A picture is presented of the distribution and concentration of the needs and services for family planning in the United States by county. Noteworthy is the concentration of the heaviest program inputs as well as the largest number of women not served in a relatively few urban counties.

GEOGRAPHIC DISTRIBUTION OF NEED FOR FAMILY PLANNING AND SUBSIDIZED SERVICES IN THE UNITED STATES

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Introduction

A STUDY, *Need for Subsidized Family Planning Services: United States, Each State and County, 1968,* has recently been released by the Family Planning Office of the Office of Economic Opportunity. This paper will review the purpose and design of the study, and discuss findings which relate to the distribution of women at risk, the number reported served in subsidized programs, and the number unserved, by county, for the United States.

The object of this work was to collect, for each of the 3,072 counties in the U. S., basic data on the need for subsidized family planning services, the services currently available, selected characteristics relevant to need, and resources available for the delivery of services.

The purpose in compiling and collecting such data was, for the first time, to develop a capability for estimating the level of organized family planning services in the U. S. In addition, such information could assist in planning by making it possible to examine where program inputs were going and where they were needed. A file of this nature, it was felt, would also provide baseline data useful for monitoring improvements in the distribution of program efforts over time, and might also serve as a preliminary tool for evaluating the effectiveness of publicly financed family planning programs in reaching program objectives.

For each county in the U. S., selected variables on needs and resources have been compiled from existing sources; however, data on services required field surveys. This paper will deal with only a limited portion of the material on file; the items included in the study for each county are listed in the Appendix.

Methodology

The report, *Need for Subsidized Family Planning Services: United States, Each State and County, 1968,** includes

* Available from the Family Planning Program, Office of Health Affairs, Office of Economic Opportunity, Washington, D. C., or the Center for Family Planning Program Development of Planned Parenthood-World Population, New York, N. Y. 10022.

a full discussion of the methodology and the limitations of data. However, a few important points relevant to the material in this paper will be discussed here.

Population

The basic population denominator and number of women age 15-44 in this work consist of 1966 population estimates for the United States, by county, made by the State and Local Population Estimates Branch, Population Division, U S. Bureau of the Census.*

Need

The total number of women age 15-44 estimated to require subsidized family planning services consist of those who can be classified as medically indigent, fertile, exposed to risk of pregnancy, not currently pregnant or seeking a desired pregnancy. This has been approximated by applying the Dryfoos-Polgar-Varky formula to the census estimates for each county for 1966. The methodology employed by the formula, which was developed at Planned Parenthood, is described in detail in the full report.

Current Services

Because there were no readily available nationwide statistics giving patient figures from which to determine how many women were currently receiving family planning service from organized programs during the period from July 1, 1967, to June 30, 1968, three mail surveys had to be conducted.

We know that health departments, hospitals, and free-standing clinics are the major channels through which subsidized family planning services are delivered, but knowledge of the level of service and the exact locations of service facilities is severely limited. In order to establish a preliminary universe of agencies providing organized family planning services to low-income women, available data from previous reports and surveys were examined for each of these three channels. The field to be surveyed included voluntary and public hospitals, health departments, Planned Parenthood clinics, OEO family planning projects, Neighborhood Health Centers, maternity and infant care projects, and other agencies known to be providing family planning.

It was decided to survey hospitals, Planned Parenthood affiliates, and state health departments—individually and directly—to determine the number of patients served in their programs, and the addresses of their clinics. Responses originating from the same locality were compared for duplications, since combined funding and sponsorship sometimes result in duplicate reporting. When necessary, responses were also edited for conversion from visits to persons served since some agencies do not have record systems which enable them to report unduplicated counts of patients served. While the service figures are probably the best available nationally, they must be regarded as approximations.

No attempt was made to obtain figures on the number of women in the target population served by private physicians at their own expense or through Medicaid. Estimates based on scanty data place this proportion at less than 10 per cent of those in need. Nor could a study of this kind attempt to assess the retention rate of service programs or to evaluate their general quality. Therefore, while the term "number of women served" is employed, it would be more accurate to refer to the "number of patients enrolled" by an organized family planning service. How well or how fully the patients are served is not known, and it is probable that great variation exists from program to program. The study, therefore, could be

* Current Population Reports Series, p-25, Nos. 401, 404, 407 and 409, 1968, describe methodology.

regarded as estimating the extent to which organized programs have been successful in at least enrolling the population in need—a necessary first step toward the systematic evaluation of any program.

Within the defined universe of programs and agencies from which service data were sought, the response rate was excellent, nearly 100 per cent in all categories.

Findings

The data to be presented now are limited to distributions of need and services by county, along with a preliminary assessment of some general characteristics of the counties containing and not containing organized services.

Table 1 provides a summary of the distribution of U. S. counties by the number reporting organized family planning services in fiscal 1968.

In the U. S., it is estimated that, in FY 1968, there were approximately 5.4 million medically indigent women in need of subsidized family planning services. Among the 3,072 U. S. counties, only 1,200 reported organized programs, while, in 1,872 counties, no family planning programs for medically indigent women were identified. One hundred and twenty-two counties reported programs, but were not able to provide figures on the number of women served; they are included among the 1,200 counties with reported programs.

The 1,200 counties reporting organized family planning programs make up 39 per cent of U. S. counties; they also contain approximately 75 per cent of the total U. S. population, and of women aged 15-44, as well as the same proportion of low-income women in need of subsidized family planning services. Almost 800,000 women received subsidized services within these (1,200) counties, which amounts to about 15 per cent of all the women in the U. S. who are estimated to be in need of family planning services (Table 1a). At risk and remaining to be served in the counties with reported programs, were 3.2 million women, or 70 per cent of the total number of women who are unserved in the U. S.

While only 15 per cent of the women in need are being served nationally, there is, of course, great variation from county to county in the current service picture; a few counties were found to provide service to more than 40 per cent of the group at risk, while others reported less than 1 per cent. Among the 1,200 counties reporting services, 20 per cent of those at risk are being served. We still have a long way to go.

The 1,872 counties without reported programs constitute 61 per cent of all U. S. counties but they contain only about 25 per cent of the total U. S. population, about the same proportion of women age 15-44, and 1.4 million or 27 per cent of all low-income U. S. women at risk and in need of family planning. Since no programs are reported, unserved females also equal 1.4 million and unmet need equals 100 per cent.

In summary, about three-fifths of U. S. counties contain one-quarter of those at risk and report no organized programs; conversely, two-fifths of U. S. counties contain three-quarters of those at risk in the entire country and report service to about one-fifth of this group (Table 1). Since the two-fifths of U. S. counties with service contain roughly three-quarters of the U. S. population, it is obvious that these include most of the major urban areas in the country, where need is more highly concentrated. On the other hand, as noted earlier, the 1,872 counties with no organized programs contain only about 1.4 million women at risk, indicating that the need is much less concentrated in these counties.

Table 2 shows the distribution of counties ranked by quartiles of women

Table 1—Distribution of U. S. counties by number reporting organized family planning services for medically indigent women served and unserved: total U. S. population,[a] women age 15-44,[a] estimated number of women in need,[b] number of women served and unserved

	No. of counties	Total population[a] (1966 est.)	Female population[a] Age 15-44	Female population in need[b]	Females reported served	Unserved females
		(000)	(000)	(000)	(000)	(000)
U. S. counties reporting no organized family planning services to indigent women	1,872	48,888[c]	9,577	1,430	—	1,430
Counties reporting organized services to indigent women	1,200[d]	146,811	29,966	3,937	773	3,164
Total	3,072	195,699	39,543	5,367	773	4,594
			Vertical per cent			
No service	60.9	25.0	24.2	26.6	0.0	31.1
With service	39.1	75.0	75.8	73.4	100.0	63.9
Total	100.0	100.0	100.0	100.0	100.0	100.0
			Horizontal per cent			
	(000)					
No service	(N= 48,888)		19.6	2.9	0.0	2.9
With service	(N=146,811)		20.4	2.7	0.5	2.2
Total	(N=195,699)		20.2	2.7	0.4	2.3

a. U. S. Bureau of Census, 1966 population estimates.

b. Estimated by applying the Dryfoos-Polgar-Varky formula to female population age 15-44, 1966.

c. Rounding to the nearest thousand was done after computation.

d. One hundred twenty-two counties reporting service but not providing figures on the number of women served have been included; present information is that the number of women served in these counties is not significant.

Table 1a—Number of medically indigent women served and unserved as per cent of U. S. total estimated at risk for subsidized family planning services, fiscal 1968

	No.	%
Served	800	15.4
Unserved	4,600	84.6
Total need	5,400	100.0

served in the 1,200 counties with reported organized programs. The significant finding here is the concentration of service in relatively few counties: 8 counties, or 0.3 per cent of all U. S. counties, account for the first quartile in which about 200,000 women were served (or 25 per cent of reported services). Only 23 more counties, or 0.7 per cent of all U. S. counties, account for the next quartile—200,000 women served. Expressed cumulatively, *31 or only 1 per cent of all U. S. counties account for 50 per cent of all women reported served in subsidized family planning programs throughout the United States.*

Going one step further, the next quartile adds 86 counties. Thus, 117 counties, or 4 per cent of U. S. counties, account for 75 per cent of women reported served; that is, 600,000 out of 800,000 served throughout the U. S. This obviously reflects concentration of program inputs and, as will be shown later in more detail, those service areas include nearly all of the great urban counties where population is concentrated, where needs are most obvious, and where resources for delivery of services are most readily at hand.

Finally, the last quartile of women are served in 961 counties; these are for the most part quite small programs. On an average basis, there are about 200 women per county receiving service in the latter group of counties through all delivery agencies (although in most of these counties only one agency is usually providing services).

Table 3 shows the distribution of quartiles of unmet need: that is, the number of women estimated to be in need of subsidized family planning services but not reported as receiving them, and the number of counties in each quartile. There are approximately 4.6 million women still in need of service.

Table 2—Quartile range of women served in subsidized family planning programs for U. S., fiscal 1968; number and per cent of counties in each quartile

Women served			Counties			
No.	Cum	Cum %	No.	%	Cum	Cum %
(000)	(000)					
200	200	25	8	0.3	8	0.3
200	400	50	23	0.7	31	1.0
200	600	75	86	3.0	117	4.0
200	800	100	961	31.0	1,078	35.0
			122[a]	4.0	1,200	39.1
	None reported		1,872	61.0	3,072	100.0
			3,072	100.0		

a. One hundred twenty-two counties reporting service but not providing figures on the number of women served have been included.

Table 3—Quartile range of women estimated at risk for subsidized family planning services not receiving service for U. S., fiscal 1968, and number and per cent of counties in each quartile

Women unserved			Counties			
No.	Cum	Cum %	No.	%	Cum	Cum %
(000)	(000)					
1,150	1,150	25	69	2	69	2
1,150	2,300	50	244	8	313	10
1,150	3,450	75	626	20	939	31
1,150	4,600	100	2,133	69	3,072	100
			3,072	100		

Here, too, great concentration is evident: relatively few counties in the U. S., 69 in all, account for 25 per cent of the unmet need. The next quartile of unmet need involves 244 additional counties. Thus half of the unmet need of 2.3 million women is found in 313 counties (about 10 per cent of all counties).

It can be noted at this point that most counties with the greatest need figures are also found heading the list of counties with the largest program inputs. For example, if one compares the 50 counties with the greatest need to the first 50, by numbers served, *29* appear on both lists, indicating that there is fair correspondence between location of needs and service efforts. However, the magnitude of the input relative to need is as yet grossly insufficient, inasmuch as several million women remain to be reached and over one million of these are in relatively concentrated target areas in only 69 U. S. counties.

Table 3 shows that the fourth quartile of unmet need is spread over a vast area involving 2,133 counties. While these counties include some metropolitan areas, they are for the most part rural and rural-farm areas with small and dispersed populations and with few health resources, making it difficult and costly to reach the patient.

Table 4 expands on reported services as presented initially in Table 2. In Table 4, as in the earlier table, the number of women served is the controlling variable. The eight counties comprising the first quartile are detailed in Table 4 and vividly illustrate how service inputs have been concentrated in major urban areas. It was to show this that the county, state, and major city identifications were provided. Note that the East appears to be first with three New York City counties, Baltimore, and Washington, D. C. The Midwest is represented by Cook County (Chicago) and Wayne County (Detroit). Finally, in the Far West, we have Los Angeles County.

For proportion of those in need who are served, these areas represent fairly substantial program achievements when compared to the national average: in these eight counties 42 per cent were served—200,000 of 471,000 in need—whereas nationally only 15 per cent were served.

In the second quartile, involving 23 counties, 36 per cent of those at risk were served, in the third quartile 23 per cent, and in the fourth—the least densely populated counties of the U. S.—only 10 per cent. The column labeled "total population" illustrates the increasing dispersion as one moves from high to low

Table 4—U. S. counties by quartiles of women served in subsidized family planning programs; number of women served, estimated need, number unserved, female population age 15-44, total population*

No. of counties	Rank by no. served	County	State	Principal city	No. served (fiscal 1968)	Estimated need	Unserved	Females 15–44 (1966)	Total population (1966)
					(000)	(000)	(000)	(000)	(000)
Detailed listing of 8 counties comprising first quartile, with ranking by number served	1	Cook	Ill.	Chicago	38	82	44	1,029	5,400
	2	L. A.	Calif.	L. A.	33	126	94	1,375	6,814
	3	N. Y.	N. Y.	N. Y. C.	30	49	19	305	1,540
	4	Kings	N. Y.	N. Y. C.	22	64	42	548	2,702
	5	Wayne	Mich.	Detroit	21	59	39	532	2,705
	6	Bronx	N. Y.	N. Y. C.	19	36	17	314	1,543
	7	D. C.	—	Washington	18	21	2	164	806
	8	Baltimore	Md.	Baltimore	18	32	14	303	1,489
8	–	—	—	—	200	471	272	4,572	22,999
23	–	—	—	—	200	550	352	4,600	22,700
86	–	—	—	—	200	860	660	7,735	37,649
1,083[a]	–	—	—	—	200	2,080	1,880	13,059	63,463
1,872	–	—	—	—	No. services reported	1,430	1,430	9,577	48,888
3,072					800	5,367	4,594	39,543	195,699

* Rounding to nearest thousand performed after computation. Total computed in columns or horizontals may not tally due to rounding.

a. One hundred twenty-two reporting service but not providing figures on the number served have been included.

service areas. The first eight counties contain as many people as the next 23. The next 86 counties contain fewer people than the first two groups of 31 counties, and so on. The data make clear that the question of providing family planning services in those areas where population is spread thin has only begun to be examined. Indeed, this is generally true for nearly all health services, not merely family planning.

Table 5 presents data on the population size and the range of the percentage of rural-farm population in the 1,200 counties reporting service figures, arranged again by quartiles of women served. It can be seen from the range of population size that, while in general the counties with least service in the fourth quartile must include many sparsely populated areas, they are not exclusively so. One county in this quartile contains 1.3 million people—suggesting that even in large urban areas the extent of programing for family planning services is severely deficient.

It appears that the first two quartiles, accounting for half of the women served, are comprised exclusively of high-population counties. For example, in quartile two the smallest county by population size is 320,000. Very few of these 31 counties in the first quartiles have any rural-farm population.

The third quartile contains counties that range from relatively small—25,000 population—up to quite large—1.4 million—and show a wide variation in percentage of rural-farm population.

In the fourth quartile, there is a tremendous range, both of population size —from less than 1,000 to 1.3 million— and of rurality—from zero to 59.5 per cent (an inordinately high proportion to be classified as rural-farm). These 1,083 counties are a great mixture of county types, including some highly urban areas which are in fact part of great metropolitan centers (i.e., Boston, Massachusetts; Passaic, New Jersey; Suffolk County, New York) as well as some of the most rural parts of the United States.

It is obviously not always possible to categorize counties as urban or rural-farm areas. The usual problems of classification plague the researcher on this as on so many other dimensions. For, within a single county, there may be extensive urban as well as rural-farm areas. The socioeconomic ecology of a region does not usually oblige us by observing county jurisdictional lines. This factor often results in the mixture of characteristics demonstrated in the tables. Table 6 provides an overview of the number of women unserved with respect to the rural-farm characteristics. All U. S. counties have been ranked from low to high according to per cent rural-farm, and then distributed by quarters by the number of women needing subsidized family planning service. In addition, the number of counties for each quarter with no reported programs are shown.

The 124 least rural counties contain a

Table 5—Quartile range of women served in subsidized family planning programs for U. S., fiscal 1968; for each quartile: the number of counties, range of population size, and range of per cent rural-farm population

Women served	No. of[a] counties	Range of[b] population size	% rural-farm[c]
(000)		(000)	
200	8	800–6,800	All less than 1
200	23	320–2,000	0.0– 2.4
200	86	25–1,400	0.0–17.5
200	1,083[a]	<1–1,300	0.0–59.5
800	1,200		

a. One hundred twenty-two counties reporting service but not providing figures on the number of women served have been included.

b. Bureau of Census estimate for 1966.

c. 1960 Census.

Table 6—All U. S. counties ranked by per cent rural-farm population and distributed by quarters of women unserved (fiscal 1968), range of per cent rural-farm population per quarter, number and per cent of counties, and number and per cent of counties with no program

Range % rural-farm population[a]	No. of women unserved	No. of U. S. counties	% of U. S. counties	Counties with no subsidized programs		
				No.	%	
	(000)					
0.0– 0.9	1,150	124	4.0	26	21.0	(N=124)
1.0– 5.2	1,150	359	11.7	45	12.5	(N=359)
5.3–17.8	1,150	876	28.5	500	57.1	(N=876)
17.9–86.0	1,150	1,713	55.8	1,301	75.9	(N=1,713)
	4,600	3,072	100.0	1,872	60.9	(N=3,072)

a. 1960 Census.

quarter of the number of women needing service (1.15 million). No county within this group exceeds 0.9 per cent of rural-farm population; and only 26 or one-fifth of these counties report no program. In the next group, all counties show a small proportion of rural-farm population, not less than 1 per cent and not more than 5 per cent. Here also a small number of counties, about one-eighth, report no program.

Group three moves into the middle to upper range with respect to rurality, and this includes 28.5 per cent of all U. S. counties; 500 or 57 per cent of these report no programs. Finally, in group four, we are really in the country. These are predominately rural counties and include over half of all counties in the U. S. Seventy-five per cent of these counties report no program. As rurality increases, programing decreases.

Table 7 illustrates the program potential of 1,872 counties with no reported service. In this table, the distribution of all counties with no service is

Table 7—Number and per cent of U. S. counties with no subsidized family planning services, by range of estimated number of women in need; number and per cent of women unserved

Counties with no service				Range, estimated no. of women needing service	No. unserved			
No.	Cum	%	Cum %			Cum	%	Cum %
					(000)	(000)		
123	123	6.6	6.6	2,000–10,000	382	382	26.7	26.7
315	438	16.9	23.5	1,000– 1,999	428	810	29.0	55.7
558	996	29.7	53.2	500– 999	395	1,195	27.8	83.5
876	1,872	46.8	100.0	000– 499	235	1,430	16.5	100.0
1,872		100.0			1,430		100.0	

controlled by the range of estimated number of women in need. The total number of women in need is also presented for each group of counties.

Line two in the table shows that a total of 438, or 24 per cent of counties with no program, contain 1,000 or more women at risk; cumulatively, these counties contain a total of 819,000, or 56 per cent, of all those unserved in counties without programs. They should be regarded as areas with high program potential since they contain 1,000 or more women at risk.

The figure of 1,000 or more women per county at risk and in need is a useful measure of the service potential in these areas, since it is estimated that this number of patients is sufficient to provide minimum economy of scale in the operation of a clinic program.

The remaining two groups, totaling three-quarters of all U. S. counties without programs, are the more sparsely populated ones and account for 44 per cent of women at risk in unserved areas.

Summary

This paper has presented in broad terms the distribution and concentration of needs and services in the United States by county.

Of particular note is the concentration in relatively few urban counties of both the heaviest program inputs as well as the greatest number of women unserved. Equally important, a program potential exists in 438 counties with no service provided and more than 1,000 women at risk.

The data also point up the virtual nonexistence of *organized* programs in sparsely populated and rural-farm areas of the United States. In qualitative human terms, the need for family planning programs here is undoubtedly just as great as in metropolitan communities.

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APPENDIX

What Is in the File—for Each County in the United States.

a. *Needs and Services*

Total population of U. S., 1966; women in the childbearing years, i.e., 15-44; number of women medically indigent needing subsidized family planning services; number receiving family planning services through subsidized clinic programs; number in need not receiving services, or unmet need; number of home-based migrant workers; number of American Indians under the jurisdiction of the Indian Health Service of DHEW.

Under needs we have also selected health and demographic indexes which provide greater insight into the characteristics of each county: infant mortality rate; number of infant deaths in excess of 17.8 per 1,000 for the five years 1961-1965; fertility rate per 1,000; live birth order as a per cent of all births; out-of-wedlock births per 1,000 live births (not reported for 16 states); births of 2,500 grams or less as a per cent of live births.

Each county is classified by whether it is within a Standard Metropolitan Statistical Area or State Economic Area (for New England) or a nonmetropolitan county according to total population of SMSA, SEA or county.

b. *Resources*

Physicians—Number of nonfederal physicians in patient care with offices in the county; ratio of M.D.'s per 100,000 population; num-

ber of general practitioners; ratio per 100,000 population; number of obstetrician-gynecologists and ratio per 100,000 population.

Hospitals—For all short-term, general-care, nonprofit hospitals reporting births, operated by private agencies, nonfederal governmental agencies, but including the Public Health Service and Indian Health Service hospitals: number in each county; total births reported for all hospitals in the county; number reporting family planning services.

Other Resources — Counties with medical schools; community action agencies; OEO-funded Family Planning Projects; OEO-funded Neighborhood Health Centers; counties with Model City Programs; Children's Bureau Maternal and Infant Care Projects; Public Health Service Neighborhood Service Projects; counties where the health department provides family planning services; and finally, counties where Planned Parenthood affiliates provide family planning services.

Book Service Changes for 1971

To simplify and improve Book Service procedures, a slight increase will be made in the cost of all books, as of January 1, 1971. This is to cover postage and handling, and there will therefore be no additional charges for these items.

Another change for 1971 will be the required prepayment of all orders under $5. —*without exception.* (Book Service, American Public Health Association, 1740 Broadway, New York, N. Y. 10019.)

Urgently Needed

The January, February, March, May, July, October, December, 1969, and January and February, 1970, issues of the American Journal of Public Health and the supplement, Medical Care: The Current Scene and Prospects for the Future, are urgently needed. Members who wish to donate their copies should send them to:

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