	<.001
Chatting	8.1	7.2	.027
Structuring the interaction	7.8	7.3	NS
Patient questions	6.9	7.3	NS
Preventive services	2.9	3.7	.001
Procedure	2.9	1.5	.003
Nutrition advice	2.2	2.2	NS
Exercise advice	1.4	1.4	NS
Smoking behavior assessment or advice	1.3	1.5	NS
Compliance assessment	1.2	1.3	NS
Counseling	1.1	4.0	<.001
Negotiation	1.1	1.1	NS
Assessing patient's health knowledge	1.1	1.3	NS
Health promotion	1.1	1.3	NS
Substance use assessment or advice	0.4	0.5	NS

*Adjusted for patient age, reason for visit, and presence of another family member.

ber, and reason for visit. Marital status and whether family members also see this physician were not used as covariates because of problems of attrition caused by missing data. Marital status was not independently associated with any of the outcome measures and therefore would not affect the findings if included in the models. Whether family members see this physician was associated with several outcome measures and was tested in all models in which the variable was associated with the outcome variable. Findings that differed because of inclusion in a model are noted.

Table 2 presents the association of another family member's problem being discussed with the outcomes for the index patient, adjusting for patient and visit covariates. The degree to which the expectations of the index patient were met was greater when another family mem-

ber's problem was discussed. When the variable whether family members see this physician was included, the P value for the association with expectations met was $P=.08$. There was no difference in patient report of satisfaction with the visit between the two groups. Patients in the two groups were equally likely to report good communication with the physician, with those whose visits included discussion of another family member's problem reporting a higher degree of ability to discuss emotional problems with the physician.

Also presented in Table 2 are the associations with the preventive service delivery scores. There was no statistically significant difference in the rate of delivery of screening, health habit counseling, or immunization services between the two groups. Contrary to the anticipated direction, there was a slight trend that during those visits in which another family member's problem was discussed, the index patient received a higher proportion of recommended immunization services ($P=.2$).

The visits were longer when another family member's problem was discussed, and the time was allocated differently. As indicated in Table 3, a smaller proportion of time was spent on chatting, providing feedback, conducting physical examination, planning treatment, and performing procedures during visits at which another family member's problem was discussed. A greater proportion of time was spent counseling (eg, a discussion of interpersonal relations or current emotional state), taking history, and gathering family information. A greater proportion of time was also spent on preventive services; this mirrors the nonsignificant trend reported in Table 2. When the variable whether family members see this physician was included as a covariate with each of the time-use variables, all findings were substantially unchanged, with the exception of chatting wherein the group means were less distinct and $P=.09$.

DISCUSSION

Family physicians delivered care to a family member other than the identified patient for the visit during nearly 1 in every 5 visits. Physicians do not appear to bill the primary patient for this extra advice and effort. There does not appear to be a detrimental effect on the index patient at least in terms of patient satisfaction, expectations for the visit, or delivery of preventive services.

Other researchers studying a group of hospital-based general internists in a major urban teaching institution¹⁰ found that during triad visits, the second person raised almost as many topics as the index patient. The authors also found that fewer total topics were raised during triad visits than during encounters where only the patient and physician were present. The authors suggested that a triad may negatively affect the patient-physician relationship by discouraging patients from initiating, discussing, and fully expressing their own topics.

Our study found no negative effect among the patient visits during which another family member's problem was discussed. This is reflected by a high rate of patients who report that their expectations for the visit were met and their main concerns addressed, and by the patients' high rate of disagreement with the item that stated there were issues they wanted to bring up but were not able to raise. The potential detrimental effect on communication between the index patient and the physician suggested by Green et al¹⁰ was not found in our sample.

Data from our study indicate that time spent gathering information and counseling about the secondary patient's problem is associated with a longer visit and less time spent on physical examination, providing feedback, performing procedures, and planning treatment for the index patient. The additional time spent on prevention-related activities and health education may indicate that discussion of another family member's problem may prompt the delivery of preventive services to the index patient, or that the delivery of some preventive service to the patient may prompt discussion of another family member's problem. It may also reflect the greater likelihood of care for a second family member during well-care visits. This provision of preventive care in a family context may be an important benefit of family practice care.

To our knowledge, this is the first large study to examine the frequency and effect of the discussion of another family member's problem on the index patient's satisfaction with the visit and the receipt of preventive services. The study has a number of strengths, including the study of community-based family physicians and their patients and the direct observation of the encounter to determine if another family member's problem was addressed. The major study limitation is patient nonresponse to the patient questionnaire, which could have resulted in underreporting of patient dissatisfaction. However, it is unlikely that this would have differentially affected patients who did and did not have another family member's problem discussed, and thus is unlikely to have altered the study findings.

The lack of a detrimental effect on a limited number of index patient outcomes assessed is reassuring. In addition, utilization of a family member's visit to provide brief episodes of care to another family member is likely to be efficient, and may benefit from the perspective and involvement of the index patient. Additional research is needed on the effects of this care for the secondary patient. Such care clearly exemplifies the Institute of Medicine's definition of primary care as provision of continuous care in the context of community and family.²³ A spinoff study in the Ambulatory Sentinel Practice Network is currently attempting to further identify these secondary patients and to characterize the content of care provided to these family members.

It is not clear what effect changes in the health care

system will have on caring for a second family member. Managed care insurance, although not associated with care of a second family member in our data, could conceivably provide an opportunity for enhanced provision of care for secondary patients. Families often enroll in managed care, and financial incentives to decrease office visits could conceivably increase the use of patient visits as opportunities for both patients and physicians to bring up care issues related to other family members. However, pressure by managed care organizations to shorten visits may simultaneously present incentives against the use of patient visits to provide care to other family members.^{24,25}

We believe that the phenomenon of caring for a second family member represents an important added value of family practice that deserves support and further investigation.

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