House Call Practices Among Young Family Physicians

Aubrey L. Knight, MD, Alan M. Adelman, MD, MS, and Jeffery Sobal, PhD, MPH
Roanoke, Virginia, and Baltimore, Maryland

Once a major part of medical practice, physician house calls have declined in frequency over the years. Recently, it has been suggested that house calls are increasing. This study examined the current self-reported house call practices among recent graduates of family practice residency programs in the United States. A questionnaire was mailed to a cross-sectional, random national sample of 301 family physicians who are members of the American Academy of Family Physicians and who completed a residency between 1981 and 1986. There was a 66% response rate to three mailings, with 197 questionnaires analyzed. Sixty-two percent of the physicians reported they were making house calls. The majority (53%) made less than one house call per month. Fewer than 15% made house calls on a weekly basis. There was a downward trend by residency year in the percentage of physicians making house calls when comparing graduates from 1981 to 1986. House calls do not appear to be a significant part of the practice of young family physicians.

House calls were once a major component of medical practice in the United States, but have shown a steady decline in recent years. In 1960, family physicians made 68 million house calls, which decreased to 17 million by 1975.[1]

Studies of physicians' practice patterns in the 1960s report that from 4% to 9% of patient encounters were house calls.[2–5] Several more recent studies have examined the prevalence of house calls by family physicians in the United States. A 1971 New Jersey survey of general practitioners and family physicians reported that 82% of respondents made house calls,[6] although there was only a 41% response rate, which raises the possibility of a self-selection bias. No difference in house call patterns was noted between rural and urban or between younger and older physicians. Each physician averaged six house calls per week, with 4.7 scheduled. A 1973 survey also found that 82% of the general practitioners and family physicians made house calls in contrast to 74% of the internists.[7] Among physicians under the age of 35 years, 63% made house calls compared with 88% of those 45 to 55 years of age. A 1980 survey of American Academy of Family Physicians members, which had a 76% response rate, found that only 53% made house calls, and again younger physicians made fewer house calls.[8]

Because no recent data are available about current house call practices of family physicians, especially among younger physicians, a study of recent graduates of family practice residencies was undertaken. It is hypothesized that a relatively low percentage of family physicians who completed their residencies in the 1980s would include house calls in their practices.

METHODS

Three hundred one family physicians who completed a family practice residency between 1981 and 1986 were randomly selected from the membership roster of the American Academy of Family Physicians (AAFP). During the summer of 1988, a questionnaire requesting information about house call practices was mailed with a stamped return envelope.* Nonrespondents were contacted with two additional mailings, for a total of three mailings.

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From the Department of Family Medicine, University of Virginia, Roanoke Program, and the Department of Family Medicine, University of Maryland at Baltimore. At the time this study was conducted Dr. Knight was a Family Medicine Faculty Development Fellow in the Department of Family Medicine, University of Maryland at Baltimore. Requests for reprints should be addressed to Dr Aubrey L. Knight, 2145 Mount Pleasant Blvd, SE, Roanoke, VA 24014.

*A copy of the questionnaire is available from the authors upon request.

TABLE 1. OPINIONS OF PHYSICIANS WHO DO AND DO NOT MAKE HOUSE CALLS ABOUT SEVERAL ASPECTS OF HOUSE CALLS

	Make House Calls	Strongly Agree/ Agree No.	(%)	Strongly Disagree/ Disagree No.	(%)
House calls are a useful means for gathering information about family relationships	Yes	119	(98)	2	(2)
	No	63	(93)	5	(7)
House calls are a useful means for gathering information about the home environment	Yes	121	(100)	0	(0)
	No	68	(99)	1	(1)
House calls are important for comprehensive family care *	Yes	74	(64)	42	(36)
	No	24	(35)	44	(65)
House call content can be managed more efficiently in the office	Yes	84	(72)	33	(28)
	No	58	(85)	10	(15)
House calls are a poor use of a physician's time †	Yes	58	(49)	61	(51)
	No	49	(71)	20	(29)
Making house calls leads to patient satisfaction ‡	Yes	117	(98)	3	(2)
	No	60	(88)	8	(12)
House calls are a viable income source	Yes	16	(14)	97	(86)
	No	9	(14)	56	(86)

* $P < .001$
† $P < .01$
‡ $P < .05$

The one-page house call questionnaire was developed and pretested on family physicians not eligible for the study. Physicians were asked whether they were currently making house calls on both an urgent and a regularly scheduled basis; the frequency with which they made house calls; and the average house call duration. Those physicians who stated they did not make house calls were asked to note whether any of the following reasons played a role: time constraints, economic costs, and safety. All respondents were asked to indicate whether they strongly agreed, agreed, disagreed, or strongly disagreed with seven statements about house calls covering usefulness in gathering family information, usefulness in gathering information about the home environment, importance for comprehensive family care, efficiency of office visits vs house calls, house calls as a poor use of physician time, house calls as a source of patient satisfaction, and house calls as a viable source of income. Exact wordings are presented in Table 1. Finally, physician demographics were assessed, including sex, state of practice, year of residency completion, type of practice, and urban vs rural practice location.

Information was gathered about the nonrespondents. The given name was used to determine the sex of the nonrespondent. The mailing address was used to determine region of practice. US Bureau of the Census definitions for the four regions of the United States (Northeast, South, Midwest, West) were used.[9] Birth year was obtained from the *American Academy of Family Physicians* (AAFP) *1988-1990 Membership Directory*.[10] Year of residency completion was considered to be the year of board certification. If year of board certification was not found in the *American Board of Family Practice 1988 Diplomate Directory*,[11] the year of residency completion was calculated by adding 3 years to the date of graduation from medical school as listed in the AAFP directory.

All data were double entered for verification of keypunch accuracy and were analyzed using a standard statistical package.[13] Chi-square analysis was used to compare proportions and categorical variable, eg, between respondents and nonrespondents or between those physicians who made house calls and those who did not. *t* Tests were used to compare continuous variables, such as age, between groups. Multivariate discriminant analysis was used to examine demographic variables as predictors of house calls. Level of significance was set at the $P<.05$ level.

Two hundred of the 301 questionnaires were returned for a 66% response rate. Three questionnaires were excluded from the analysis because the respondent was not residency trained or was a residency director who did not feel that the questionnaire was appropriate to complete. Thus, 197 questionnaires were included in the analysis. Some respondents did not answer all questions, and such missing data were not included in the analysis.

RESULTS

Table 2 shows a summary of the characteristics of the respondents and nonrespondents. There was a significant difference by sex, with a greater proportion of women (79%) responding to the questionnaire than men (62%, $P<.05$). There was no difference between respondents and nonrespondents with respect to region of practice, year the residency was completed, or average age.

Sixty-two percent of the physicians reported that they were currently making house calls. The majority of physicians made house calls on both an urgent and a regularly scheduled basis. While the majority of physicians reported that house calls are a part of their practice, most made fewer than one house call per month. Fewer than 15% of the physicians made house calls on a weekly basis. Most physicians spent between 21 to 39 minutes per house call. The characteristics of the house call practices are summarized in Table 3.

Several demographic factors were associated with per-

TABLE 2. CHARACTERISTICS OF RESPONDENTS AND NONRESPONDENTS *

Characteristic	Respondents No.	(%)	Nonrespondents No.	(%)
Sex †				
Male	146	(75)	90	(87)
Female	49	(25)	13	(13)
Region of country				
Northeast	34	(18)	12	(12)
South	55	(29)	42	(41)
Midwest	59	(31)	28	(27)
West	41	(22)	21	(20)
Year of residency completion				
1981	29	(16)	20	(20)
1982	29	(16)	11	(11)
1983	38	(20)	15	(15)
1984	35	(19)	19	(19)
1985	31	(17)	17	(17)
1986	25	(13)	20	(20)
Type of practice				
Hospital-based	9	(5)		
HMO/prepaid	9	(5)		
Solo	43	(23)		
Group	81	(44)		
Academic	11	(6)		
Government	14	(8)		
Other	16	(9)		
Area of practice				
Urban	58	(31)		
Suburban	61	(32)		
Rural	71	(37)		

** Percentages may not total 100% because of rounding error.*
† P < .05
HMO denotes health maintenance organization

TABLE 3. CHARACTERISTICS OF HOUSE CALL PRACTICE *

Characteristic	No.	(%)
Type of house call		
Urgent only	31	(27)
Regularly scheduled	13	(11)
Urgent and regularly scheduled	72	(62)
Frequency of house calls		
Over 5 per week	2	(2)
Between 1 per week and 5 per week	13	(11)
Between 1 per month and 1 per week	42	(35)
Less than 1 per month	63	(53)
Average time spent per house call		
20 minutes or less	30	(24)
21 to 39 minutes	64	(52)
40 minutes or greater	30	(24)

** Percentages may not total to 100% because of rounding error.*

forming house calls. Year of completion of residency was highly predictive of performing house calls. There was an overall downward trend by residency year, especially among residency graduates in 1985 and 1986 (Figure 1). Physicians in solo or group private practice were more likely to make house calls than all others (72% vs 41%, respectively, $P<.001$). Seventy-seven percent of rural physicians made house calls compared with only 50% of urban and 54% of suburban physicians ($P<.01$). More male physicians (66%) made house calls than female physicians (49%), although this difference only approached, but did not achieve, statistical significance ($P<.055$). Prevalence of house calls did not vary by region of country.

The higher rate of house calls among residency graduates of 1984 may be explained by several variables. Graduates of 1984 had a higher percentage of rural physicians (56%) and physicians in private practice (92%) than graduates of any other year. There was no trend between year of completion of residency and the frequency of house calls. Graduates of 1985 (73%) made house calls more frequently (>1 per month) than any other year.

A multivariate discriminant analysis was used to examine the contribution of the six demographic variables to predict whether a physician performed house calls. Being in private practice had the largest standardized discriminant coefficient with performing house calls (.75), followed by being a less recent graduate (.41), practicing in a rural area (.35), and being male (.27). Region and age had small coefficients. Predicting house calls using the variables in this discriminant model correctly classified 72% of the physicians who made house calls and 67% of those who did not make house calls.

Of physicians who did not make house calls, 79% reported that time constraints were a very or somewhat important factor in not making house calls. Fifty-one percent stated that economic reasons were a very or somewhat important factor. Forty-nine percent responded that safety reasons were either a very or a somewhat important factor. There was no difference by sex in the response to the safety reasons.

Table 1 is a summary of the responses of physicians to questions about a variety of aspects of house call practice, divided into those who did and did not make house calls. Physicians who made house calls were more likely to state that house calls were important for comprehensive family care and led to high patient satisfaction. They were also more likely to respond that house calls were not a poor use of physician time. Physicians in rural (63%) and urban (60%) areas were more likely ($P<.05$) to agree about the importance of house calls for comprehensive family care than their suburban counterparts (38%). Physicians in private practice (84%) were more likely ($P<.05$) to agree

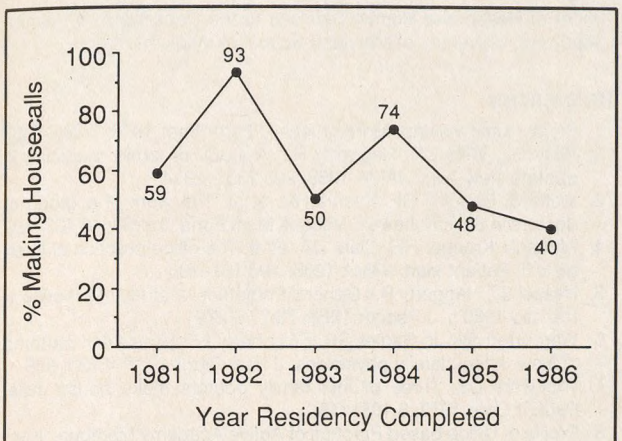

Figure 1. Percentage of physicians making house calls, by year or residency completed.

with the statement that the substance of most house calls can be managed more efficiently in the office than physicians in non-private practice (66%). Physicians in rural practice (54%) were more likely to disagree with the statement that house calls were poor use of a physician's time than physicians in urban (38%) and suburban (35%) practices. There was no difference in the responses to these questions by sex.

DISCUSSION

The physician house call is sometimes seen as a casualty of the technological explosion in modern medicine. There are reasons, however, to suggest that the house call may currently be gaining acceptance among primary care physicians.[13] With the aging of the population and the shortening of hospital stays, house calls have become more of a necessity. Health legislators and health insurance carriers alike are interested in home care, since preliminary evidence suggests that this approach may shorten hospital stays and delay institutionalization.[14] House calls are also valuable in improving physician-patient relationships by improving patient satisfaction and enhancing cooperative efforts among physicians and other health care professionals.

The information that can be gathered through house calls goes beyond the usual office encounter. A house call gives the physician an opportunity to assess important nonmedical aspects of care, such as home environment and family relationships. A physician who has an understanding of a patient's life situations can manage the patient more effectively.[15]

A potential bias of this survey is self-selection. The high response rate (66%) is in line with other quality surveys of physicians.[16] Having such a good response rate minimizes the possibility of a self-selection bias and assures external validity. The only difference between respondents and nonrespondents was sex, which was not a significant predictor of making house calls. In addition, surveys of homogeneous populations about topics of concern to them do not require response rates as high as those of heterogeneous samples.[17]

The house call practices reported in this survey differ from those reported in previous literature. In earlier studies 53% to 82% of family physicians made house calls,[6–8] and an average of six house calls were made per week.[6] Although 62% of physicians in this survey report making house calls, the majority make under one house call per month and fewer than 15% make house calls on a weekly basis. Physicians in other primary care specialties also make house calls, but at rates different from the rates of family physicians.[4–5] It should also be noted that house calls by family physicians are more prevalent in other countries, such as Britain.[18]

The results of this survey tend to corroborate those of earlier studies, which found that younger physicians make fewer house calls than their older counterparts.[7,8] The results of these studies may represent a cohort effect in that older physicians may have larger populations of older patients who are more likely to require house calls. Another possible reason that younger physicians may make fewer house calls is that early in their professional careers they have smaller practices, which would require fewer house calls. A question that remains is whether younger physicians will continue this pattern throughout their career. This question cannot be answered with this cross-sectional survey. Longitudinal data are needed to examine the house call practice of physicians as they and their practices age.

From these results it can be concluded that the major determinant of performing house calls is whether the physician was in private practice. Area of practice was less important than year of graduation in predicting performance of house calls. Rural physicians are more likely to offer house calls than their urban or suburban counterparts. This finding corresponds with the perception that house calls are more frequently in the domain of the rural practitioner,[7] but is not consistent with the results of the 1977 survey of New Jersey family physicians.[6]

Despite some suggestions that house calls are on the rise,[13] this study tends to show the contrary. Many authors have reviewed the circumstances and indications for which house calls are appropriate.[6,13,15,19,20] Most of these reports concluded that, as a group, the elderly are more likely to require home care. If family physicians are to remain lead-

ers in the health care of this rapidly growing group, they must actively participate in the care of appropriate patients at home.

The vast majority of physicians in this study who do not make house calls cite time constraints as an important factor. A 1972 study of the house call practices of general practitioners reported that house calls were more likely to be made at "off-hour time."[21] With other medically related activities such as committee meetings and continuing medical education already infringing on the physician's "free time," the inclusion of another such activity might seem overwhelming.

Eighty-six percent of all respondents thought that house calls were not a viable income source. Even though time constraints were the most notable reason for not offering house calls, one half believed that economic reasons were important in their decision not to offer house calls in their practice. Because of the value that society and the individual place on the house call, improvement in the reimbursement may be necessary to encourage more physicians to include house calls in their practices. Because of the amount of time required in making a house call, less money would be generated than would be by seeing several patients in the same time span in the office. Nevertheless, as Burton suggested, the "trade-off in benefit to the selected patients and gratification to the physician is of primary importance."[22]

In conclusion, 62% of young family physicians reported making house calls. Despite suggestions that house calls may be on the rise, this study showed that recent graduates of family practice residencies are less likely to make house calls and that less than 15% of young physicians' made weekly house calls. A longitudinal study is needed to determine whether these patterns change as the physicians' practices build and they accumulate more elderly patients who are more likely to benefit from home care.

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