

Results of a Needs Assessment Strategy in Developing a Family Practice Program in an Inner-City Community

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The planners of an inner-city clinic and family practice residency program conducted a four-step needs assessment study to identify the importance, availability, and feasibility of local family practice services and objectives. Using mailout-mailback and supervised questionnaire data collection techniques, they contacted 1,020 consumers and providers. Those objectives rated most important and feasible and least available were given top priority for implementation, while the objectives rated important and unavailable but not currently feasible received research priorities.

This is a report of a needs assessment study conducted in 1975-1976 in the King-Drew service area of Los Angeles to assist in the planning of a family practice residency program and a family practice clinic or model unit. The King-Drew Medical Center consists primarily of the Martin Luther King, Jr. General Hospital and the Charles R. Drew Postgraduate Medical School. The center was developed to serve a community of about 350,000 persons of whom approximately 80 percent are Black, 15 percent have Spanish surnames, and 5 percent are white, Native American, or Asian. The community is well recognized as being medically underserved.

The major aim of this study was to determine the priority of family practice objectives in the King-Drew community by considering each po-

tential service's importance, present availability, and feasibility. A secondary purpose of the study was to validate a needs assessment strategy not previously applied in a health setting.

Background: Family Practice in the Inner City

A comprehensive study conducted by the American Medical Association's Ad Hoc Committee on Education for Family Practice (Willard Report published in 1966) reported that the number of physicians engaged in family practice had declined dramatically between 1931 and 1966. Virtually no programs existed at the time for training physicians for family practice.¹ The committee therefore recommended that such training be made a national priority. Although significant progress has been made since the Willard Report, there is nevertheless cause for concern about the development of family practice in inner cities. The American Board of Family Practice has been established, together with over 364 family practice residency training programs with 6,531 residents,²

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but few family physicians practice in inner cities, and there has been a tendency among recent family practice graduates to practice in smaller communities as opposed to larger or more congested areas. Furthermore, very few minority physicians are involved in family practice residencies; in August 1979, only 705 of all residents in family practice (9.3 percent) were Black, had Spanish surnames, or were Native Americans (according to a telephone conversation with Ross R. Black, MD, Division of Education, American Academy of Family Physicians, August 1979).

Watts, where King-Drew's 400,000 Black and Spanish surname consumers are most concentrated, has a lower average income, a younger population, and a higher unemployment and death rate than Los Angeles County as a whole. Watts also has few available primary care services: many persons in the King-Drew service area depend on the hospital emergency services for their full range of medical care needs. As of 1972, when the King-Drew Medical Center opened, there was one physician per 609 persons in California, but in the King-Drew service area the figure was one physician per 2,200 persons.³ In the entire Southeast Health Services Region, whose approximately 780,000 residents are served by the Medical Center, there are currently only 15 Board certified family physicians.⁴ Only three of these family physicians practice in the Watts area. A recent survey of a random sample of 200 patients in the Walk-In Clinic at King-Drew Hospital revealed that while 75 percent preferred to have primary physicians caring for them, only 10 percent had physicians of any kind whom they could name.⁵

Given the comprehensive nature of family practice, the planners of the King-Drew Medical Center felt that a family practice program could well serve this community. In order to determine which of many potential family practice services were most relevant to local needs, and to make the most efficient use of available resources, the planners of this program undertook a survey to assess the needs of consumers and the priorities of providers in the community.

Needs Assessment Strategy Review

The evaluation literature was reviewed to identify needs assessment strategies appropriate for

use at King-Drew. (The process of identifying needs and deciding upon priorities among them has been termed needs assessment.⁶ A need is identified when observed conditions fall below what is considered to be an acceptable standard.) Several methods, most of which were not formal needs assessment strategies, were identified as means of collecting information on health care needs and preferences of patient populations. They included the use of archival data, structured interviews, self-administered questionnaires, and open community forums.^{4,7-10}

One needs assessment strategy, developed at UCLA for use in educational settings, was selected for use in the King-Drew study because it is community based and utilizes data from a variety of sources.¹¹ This strategy requires first developing a list of objectives that might potentially be transformed into program services. The relative importance of these objectives is weighed, and an assessment of existing programs determines discrepancies between important goals and currently available services. Finally, an analysis is conducted to identify the objectives considered by consumers and providers to be the most important, least available, and yet feasible to achieve.

Methodology

Identification of Objectives

Literature about the development of family practice programs was reviewed to identify potential objectives for a family practice program as defined by the medical community and to determine an appropriate survey method to ascertain community needs and preferences for medical services. In general, the literature focuses on issues of program administration, integration of the program in university teaching hospitals, and the content of family practice education in undergraduate and graduate programs.^{12,13} While some of these studies describe the overall value of family practice per se,⁷ they do not evaluate the relative importance of different family practice services in the surrounding community. In order to make such a comparison, the planners of the King-Drew program obtained additional statements of objectives from a review of 20 family practice residency programs throughout the country.¹⁴ After listing

the objectives, a group of two family physicians, one internist, an epidemiologist, two educational specialists, and two consumer representatives met to discuss and refine the statements of objectives. At this point, the list contained approximately 50 objectives. It was not modified until the needs assessment form was tested in a pilot study.

Sample Selection

The three groups identified for participation in the needs assessment study were consumers (actual or potential users of services), providers, and health care administrators. The total overall sample size was 1,022. A consumer sample of 350 households was systematically drawn from a probability sample of 1,000 households in the King-Drew service area representative of the racial, income, educational, housing, and employment characteristics of the service area. To ensure that former or current users of King-Drew Medical Center services were represented by the consumer sample, three additional subsets were included. These subsets consisted of participants in a monthly community forum (N=100), consumers of outreach screening programs (N=100), a sample of Walk-In Clinic patients (N=150), and patients from a monthly Free Clinic (N=24). The total size of the consumer sample was 724.

Sample providers included nurses, physicians, social workers, and medex students. Every third physician (N=64) on the roster of the King Hospital and Drew Postgraduate Medical School faculty was selected so that all medical departments and professorial ranks were represented. Every fifth physician (N=100) from a list of 500 community physicians was selected without regard to specialty. In addition, 20 social workers, 20 nurses, and 20 medex students were systematically selected from the King-Drew Center. The total sample size of the provider group was 224.

Administrators (N=74) were drawn from top and middle level positions at both King Hospital and Drew Postgraduate Medical School, and because of the limited number, all names were used.

Questionnaire Development

The survey's self-administered questionnaire listed the objectives and provided a modified

Likert reference scale for rating the objectives in terms of importance, present availability, and feasibility. *Importance* was rated on a scale of 1 to 5 from "least important" to "most important." Respondents were instructed to assign at least two objectives to each of the five response categories (a Q-sort technique). *Availability* was rated on a scale of 1 to 3 from "not available" to "available but difficult to get" to "easily available." *Feasibility* was also rated on a three-point scale from "not feasible" to "feasible but difficult to get" to "easy to provide."

After a pilot test, 38 objectives were drafted into a final questionnaire which was prepared for administration in English and in Spanish. Because the pilot test indicated that many consumers had difficulty rating the feasibility of implementing family practice services, the feasibility scale was deleted from consumers' questionnaires. Only providers and administrators were instructed to rate the final 38 objectives in terms of feasibility as well as importance and availability.

Data Gathering

Two different data gathering methods were employed: the mailout-mailback technique and the supervised self-administered technique. All consumers in the Free Clinic subsample, the Walk-In Clinic subsample, and 250 out of 350 persons in the household subsample were supervised as they completed their questionnaires. The remaining 100 consumers from the household survey, the Community Medicine Forum, the Outreach Screening Clinic, and the providers and administrators were sent questionnaires using a mailout-mailback method.

Plan of Analysis

Target objectives for the family practice center were selected based on a synthesis of the mean rating of objectives in terms of their importance, availability, and feasibility. By comparing perceived needs to the actual experiences of the family practice center in the year following the study, the planners evaluated the validity of the responses to the needs assessment study. The response rate (mailed vs supervised), the accuracy and completeness of data, and the estimated cost

Method Subsample	Assignments		Return Rate*	
	f	%	f	%
Supervised Self-Administration**				
Household	250	24.5	102	40.8
Walk-In Clinic	150	14.7	116	77.3
Free Clinic	24	2.3	22	91.7
Mailout-Mailback†				
Community Medicine Forum	100	9.8	37	37.0
Household	100	9.8	5	5.0
Outreach Screening	100	9.8	12	12.0
Providers	224	21.9	84	37.5
Administrators	74	7.2	38	51.4
Total	1,022	100.0	416	40.7
*Frequency and percent of original assignments				
**Overall return rate for supervised self-administration was 57 percent				
†Overall return rate for mailout-mailback was 29 percent				

of mailing and supervising questionnaires served as determinants of the practicality of the needs assessment strategy.

Results

Response Rate

A large original sample size was selected on the assumption that it might be difficult to obtain responses from some of the subsamples and the mailout-mailback technique might yield poor return rates. The number of responses to the needs assessment survey confirmed this assumption (Table 1).

Of the 300 questionnaires mailed to consumers, 90 were returned due to incorrect addresses, and 54 were returned completed. Thus, the return rate was 18 percent for questionnaires mailed and 26 percent for those received.

Of the questionnaires mailed to community providers, 23 were returned with incorrect addresses, and 84, or 42 percent of the received total,

were returned complete.

Of 424 attempts to obtain supervised self-administered responses, 20 failed due to incorrect addresses, 80 because respondents were not at home or refused to answer, and 94 because persons refused to participate (34 Walk-In Clinic patients, 2 Free Clinic patients, and 58 in the household sample). Thus, 57 percent (240/424) of the original sample completed the questionnaires. Of the persons actually contacted, 74 percent (240/324) completed the questionnaire.

Largely due to the poor response rates for some of the subsamples participating in the mailout-mailback data gathering method, the overall response rate of 40.7 percent did not meet this study's target of 50 percent response. The number of returns was considered to be sufficiently large, however, for each group's needs to be reliably assessed. The proportions of consumers, providers, and administrators in the original and return samples were roughly equivalent, and there were few large differences in terms of sociodemographic and economic variables between the respondent and original planned samples.

Accuracy and Completeness

Among the respondents, 80 percent of the consumers followed the Q-sort direction to place at least two of the objectives in each rating category. Ninety percent of the providers and administrators responded as directed. Eighty-six percent of the questionnaires returned by consumers were complete, as were 90 percent of those from providers and administrators. Because none of the incomplete questionnaires represented more than four unanswered questions, missing data were ignored in the calculation of results.

Data Gathering Costs

Total cost for the mailout-mailback method was approximately \$484. The cost of 424 attempted personal contacts was approximately \$3,227, which included the cost of training questionnaire administrators. Thus, the cost per completed questionnaire in the mailout-mailback method averaged to \$8.89, and in the supervised self-administered method, \$13.34.

Although the mailout-mailback survey had the advantage of being relatively inexpensive, the much higher return rate (74 percent compared to 26 percent) associated with the supervised questionnaire suggests that when community involvement is considered essential to a needs assessment in the inner-city, this more costly technique might prove worthwhile.

Selection of Target Objectives

In the overall sample, each objective was given mean ratings of importance, availability, and feasibility (Table 2).

The overall mean rating of importance for all objectives was 4.0 on a scale of 1 to 5. In addition, separate averages were computed and compared for each subgroup of consumers, providers, administrators, and provider/administrators (such as physicians who were also administrators, department chairpersons, or associate deans). For consumers the mean was 4.1, for providers 3.7, for administrators 3.8, and for provider/administrators 4.0. Consumers' ratings ranged from 3.5 to 4.6, providers from 2.75 to 4.45, and administrators from 2.26 to 4.63.

The objective perceived as most important in the total sample was Number 1, "to inform people about the kind of health services that are available

to them" (Table 2). The objective perceived as being least important by the total sample was Number 24, "to care for persons of all ages and both sexes in the same clinic." Between consumers and providers, there were statistically significant differences in the rating in importance of 20 (52.6 percent) of the objectives; consumers and administrators differed significantly on 12 (32 percent), and provider/administrators and consumers differed significantly on 10 (29 percent) of the objectives. The most striking disagreement in the rating of consumers and administrators was on Number 11, "to conduct research to improve health care delivery." Consumers rated this 3.6 while administrators rated it 2.88, and providers 3.0. The greatest discrepancy between consumer and provider ratings appeared over Number 24, with an average rating of 2.75 for providers and 3.77 for consumers, and over Number 38, with consumers rating it 4.6 while providers rated it 3.21. Other objectives rated much higher by consumers than by providers included Number 4, cost control; Number 6, reduction of waiting time; Number 13, annual physical examinations; and Number 20, the care of all members of the family by one physician. The only statements which providers rated higher than consumers were Numbers 8, 16, 17, 27, 28, and 32. These differences, however, were not significant. A striking finding in these results was the tendency for persons who were *both providers and administrators*—mostly department chairpersons and deans—to agree more closely with consumers than with providers or administrators in their ratings, particularly on Numbers 6, 11, 20, 22, 23, and 24. This similarity in rating patterns between consumers and provider/administrators in the King-Drew health care system may provide the basis for making the health care system more sensitive to community needs and concerns.

The scale for rating availability ranged from 1 to 3, and the overall mean was 2.1 with a range from 1.65 to 2.5. The objective that received the highest overall mean rating in availability (2.46) was Number 9, "immunizations against certain viral diseases." The lowest overall availability rating was given to Number 38, home visits. Ratings in availability by consumers, providers, and administrators tended to agree. Disagreement was significant at the .01 level for only four of the statements of objectives (Numbers 4, 13, 24, 37).

Only providers and administrators rated feasi-

Table 2. Mean Ratings of Objectives

Objectives	Importance (N=416) (Scale: 1-5)	Availability (N=416) (Scale: 1-3)	Feasibility (N=122) (Scale 1-3)
1. Inform people about available health services	4.46	2.26	2.60
2. Teach families to identify dangers of common health problems	4.24	2.06	2.26
3. Help people get to a physician or hospital when needed	4.09**	2.21	2.45
4. Reduce the costs of health care services in a clinic or doctor's office	4.05**	1.69**	1.63
5. Set up health care services in the community close to the people	4.15	1.98	2.04
6. Reduce the waiting time to see a doctor	4.02**	1.78**	1.95
7. Make clinic's hours fit community needs	3.86	1.89	2.10
8. Show people how to stay healthy by proper diet, exercise, etc	3.83	2.03	2.31
9. Vaccinate against diseases like polio, measles, flu	4.26	2.49*	2.80
10. Screen for early stages of diseases like high blood pressure or diabetes	4.38*	2.26	2.53
11. Conduct research in health services delivery	3.47**	1.77	2.15
12. Gather complete information about individuals' health and medical problems	3.90**	2.08	2.15
13. Provide yearly physical examinations	3.82**	2.03**	1.92
14. Provide appropriate laboratory tests for diagnosis without waste	3.97*	2.13	2.33
15. Recognize and respond when people are in need of care	4.24	2.03	2.30
16. Provide the treatment that works and is safest for each patient	4.32	2.14	2.32
17. Allow patients to be responsible for some decisions about their health care	3.81	1.98	2.30
18. Closely follow people under treatment for an illness	4.28	2.12	2.30
19. Assist people in adjusting to life after a serious illness or injury	4.14**	2.00	2.12
20. Provide health care to the whole family by the same doctor	3.77**	1.84	1.85
21. Obtain patients' family history	3.65**	2.05	2.38
22. Identify and assist with family problems like child abuse and alcoholism	4.16**	1.85	2.00
23. Involve other members of patient's family in maintaining health and treating disease	3.82**	1.92	2.03
24. Care for persons of all ages and both sexes at the same clinic	3.45**	2.02**	2.04
25. Treat most common health problems in the same clinic	4.03**	1.94*	2.17

*Differences among providers, consumers, administrators, and provider/administrators at the .05 level
**Differences among groups at the .01 level

Table 2. Mean Ratings of Objectives (continued)

Objectives	Importance (N=416) (Scale: 1-5)	Availability (N=416) (Scale: 1-3)	Feasibility (N=122) (Scale: 1-3)
26. Care for normal pregnancies and deliveries	3.88**	2.44	2.63
27. Be sensitive to patients' feelings	4.19	2.13	2.60
28. Respect each patient as an individual	4.42	2.20	2.66
29. Seek patients' opinions about services offered in the family practice center	3.66**	1.88	2.44
30. Have physicians recognize when they need help from other health care providers	4.13**	2.14	2.40
31. Become aware of community health resources like family counselors and medical specialists	4.01	1.99*	2.50
32. Communicate clearly with other providers in making referrals and treating patients	4.00	2.07	2.41
33. Develop relationships which allow for long-term care of persons by the same providers	3.87	1.86	2.02
34. Ensure care of patients during a doctor's absence by accurate record keeping and informing other providers	4.48	2.08	2.45
35. Make the best use of the skills of each member of a family care team	4.15	2.01	2.34
36. Allow nurse practitioners and/or physician's assistants to provide care when possible	3.74	1.92	2.32
37. Become involved with community groups concerned with health, such as schools or churches	3.49**	1.90**	2.32
38. Make home visits when indicated	4.09**	1.65	1.89

*Differences among providers, consumers, administrators, and provider/administrators at the .05 level
**Differences among groups at the .01 level

bility. The feasibility scale ranged from 1 to 3, and the overall mean feasibility rating was 2.1 with a range of 1.63 to 2.8. The highest feasibility rating was given to Number 9, "immunizations" (which also received the highest availability rating). The objective receiving the lowest feasibility rating was Number 4, "reducing the cost of health care." There were no statistically significant differences in the mean ratings between the provider and the administrators.

In order to assign a priority scale to the objectives, the rating results were synthesized by combining importance, availability, and feasibility ratings, as seen in Table 3. Top priority for *im-*

plementation was given to those objectives rated high in importance and feasibility, and low in current availability. Four objectives were identified in this manner:

Number 5, To set up health services that are close to the people in the community

Number 22, To identify and assist with family problems that are threats to health

Number 25, To adequately treat the common or frequent health problems in the same clinic

Number 31, To make better use of community resources

Three of the objectives received top priority for family practice *research* because they were rated

Table 3. Synthesis of Needs Assessment Results

		IMPORTANCE			
		2.5*-3.5	3.5-4.0	4.0-4.5	
AVAILABILITY	1.0-2.0 Feasibility	1.0-2.0		Objective: 20	Objectives: 4,6,38
		2.0-3.0	Objectives: 11,37	Objectives: 7,17,23,29, 19,33,36	Objectives: 5,31,22,25
	2.0-3.0 Feasibility	1.0-2.0		Objective: 13	
		2.0-3.0	Objective: 24	Objectives: 8,12,14,21, 26,31	Objectives: 1,2,3,9,10, 15,16,18,19, 27,28,30,32, 34,35

*No objective's average rating fell below 2.5 or above 4.5 in importance

greater than 4.0 in importance but less than 2.0 for availability and feasibility:

- Number 4, To reduce costs of health care
- Number 6, To reduce the time a patient has to wait for health services
- Number 38, To make home visits when indicated

Validity of the Needs Assessment Findings

The King-Drew needs assessment strategy resulted in identifying objectives that were important to the Watts community, not yet available to it, and feasible to translate into service through the family practice residency program. Seven objectives identified in the study have served to guide the center's development and research activities. In response to the Watts community's selection of the objective to provide health services that are close to the people, the model family practice center was organized, satellite activities were developed at two outlying clinics including the basement of a community church, and an evening

clinic was established to meet the needs of persons whose daily work prevented them from visiting the clinic during regular hours. In response to the research objective, "to reduce the time a patient has to wait for services," one of the residents conducted a patient time flow study to determine the points of longest wait. The study resulted in a new approach to patient orientation and screening that has substantially reduced waiting time in the family practice center.

During the first year after the needs assessment, the family practice center's growth rate, patients' compliance with appointments, and the extent to which patients reported as family units demonstrated the validity of the study's findings. The family practice center grew at a rate of 100 new patients per month, and by the end of the eighth month approximately 450 patients were being seen per month. Whereas compliance with appointments had averaged between 50 and 60 percent for all of the outpatient clinics of the institution, by the sixth month of the center's operation its show

rate was between 75 and 80 percent, and by the eighth month there were 150 patients, or 20 percent of the population, who were followed as family units.

Discussion

A review of the conditions surrounding the King-Drew needs assessment produces several possible explanations for the unexpectedly low response rate by consumers. Although the respondent population resembled the entire consumer sample in age, family ties, and marital status, it appeared to have 1.5 to 2 years more education, which indicates that the less well-educated groups were less responsive, particularly to the mailed surveys, than others. (According to other studies conducted by Dr. John Ware of the Rand Corporation, response rates in community surveys range from 25 to 95 percent, and groups with lower socioeconomic status show poorer response rates.) Given the generally low educational level of consumers in the King-Drew service area, response rates might have been boosted had the questionnaire been shortened so that it took less than one half-hour to complete. Also, it was probably unrealistic to expect the majority of consumers in an area of such high mobility to be concerned about the family practice center's future. Among consumers who had otherwise become involved with King-Drew, eg, those who had participated in the Community Medicine Forums, the response rate was three times greater than it was among consumers in outreach screening programs, and six times greater than it was among people identified by probability sample of households. Even among providers, physicians working within King-Drew were about four times more responsive than practicing community physicians.

A review of the ratings reveals that while consumers and providers in the Watts area generally considered family practice objectives to be important, consumers tended to rate them higher than did providers. Consumers also attached great importance to improving access to health care, and to maintaining health and preventing disease. They gave a high rating (3.5) to the family unit objectives, but rated the access and preventive medicine objectives as more important. Perhaps this was because the community did not understand the concept of family unit medicine as well as it did other concepts in medicine, or perhaps the

residents of Watts were primarily concerned with getting medical care, and considered the relatively sophisticated ideas, like treatment of families by medical teams, to be impractical priorities.

The strategy used in this needs assessment encouraged the kind of community input that is essential to the structuring of family practice units to improve health care delivery. The results from this study have been used at King-Drew in improving access to care and disease prevention, increasing compliance with medical care regimens, reducing waiting time and the cost of care, and in generally improving the design of the family practice center.

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