

Physician Behavior as a Determinant of Utilization Patterns: The Case of Abortion

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Abstract: Health services utilization may be influenced by the structure of the health system and the behavior of health professionals as well as by the actions of individual patients. This research examines the responses of obstetricians toward women seeking abortion. The population for this study includes all obstetrician-gynecologists with any private practice in Maryland during 1975 (473). Each responding physician (443) was presented with a case history vignette describing, in a telephone interview, a woman who is pregnant and considering an abortion. The sociodemographic characteristics of the woman were systematically varied to determine effects of patient attributes on physicians' patient management decisions. Deci-

sions to refer the patient or to participate personally in her care were found to be associated most strongly with the patients' financial resources. Three hundred and twelve obstetricians returned a mail questionnaire, probing their own attitudes and characteristics. Physicians' liberal or conservative attitudes toward expansion of reproductive health care services and their level of disturbance by the abortion procedure were also influential in these patient management decisions. Simultaneous examination of both patient and physician characteristics indicated that the former had the greater weight in accounting for referral decisions. (Am. J. Public Health 68:1104-1114, 1978.)

Introduction

Utilization behavior is affected by the structure of the health care system and by the behavior of health professionals.^{1, 2} Available data suggest that the behavior of professionals is particularly likely to influence utilization patterns under circumstances where health services or their clients are legally or morally stigmatized.³⁻⁶ Legally induced abortion has been available throughout the United States since January 1973. The abortion utilization patterns that have emerged are, nevertheless, difficult to explain entirely on the grounds of "differences in the willingness of women . . . to terminate unwanted pregnancies by abortion."⁷

In 1976, only 37 per cent of induced abortions in this country took place in hospitals, as compared with 99 per cent of births. The bulk of these abortions occurred in free-standing nonhospital clinics located in metropolitan areas and on the East and West coasts.⁸ Furthermore, the proportion of abortions performed outside of hospitals has been steadily increasing over the past four years. Studies of abortion patients suggest that these women are unlikely to be referred to clinics by a private physician or to perceive private

physicians as an important source of help for their pregnancy problem.^{9, 10}

These utilization patterns may be explained, in part, by the relative costs of hospital and clinic care and in part, by women's desire to conceal their circumstances by avoiding the more usual and "public" channels of medical care. However, it is reasonable to hypothesize that the response of traditional health institutions and of private physicians to abortion as a health service may also play a role in shaping the current system for delivery of abortion services. The objectives of the research reported in this paper were to examine obstetricians' reactions to the abortion-seeking woman as functions of both the physician's own characteristics and those of the potential patient.

Methods

The data on which this paper is based were obtained during the winter of 1975-1976 as part of a survey of abortion practices among obstetrician-gynecologists in Maryland.*

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*Extrapolation from data collected in this study indicates that private obstetricians performed about 61 per cent of the first trimester abortions and about 75 per cent of the second trimester abortions in Maryland during the period under study. These figures may somewhat overstate the participation of private physicians in abortion, however, since approximately one-half of the abortions done in Maryland in 1975 were performed in nonhospital clinics. The study reported here was completed prior to the Supreme Court decision (June 1977) cutting off federal participation in reimbursement of abortion under the Medicaid program. However, the state of Maryland has continued to provide this reimbursement out of state funds.

The population for this study was defined as all obstetrician-gynecologists with any private practice in the state during 1975. On the basis of this criterion, 473 physicians were identified as eligible for inclusion in the study. Of this total number, 443 (94 per cent) completed a telephone interview, and 312 (70 per cent of those interviewed) returned a mail questionnaire.

The telephone interview focused on the physician's management of requests for abortion, emphasizing the procedural rather than the strictly medical aspects of practice. Each physician was presented with a brief case history vignette describing a patient with a suspected pregnancy, and was then asked a series of questions about how he or she would manage this patient. The mail questionnaire obtained information about more general aspects of practice, personal and educational background, and attitudes toward a variety of issues considered potentially relevant to abortion.

Physicians who were not interviewed (30 out of 473) or who failed to return the questionnaire (131 of 443) were compared with respondents by age and residential location and, as between interview only and questionnaire respondents, by patient management variables as well. There were no significant age differences among the three response groups, but response rates to the interview itself and to the questionnaire were somewhat lower from physicians located in the suburbs surrounding Washington, DC, than from individuals living either in the Baltimore area or in rural counties. There is, in addition, a (nonsignificant) tendency for questionnaire respondents to be more liberal in their abortion practices than physicians who were interviewed but failed to return the questionnaire. Overall response rates to this study were high and the differences among response groups are small; the effect of these differences, if any, would be to very slightly exaggerate the permissiveness of abortion practice within the state.

The Vignette Procedure

A major aim of this research was to determine how obstetricians' responses to abortion-seeking women might be affected by the social and demographic characteristics of the woman herself. For example, do obstetricians react differently to a young woman with an unwanted pregnancy as compared with an older woman, or to a single woman as compared with a married woman? To answer this question, 64 brief case histories were constructed in which attributes of the woman were systematically varied according to a fractional factorial design.¹¹ One of the 64 case histories was randomly assigned to each physician. By examining the differences in obstetricians' responses depending on which version was received, it is possible to determine how their responses are affected by specific variations in patient characteristics.

The seven characteristics that were used in constructing the case history vignettes are listed in Figure 1, and a sample vignette is also presented. As indicated, these attributes are: whether or not the patient was previously known to the physician, and the patient's race, age, marital status,

PATIENT CHARACTERISTICS VARIED

1. RECRUITMENT:	OLD, NEW PATIENT
2. RACE:	BLACK, WHITE
3. AGE:	16, 19, 25, 35
4. MARITAL STATUS:	SINGLE, MARRIED, DIVORCED
5. PARITY:	0, 1, 2, 3
6. GESTATION:	8 WEEKS, 16 WEEKS
7. FINANCIAL RESOURCES:	NO MONEY, MEDICAID, PRIVATE INSURANCE MONEY NO OBJECT

SAMPLE VIGNETTE

MRS. ALLEN HAS BEEN A PATIENT OF YOURS BEFORE. ON THIS OCCASION, SHE TELLS YOU THAT SHE THINKS SHE IS PREGNANT. THIS WOMAN IS BLACK, 25 YEARS OLD, MARRIED, AND HAS THREE CHILDREN. SHE STATES THAT SHE HAD HER LAST MENSTRUAL PERIOD ABOUT 16 WEEKS AGO, AND THAT SHE HAS MEDICAID COVERAGE.

FIGURE 1—Patient Characteristics Varied and Sample Vignette as Read to Physician

number of living children, weeks of gestation, and financial resources available to pay for medical care.

The first step in the vignette procedure was for the interviewer to read the assigned case history to the physician. She then went on to say, "Ms. Allen has not mentioned abortion. Would you ask her whether or not she wanted to continue with this pregnancy?" Following the doctor's response the interviewer continued, "Ms. Allen goes on to state that she had not intended this pregnancy and is *considering* an abortion. Which of the following actions would you most probably take in this situation: Would you explain to the woman that you could not help her, would you refer her elsewhere for help, or would you continue to see her?" Depending on the response to this question, the interviewer asked the doctor either about what consideration would be given to alternative ways of handling this pregnancy or about management of the referral. Obstetricians who had indicated they would continue to see the patient were then asked, "If an abortion is decided upon, would you arrange to perform the abortion yourself, or would you refer Ms. Allen elsewhere?" Physicians who stated, at this point, that they would refer the patient were asked to whom the referral would be made and whether the physician would make the referral arrangements himself or would expect the patient to do so. Following this set of questions, *all* respondents were asked if discussion would be initiated with this patient concerning the prevention of unplanned pregnancies in the future, and whether or not a history of previous induced abortion would affect the management of Ms. Allen's case.

Results

The data presented are limited to those obstetricians who had carried out a minimum of one abortion within the 12-month period preceding the date of interview. Since these physicians perform at least *some* abortions, their selectivity in accepting or rejecting patients is likely to have a substantial impact on patterns of utilization for this procedure. As shown in Table 1, with the exception of religious prefer-

TABLE 1—Practice, Training and Personal Characteristics of Obstetricians by Abortion Performance¹

Characteristics	Obstetricians Who Do Perform Abortions		Obstetricians Who Do Not Perform Abortions	
	No.	Per Cent	No.	Per Cent
Community ²				
Baltimore area	129	51.2	73	38.2
Suburban District of Columbia	73	29.0	69	36.1
Nonmetropolitan	50	19.8	49	25.7
TOTAL	252	100.0	191	100.0
Years of practice in present community				
1-5	38	20.1	21	16.5
6-18	75	39.7	54	42.5
≥ 19	76	40.2	52	40.9
TOTAL	189	100.0	127	100.0
Type of Practice				
Solo	83	44.1	69	54.8
Group	105	55.9	57	45.2
TOTAL	188	100.0	126	100.0
Medical training				
Board certified Ob-gyn	141	75.0	86	69.4
No board certification	47	25.0	38	30.6
TOTAL	188	100.0	124	100.0
Sex				
Male	179	95.2	115	90.6
Female	9	4.8	12	9.4
TOTAL	188	100.0	127	100.0
Religion				
Catholic	13	7.0	73	57.9
Protestant	81	43.3	32	25.4
Jewish	53	28.3	6	4.8
Other	40	21.4	15	11.9
TOTAL	187	100.0	126	100.0

¹With the exception of "community", data are based on questionnaire responses. Questionnaires were returned by 70 per cent of interviewees. Totals for each item vary slightly due to nonresponse.

²Baltimore area includes Baltimore City and County; suburban District of Columbia includes Montgomery and Prince Georges Counties; and nonmetropolitan refers to the remainder of Maryland counties.

ence, the practice, training, and personal characteristics of obstetricians who actively provide abortion services are not markedly different from those of nonproviders. The former group is somewhat more likely to be located in the Baltimore metropolitan area, to be in group rather than in solo practice, and to have board certification in obstetrics/gynecology.

The specific variables investigated and the general direction of relationships that is anticipated are presented in Figure 2. In this model, both physician and patient characteristics are conceived of as independent variables affecting the physician's patient management decisions.

The distribution of each set of independent variable characteristics among the obstetricians studied is given in Tables 2 and 3. From the standpoint of the analyses to be reported below, it is important to note that none of these distributions are highly skewed. For patient characteristics, this was accomplished deliberately by the design of the vignette procedure. (The one exception to this last statement was also deliberate; only 10 per cent of the vignettes described the patient's marital status as "divorced".)

Table 4 presents physicians' responses to the questions on patient management. In this group of obstetricians who perform abortions, only two individuals stated that they would explain to the patient that they could not help her; these two have been combined with the "refer" category for purposes of analysis. This paper will focus primarily on examination of responses to the two sets of "specific action" questions (groups B and C), since it is these actions that appear most likely to influence whether and under what circumstances an abortion is ultimately obtained.

In order to ascertain the relative importance of individual patient and physician characteristics in obstetricians' decisions, a form of multiple regression analysis designed for use with data that do not meet conventional measurement assumptions was employed. This technique, known as multiple classification analysis (MCA), ranks a set of predictor variables in the order of their contribution to explaining variation in a given dependent variable, and also indicates the proportion of total variation in the dependent variable that is explained by a predictor set.¹² In addition, this technique

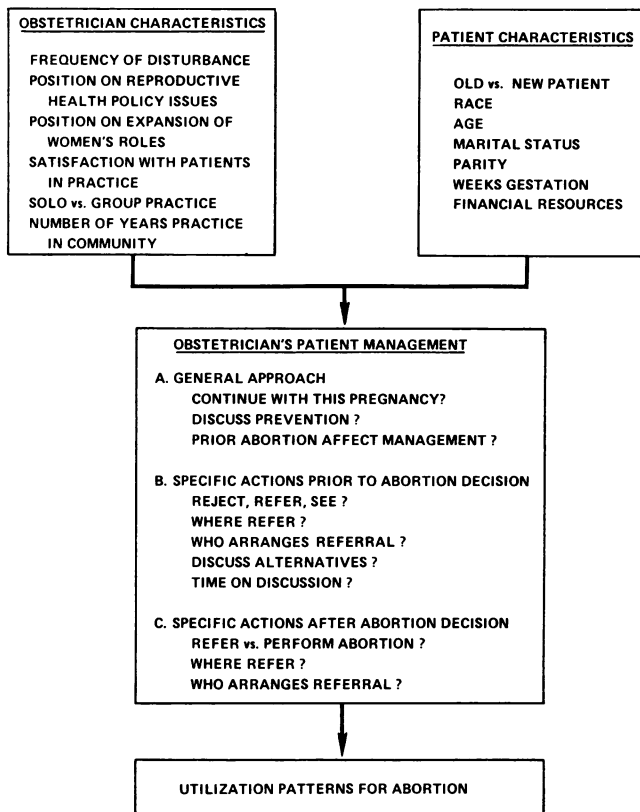


FIGURE 2—Obstetrician and Patient Characteristics, Patient Management, and Utilization Patterns

shows the direction and amount of effect of each independent variable on the dependent variable after the effects of all other independent variables have been "held constant". This latter effect is given in the form of a positive or negative deviation from the overall dependent variable mean. Since MCA is quite sensitive to the number of cases included in a particular analysis, caution should be used in interpreting results based on small numbers.

Patient Characteristics and Management Decisions

In Table 5, the seven patient characteristics used in constructing the case history vignette are ranked in order of their effects on four of the six "specific action" dimensions of patient management. Although physicians' responses to the questions on management following referral for the abortion procedure ("where refer" or "who arranges referral") are quite similar to the data that will be reported, the number of obstetricians who would refer the patient after the abortion decision is made (41) was not large enough for MCA results to be considered reliable. Consequently, these results are omitted in this presentation.

The order in which patient characteristics are listed in the left hand column of Table 5 is determined by the average rank of each characteristic. The precise average is given in the right-hand column of the Table. It is evident from these data that among the characteristics included in the vignette,

TABLE 2—Distribution of Physician Characteristics among 191* Obstetricians Who Perform Abortion¹

Physician Characteristic	No.	Per Cent
Frequency of Disturbance		
Never	33	19.9
Rarely	66	39.8
Sometimes	46	27.7
Often	21	12.7
TOTAL	166	100.0
Position on Reproductive Health Policy Issues (Scale)		
1 (Most liberal)	43	22.5
2	58	30.4
3	47	24.6
4 (Most conservative)	43	22.5
TOTAL	191	100.0
Position on Expansion of Women's Roles (Scale)		
1 (Most liberal)	37	19.4
2	33	17.3
3	48	25.1
4	47	24.6
5 (Most conservative)	26	13.6
TOTAL	191	100.0
Satisfaction with Patients in Practice		
Very	114	61.0
Not very	73	39.0
TOTAL	187	100.0
Solo vs. Group Practice		
Solo	83	44.1
Group	105	55.9
TOTAL	188	100.0
Number of Years Practice in Community		
1-5	38	20.1
6-18	75	39.7
≥ 19	76	40.2
TOTAL	189	100.0

¹Physician characteristics are based on questionnaire data. In all, 191 or 76 per cent of the 252 physicians who performed abortions returned useable questionnaires. However, the number of responses to individual questions may drop below 191. Physicians were particularly likely to give a "don't know" response when asked to estimate their frequency of disturbance.

*N for characteristic 1 = 166. All other responses within four or less of 191. Percentages determined from responses.

the patient's financial resources are most frequently the determinant of obstetricians' behavioral intentions; the precise nature of this effect is shown in Figure 3.

To prepare this figure, physicians' actions were distinguished according to the "level of involvement"* in patient care that each action alternative represented. The physician who continues to see the patient once the question of abortion is raised is considered to demonstrate a higher level of involvement than the physician who refers the patient or explains he cannot help her (combined for this analysis, as indicated above). Similarly, referral to another private physi-

*The term "involvement" is used here to indicate the level or amount of the obstetrician's personal participation in the management of an individual case and to describe his choice of private as opposed to nonprivate referral options. It is not intended to reflect a positive or negative evaluation of individual physicians' behavior.

TABLE 3—Distribution of Vignette Patient Characteristics among 251 Obstetricians Who Perform Abortions*

Patient characteristic	No.	Per Cent
Recruitment		
Old patient	122	48.6
New patient	129	51.4
Race		
Black	121	48.3
White	130	51.7
Age (years)		
16	63	25.1
19	61	24.3
25	64	25.5
35	63	25.1
Marital Status		
Single	111	43.8
Married	110	43.8
Divorced	30	11.9
Parity		
No children	68	27.1
One child	90	35.9
Two children	34	13.5
Three children	59	23.5
Gestation		
8 weeks	119	47.4
16 weeks	132	52.6
Financial resources		
No money	68	27.1
Medicaid	62	24.7
Money no object	51	20.3
Private insurance	70	27.9

*Respondents to all items numbered 251.

cian is deemed to reflect higher involvement than referral to the local health department, personal arrangement of a referral is a more involved response than delegation of this responsibility to the patient, and arranging to perform the abortion reflects more involvement than referral to another provider for this procedure.

The horizontal line in Figure 3 represents the overall dependent variable mean, or mean level of obstetrician "involvement", irrespective of patients' financial resources. Each vertical bar indicates the size of the deviation (above the mean, toward increased involvement, or below the mean, toward decreased involvement) produced by the specific characterization of the patient's financial resources in the case history. Furthermore, each bar reflects the influence of the patient's financial resources alone, controlled for the effects of the remaining six patient characteristics. Obstetricians in general are unwilling to personally arrange a referral for women for whom money is described as "no object." There is a striking contrast between obstetrician "involvement" in case management with women covered by insurance and their "non-involvement" with women characterized as having "no money" or being on Medicaid.

The second characteristic that ranks consistently high in its effects on the actions of the obstetrician is the patient's age. As was shown in Table 5, age is particularly important in accounting for the obstetrician's decision of whether to assume personal responsibility for referral arrangements.

The direction of this effect is described by Figure 4. Obstetricians are substantially more likely to personally arrange a referral for a 16-year-old than for a woman described as age 19, 25, or 35. On the other hand, these physicians were slightly more willing to see and/or to perform an abortion for an older woman as compared to one stated to be in her teens. Again, it should be noted that these results are produced by age alone, controlling for the six other patient characteristics.

With the exception of financial resources, the patient attributes that contribute most to an explanation of obstetricians' behavior are those that define the type of abortion that will be performed (8 weeks vs. 16 weeks gestation) and the social qualifications for motherhood (age, marital status, and parity). Race and prior acquaintance with this particular patient consistently rank low in accounting for physicians' responses. Furthermore, while her financial resources are the predominant factor in determining the disposition of the vignette patient, more general aspects of case management are less affected by resources but more closely tied to marital status, age, and parity. Thus, single women are more likely than married or divorced women to be asked if they wish to continue the pregnancy, and prevention of subsequent pregnancy is a topic more likely to be broached with older women or those with existing children.

Physician Characteristics and Management Decisions

Obstetricians' abortion practices have been shown to vary significantly with: their personal psychological reaction to the abortion procedure, their position regarding expansion of reproductive health services, their attitudes towards roles of women, and their satisfaction concerning patients in their own practices.¹³ Consequently, it was anticipated that these attitudinal dimensions might also influence physicians' responses to the case history vignette. The specific attitude and practice characteristics included in this portion of the analysis are listed in Figure 2 under "Obstetrician Characteristics." However, before presenting the results of this analysis, the attitude measures employed will be briefly described.

As indicated previously, data on physicians' attitudes in areas considered potentially relevant to abortion practice were collected by a questionnaire mailed subsequent to the telephone interview. In the questionnaire, physicians who indicated having *ever* performed an abortion were asked, "How do you personally feel about your participation (in this procedure)? Are you disturbed by it often, sometimes, rarely, or are you never disturbed by it?" "Frequency of disturbance" is used to measure the physician's psychological reaction to abortion. The index of "position on reproductive health policy issues" was constructed from a scale measuring strength of agreement with nine statements on current issues of federal and state policy with respect to consent requirements for abortion and sterilization, federal funding of abortion and contraceptive services, and the like. A "liberal" position on this scale represents the belief that reproductive health services should be expanded and that restrictions on their availability should be removed. Similarly, the index

TABLE 4—Distribution of Obstetricians' Responses to Questions on Vignette Patient Management¹

	Response	No.	Per Cent
A. General Approach			
Would you ask (Ms. Allen) whether or not she wanted to continue with this pregnancy?	Yes	145	57.8
	No	106	42.2
	TOTAL	251	100.0
Would you initiate discussion with (Ms. Allen) concerning the prevention of unplanned pregnancies in the future?	Yes	211	85.1
	No	37	14.9
	TOTAL	248	100.0
(Would a previous abortion) affect any aspect of how you would manage (this) case?	Yes	57	30.0
	No	191	70.0
	TOTAL	248	100.0
B. Specific Actions Prior to Abortion Decision			
Which of the following actions would you take (following patient's statement that she had not intended pregnancy and is considering abortion)?	Explain cannot help	2	.7
	Refer elsewhere for help	80	31.7
	Continue to see	170	67.5
	TOTAL	252	100.0
<i>If Refer:</i>			
Where would you probably refer her?	Private physician	10	13.0
	Private abortion clinic	18	23.4
	Hospital or hospital clinic	41	53.2
	Health department	8	10.4
	TOTAL	77	100.0
Would you be most likely to call there yourself, or would you expect Ms. Allen to make her own arrangements?	Would call	29	37.7
	Would expect patient to arrange	48	62.3
	TOTAL	77	100.0
<i>If Continue to See:</i>			
If pregnancy is established, would you bring up alternative ways of handling this pregnancy?	Yes	139	82.2
	No	30	17.8
	TOTAL	169	100.0
How much time would you usually spend on this discussion?	15 minutes or less	26	18.7
	16-30 minutes	42	30.2
	31 minutes-1 hour	36	25.9
	Varies/As much as needed	35	25.2
	TOTAL	139	100.0
C. Specific Actions After Abortion Decision			
Would you arrange to perform the abortion yourself, or would you refer?	Perform	128	75.7
	Refer	41	24.3
	TOTAL	169	100.0
<i>If Refer:</i>			
Where would you probably refer her?	Private physician	11	28.9
	Private abortion clinic	7	18.4
	Hospital or hospital clinic	18	47.4
	Health department	2	5.3
	TOTAL	38	100.0
Would you call there yourself, or would you expect Ms. Allen to make her own arrangements?	Would call	23	57.5
	Would expect patient to arrange	17	42.5
	TOTAL	40	100.0

¹Physicians who had not performed at least one abortion in the 12 months prior to interview are excluded from this table.

of "attitudes towards women's roles" was formed from five statements about the roles of women in contemporary society with which the physician was asked to agree or disagree. Here, a "liberal" position reflects an expanded view of these roles, extending beyond the conventional focus on home, reproduction, and child care. Finally, physicians were asked to rate their satisfaction with the type of patients in

their practice. Ratings were made on a four-point scale ranging from "very satisfied" to "very dissatisfied." In addition to these attitudinal dimensions, two aspects of the physician's practice were also included in this analysis: the number of years he had practiced in his present community, and whether he practiced alone or with a group.

Obstetrician characteristics are listed in the left-hand

TABLE 5—Relative Importance of Seven Patient Characteristics in Affecting Obstetricians' Management of Unwanted Pregnancy*

Patient Characteristics	Obstetrician's Management Decision				Average Rank
	Refer vs. See (Rank)	Where Refer (Rank)	Who Arranges Referral (Rank)	Refer vs. Perform Abortion (Rank)	
Financial Resources	1	1	3	1	1.5
Age	2	4	1	4	2.8
Length of Gestation	3	3	4	2	3
Marital Status	7	2	5	3	4.3
Parity	5	6	2	5	4.5
Old or New Patient	4	5	7	7	5.8
Race	6	7	6	6	6.3
Proportion of Variation Explained (R ²)	.19	.26	.29	.15	
TOTAL N	251	76	76	169	

*Physicians who had not performed an abortion within the last 12 months were excluded from this table.

column of Table 6 in order of their average rank as predictors of obstetricians' specific actions in response to the patient described in the vignette. Total numbers of cases used in the analysis are considerably reduced in this Table, since the data on physician characteristics were obtained by mail questionnaire, and not all of the physicians interviewed returned the questionnaire. Caution is particularly important in interpreting the data for the two dimensions of "where refer" and "who arranges referral", since these analyses were based on only 45 and 46 cases respectively.

The rankings of physician characteristics are less consistent across the different categories of physician response than were the rankings of patient characteristics. Examination of the multiple classification analysis results indicates

that attitudes have their clearest effects on the initial decision to see the patient or to refer her, and on the decision about whether to perform the abortion or to refer the patient elsewhere for this procedure. Physicians who take a more liberal position on reproductive health policy issues were more likely to see the patient in the first place, and physicians who are not psychologically disturbed by abortion were more likely to do the procedure themselves rather than to make a referral. Of the two practice characteristics included in the analysis, only "number of years in this community" has any marked effect on physician behavior. Physicians who have practiced longer in a community were more likely to make a private referral, and more likely to arrange the referral themselves. Furthermore, if they do continue to

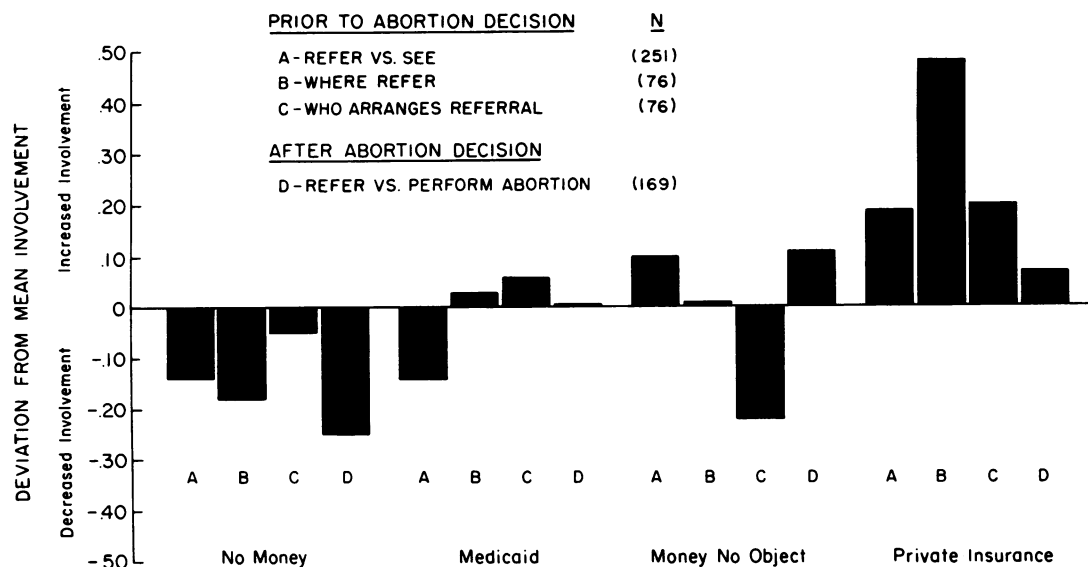


FIGURE 3—Influence of Abortion Patient's Financial Resources on Level of Obstetrician's Involvement in Patient Care

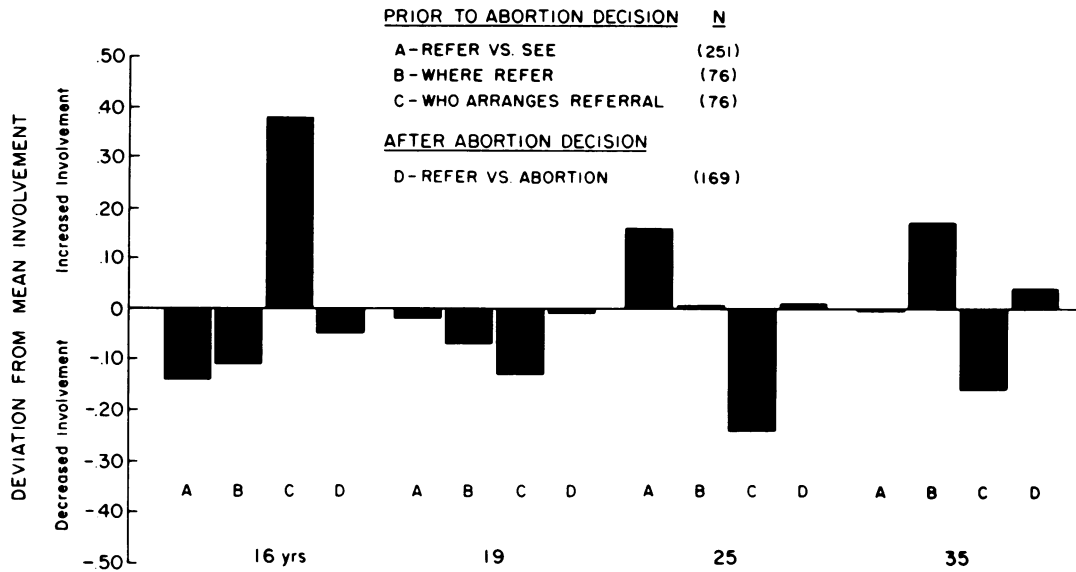


FIGURE 4—Influence of Abortion Patient's Age on Level of Obstetrician's Involvement in Patient Care

see the patient, they are likely to spend more time with her discussing alternative modes of handling her problem pregnancy.

While attitude variables do contribute to variation in physicians' stated behavior, their influence is nonlinear and often difficult to interpret. This point is illustrated by Figure 5. In this Figure, the effects of two attitudinal dimensions, obstetricians' "disturbance" and their position concerning reproductive health policy issues, on two patient management variables, "refer vs. see", prior to the abortion decision and "refer vs. perform abortion" following the decision, are examined.

Extremes of "disturbance" appear to affect both the decision whether to see the patient in the first place and the decision to perform the abortion one's self. Compared with obstetricians who are "never" disturbed by their participation in abortion procedures, the "most" disturbed obstetricians were more willing to see the patient initially, but much less willing to perform the abortion themselves. On the other hand, while "liberals" on reproductive policy issues were more likely than "conservatives" to express willingness to see the patient, this attitudinal dimension had very little influence on the obstetrician's decision about who shall perform the abortion.

TABLE 6—Relative Importance of Six Physician Characteristics in Affecting Obstetricians' Management of Unwanted Pregnancy*

Physician Characteristics	Obstetrician's Management Decision				Average Rank
	Refer vs. See (Rank)	Where Refer (Rank)	Who Arranges Referral (Rank)	Refer Vs. Perform Abortion (Rank)	
Years Practice in Community	4	1	1	4	2.5
Frequency of Disturbance	3	5	2	1	2.8
Position on Reproductive Health Policy Issues	1	2	5	3	2.8
Position on Expansion of Women's Roles	5	4	4	2	3.8
Satisfaction with Patients in Practice	6	3	3	5	4.3
Solo vs. Group Practice	2	6	6	6	5
Proportion of Variation Explained (R ²)	.13	.36	.53	.11	
TOTAL N	163	45	46	114	

*Physicians who had not performed an abortion within the last 12 months were excluded from this table.

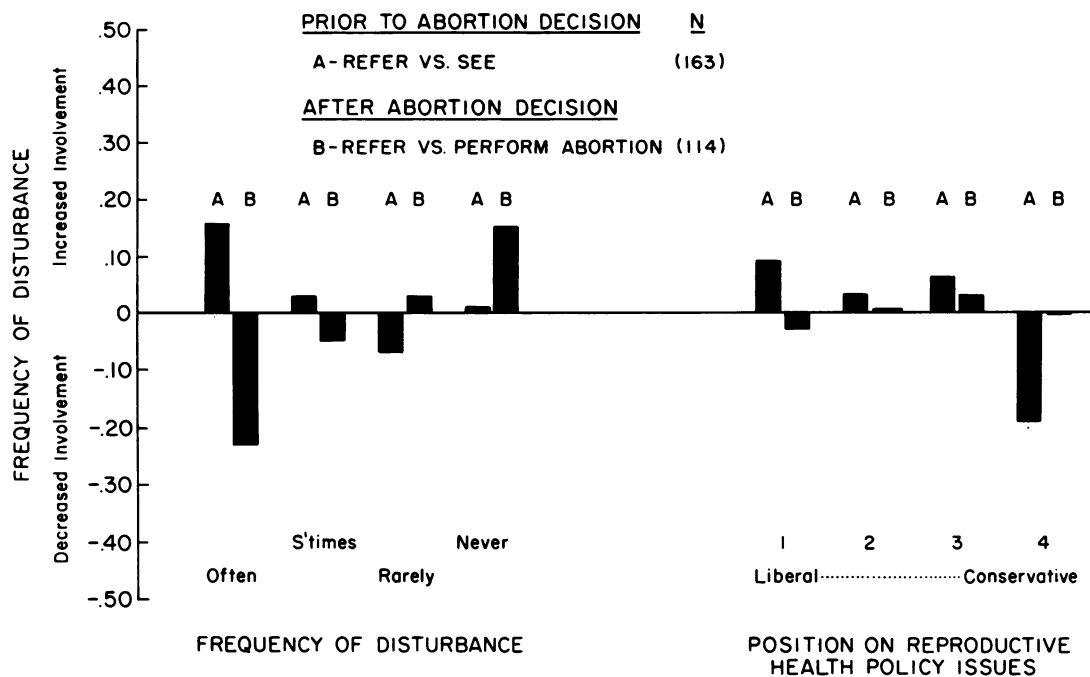


FIGURE 5—Influence of Selected Attitudes on Obstetrician's Involvement in Patient Care

Combined Influence of Obstetrician and Patient Characteristics on Management Decisions

As the final step in these analyses, we selected from among both patient and physician characteristics the four variables that contributed the most to two patient management decisions: to see the patient or to refer her and, once abortion is decided upon, to perform the abortion or to refer the patient elsewhere for this procedure. Each set of four variables was then reentered into the multiple classification analysis to determine the relative importance of patient as compared with physician characteristics in explaining these

two dimensions of physicians' projected behavior. The results of these analyses are presented in Table 7. As in Tables 5 and 6, each variable is listed in rank order of its contribution to the patient management decisions. The beta weights associated with each variable are presented, together with their significance levels and, finally, the overall per cent of variance explained by each combination of variables is given at the bottom of each column.

Patients' financial resources is the dominant variable in accounting both for the decision whether to see the patient initially and for the decision whether or not to personally

TABLE 7—Rank, Order, Significance, and Variation Explained by Four Patient and Physician Variables Used as Predictors of Obstetricians' Management Decisions

On First Patient Contact: Refer vs. See		After Abortion Decision: Refer vs. Perform Abortion	
Variable	Beta	Variable	Beta
Patient's Financial Resources	.36**	Patient's Financial Resources	.34**
Patient's Age	.21*	Physician's Frequency of Disturbance at Abortion	.26*
Physician's Position on Reproductive Health Policy Issues	.12	Physician's Position on Expansion of Women's Roles	.21
Physician's Type of Practice: Solo vs. Group	.11	Patient's Length of Gestation	.16
Proportion of Variation Explained (R ²)	.21**	Proportion of Variation Explained (R ²)	.24*
TOTAL N	(187)	TOTAL N	(116)

*p ≤ .05
**p ≤ .01

perform the abortion. Careful examination of the MCA results indicates that the nature of this effect is the same as that portrayed in Figure 1. Women described as without money or on Medicaid were less likely to be seen and more likely to be referred elsewhere for the abortion procedure than women who have private insurance or for whom money is no object. Age is important in the initial decision to see the patient; obstetricians were least willing to see the 16-year-old patient and most willing to see the 25-year-old woman. Finally, psychological disturbance by the abortion procedure is the only physician characteristic that achieves statistical significance in these combined analyses; physicians who are "often" disturbed by abortion were much more likely than those who are "never" disturbed to refer the patient for this procedure.

While these analyses suggest that patient characteristics may be more important than physician characteristics in accounting for decisions in regard to the disposition of a particular patient, attitudes play a major role in explaining obstetricians' readiness to raise the subject of abortion in the first place. It will be recalled that, after the case history was read to the physician, the first question was, "Would you ask (the patient) whether or not she wanted to continue with this pregnancy?" The variable that most successfully predicts the obstetrician's response to this question is his/her position on expansion of women's roles. Physicians who believe that roles alternative to motherhood should be open to women were also significantly more likely to offer alternatives to a pregnant patient.

Discussion

This paper has described the stated patient management decisions of obstetricians when they are confronted with a vignette about a woman with an unwanted pregnancy. The case history employed in the research was a hypothetical one, and we have no way of knowing whether the same responses would occur under actual practice conditions. However, the respondents were unaware that patient characteristics in the vignette were being systematically varied, and therefore it would have been difficult for them to deliberately manipulate their responses. Furthermore, these responses are consistent with data from more direct questions on these physicians' practices with respect to abortion patient management and fee policies.

The patient and physician characteristics examined in this paper account for significant proportions of the variation in decision-making processes basic to the delivery of health services: whether to see or to refer patients, whether to perform a surgical procedure or to send a patient in need of the procedure to another source of care. Furthermore, when the two sets of independent variables are considered simultaneously, the patients' characteristics have the greater weight in accounting for these referral decisions. More detailed aspects of referral management were also affected by the characteristics examined; however, the specific nature of these effects are less certain due to the smaller number of cases available for analysis.

In an earlier paper, physicians' attitudes were shown to have significant effects on their stated policies for the management of abortion patients.¹³ Obstetricians with more liberal opinions on extension of reproductive health services and on women's roles, and who are not disturbed by abortion procedures, report less restrictive policies for the provision of abortion services in their own practices. However, evidence from the vignette procedure suggests that these policies may not always govern the physician's behavior when he is confronted with a specific case. Approval for easy availability of abortion services on a broad policy level may coexist with a decision to limit participation in the care of selected categories of abortion patients.

The decision to limit participation—to refer the patient rather than to become personally "involved" in her care—appears most likely when the woman's social characteristics are inappropriate for a private patient (insufficient financial resources to pay for private care) or inappropriate for a pregnancy (teenage girl). These are the attributes, however, of a large proportion of women who seek abortion. In 1975, 40 per cent of women who obtained abortions in Maryland were under age 20; recent estimates by Lincoln and his colleagues indicate that from one-third to one-half of abortions in the United States are obtained by women who are poor, as defined by eligibility for public medical care funds.¹⁴ Moreover, Sullivan and her co-authors estimate that the unmet need for abortions is disproportionately concentrated among "poor, rural, and very young women."⁸ Many of these women cannot afford private medical care or prefer to avoid the publicity that can attend a visit to the local private physician, and may, therefore, welcome a referral outside of the traditional health care system. Some, perhaps, would prefer to employ traditional sources of care within their own communities, were these sources available to them. The data presented in this paper suggest that care within the traditional health system is least available to those categories of women most in need of abortion services.

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Thomas R. Forbes Named First Recipient of George Rosen Prize in the History of Medicine

The first George Rosen Prize in the history of medicine has been awarded to Dr. Thomas R. Forbes, Ebenezer K. Hunt Professor of Anatomy, Yale University School of Medicine. The award is presented annually by the Beaumont Medical Club to a prominent scholar in the history of medicine and is named for the late Dr. George Rosen, Professor of the History of Medicine at Yale, one of the leading medical historians of his generation.

Dr. Forbes, a member of the Yale faculty since 1945, is internationally known for his research in the field of reproductive endocrinology and for his work in the history of medicine. He is author of more than 170 scientific papers, chapters and abstracts, as well as three books, *The Midwife and the Witch* (1966), *Chronicle from Aldgate: Life and Death in Shakespeare's London* (1971), and *Crowner's Quest* (1978). In recent years, Dr. Forbes has produced a series of films on the history of medicine, which have added a vivid dimension to our appreciation of the lives of such preeminent physicians as Vesalius, John Hunter, and Paré. The latest of Dr. Forbes' films, *The Resurrectionists*, appeared in April 1977.

Dr. Forbes was DeLaune Lecturer and Medalist of the Worshipful Society of Apothecaries in 1975. A present member of the Special Study Section on the History of Life Sciences of the National Institutes of Health, Dr. Forbes has also been a member of the Board of Editors of the *Journal of the History of Medicine and Allied Sciences* (1956-1968), serving also as acting editor (1960-1962), and editor (1962-1963).

The Rosen Prize, a gift of Neale Watson Academic Publications, Inc., consists of a cash award and bronze plaque.