

A Survey of Health Status and Needs Of Urban Mothers and Children

HELEN M. WALLACE, M.D., M.P.H., HYMAN GOLDSTEIN, Ph.D.,
EDWIN M. GOLD, M.D., and IRA W. GABRIELSON, M.D., M.P.H.

FEW persons would question that the large cities of our country and their inhabitants are in serious trouble. Riots occur intermittently, housing is substandard, and the environment, because of pollution, is frequently unhealthy. Public schools with large classes and insufficient individualized personal instruction are giving students substandard educations. Crime, juvenile delinquency, and drug abuse are increasing and health and hospital inpatient and outpatient services are often inadequate. Recreation services are relatively few (1).

Concurrent with the aforementioned difficulties, there has been a considerable movement to the cities from rural areas of low-income people and families. This movement has placed an enormous

burden on the cities' civic services, including health services, hospitals, and social agencies, because these people have great need for services but little or no ability to support them.

Middle-class families who do support these services, however, have left the central cities for the suburbs. Many practicing physicians have also left, and although the needs of the inhabitants of our large cities have increased, they have fewer direct resources to meet them. Direct tax sources are increasingly inadequate to meet the cost of city health services, and a rise in unemployment has added a further strain to the economic and social structure. Inflation has decreased the purchasing power of the health dollar as it has that of other dollars.

We felt it timely to survey the status and needs of mothers and children in large cities. Also, the survey would provide an opportunity to determine their health status and needs during a time of economic stress and changing concepts of the delivery of health services.

Method of Study

A questionnaire was devised, and beginning in the fall of 1969 three mailings were sent to the health departments of 130 cities with a total population of 100,000 or more according to the 1960 census. These 130 cities had a total population in 1960 of 58,393,767 or 32.6 percent of the total population of the United States at that time (2).

Of the 130 questionnaires, 107 (82.3 percent) were returned. Of these 107, data were given on

The authors are with the division of maternal and child health, University of California School of Public Health, Berkeley. Dr. Wallace is professor and chairman, Dr. Goldstein is research biostatistician, Dr. Gold is professor in residence, and Dr. Gabrielson is clinical professor. Dr. Goldstein also is adjunct professor of biostatistics and Dr. Gold also is clinical professor, department of obstetrics and gynecology, University of California School of Medicine, San Francisco.

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84 (respondents) and no information was given on 23 (nonrespondents). This resulted in a response rate of 64.6 percent. Reasons given for inability to provide data were usually that data were not available or the department lacked staff to collect and provide the data requested. In general, the larger the city, the better the response rate.

Health Services in Large Cities

Thirty-two respondents had a city health department and 29 a city-county health department. An additional 18 had county health departments. The other five respondents had other types of organizational structures.

Forty-one health departments employed a full-time director of maternal and child health (MCH) services, and an additional eight cities had a part-time MCH director. When provided, the salary of the MCH director was in the regular

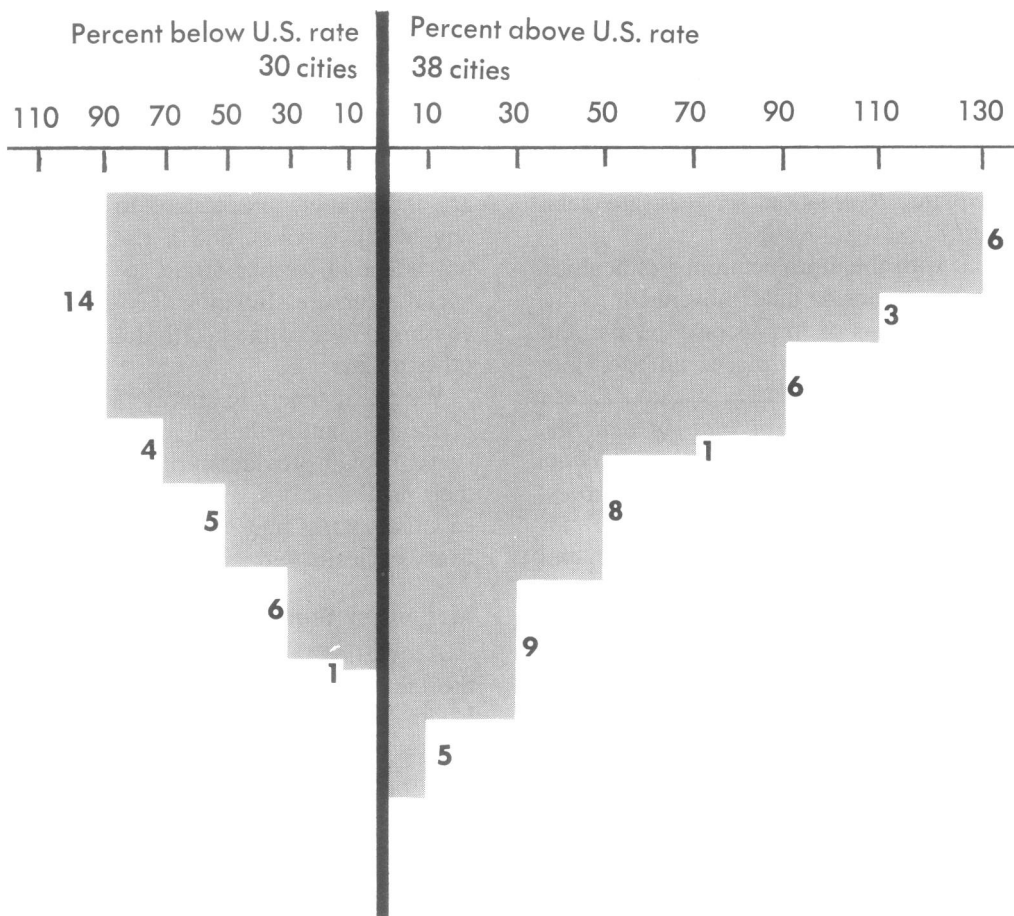
budget. Size of city was a factor in this survey, because an MCH director was reported employed by proportionately fewer cities that had less than 250,000 persons.

Forty-five departments in 1969–70 employed one or more full-time physicians in maternal and child care. Again, proportionately fewer cities having less than 250,000 persons employed a full-time MCH physician. In 1969–70, 34 cities with populations of 200,000 or more employed one or more full-time physicians, an increase of nine cities when compared with 1961 (25 cities). If full-time physicians were employed, their salaries were usually regularly budgeted items.

Mortality in Large Cities

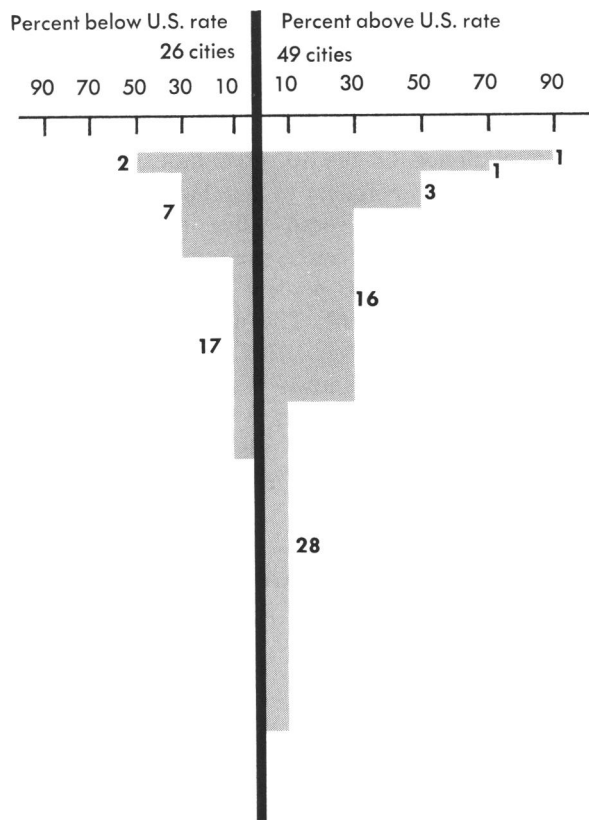
Maternal mortality. Of the 84 respondents providing information in 1969–70, 38 reported a maternal mortality rate higher than the rates for

Figure 1. Percent distribution of maternal mortality rates that are below or above the U.S. maternal mortality rate of 1967–68



NOTE: Boldface figures indicate number of cities.

Figure 2. Percent distribution of infant mortality rates that are below or above the U.S. infant mortality rate of 1967-68



NOTE: Boldface figures indicate number of cities.

the United States as a whole in 1967 or 1968, and 30 reported lower rates. Respondents from 16 cities had no information (fig. 1).

Infant mortality. Forty-nine respondents reported an infant mortality rate higher than the rates for the United States as a whole in 1967 or

Table 1. Comparison of white and nonwhite infant mortality rates, 1967 and 1968

Percent increase in nonwhite over white	1968	1967
Less than 20.1	2	1
20.1-40.0	7	3
40.1-60.0	4	0
60.1-80.0	10	3
80.1-100.0	4	2
100.1-120.0	4	2
120.1-140.0	2	1
140.1-160.0	0	0
160.1-180.0	4	0
Total	37	12

NOTE: Data were not obtained from 35 cities.

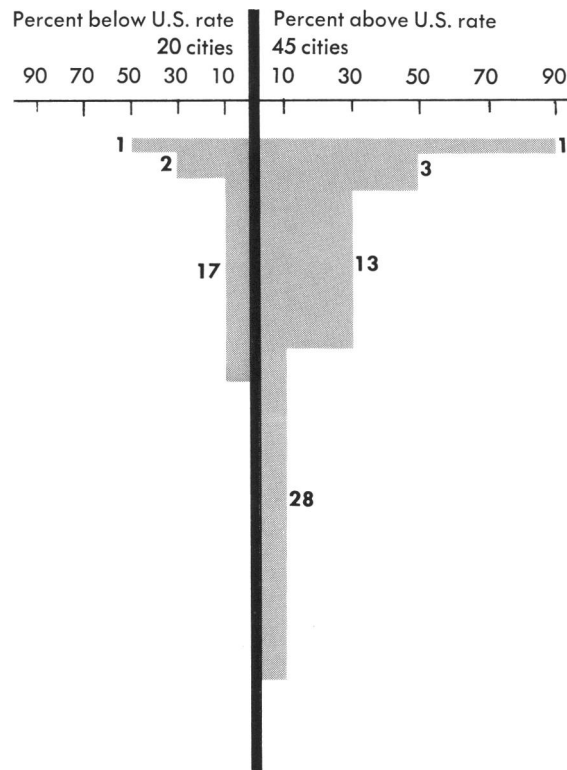
1968, and 26 reported lower infant mortality rates. Nine cities gave no information (fig. 2). Data were available on infant mortality for nonwhites in 49 cities. The rates for nonwhites were higher in all cities than those of the whites; in one city, the infant mortality rate among nonwhites was 175 percent higher than that of whites (table 1).

Neonatal mortality. Forty-five respondents reported having a neonatal mortality rate higher than the rates for the United States as a whole in 1967 or 1968, 20 reported lower rates, and respondents from 19 cities had no information (fig. 3).

Postneonatal mortality. Respondents from 35 cities reported having a postneonatal mortality rate higher than the rates for the United States as a whole in 1967 or 1968, and 30 reported lower postneonatal mortality rates. Respondents from 19 cities had no information (fig. 4).

Perinatal mortality. Information was solicited on the status of perinatal mortality; however, too little data were provided to be meaningful for

Figure 3. Percent distribution of neonatal mortality rates that are below or above the U.S. neonatal mortality rate of 1967-68



NOTE: Boldface figures indicate number of cities.

analysis. The variation in the definitions of perinatal mortality used by some large cities and the need for uniformity becomes obvious when the following tabulation of definitions is examined.

Gestation period, weight at birth, and days after birth	Number of cities
20 weeks (501 grams) through 28 days.....	32
20 weeks (501 grams) through 7 days.....	17
28 weeks (1,001 grams) through 7 days.....	3
16 weeks through 27 days.....	2
28 weeks (1,001 grams) through 28 days.....	1
20 weeks through 6 days.....	1
Total.....	56

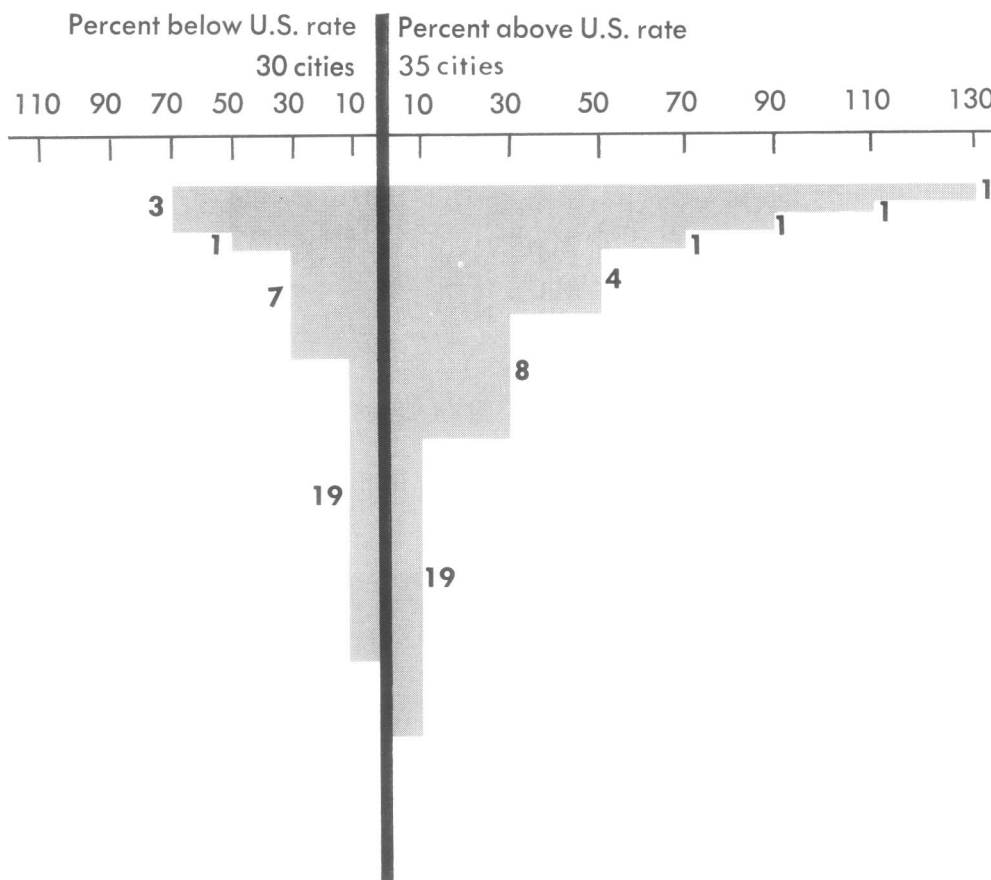
Illegitimacy. Of the 84 respondents, 53 reported an illegitimacy rate higher in 1967 and 1968 than the rate for the United States as a whole, 13 respondents reported a lower rate, and respondents from two cities reported the same rate as for the United States. Respondents from 16 cities had no information (fig. 5).

Availability of Health Services

Information was requested on annual patient caseloads, average waiting period, and number on waiting list for the first appointment for selected maternal and child care services, including prenatal clinics, well-child conferences, and services for handicapped children.

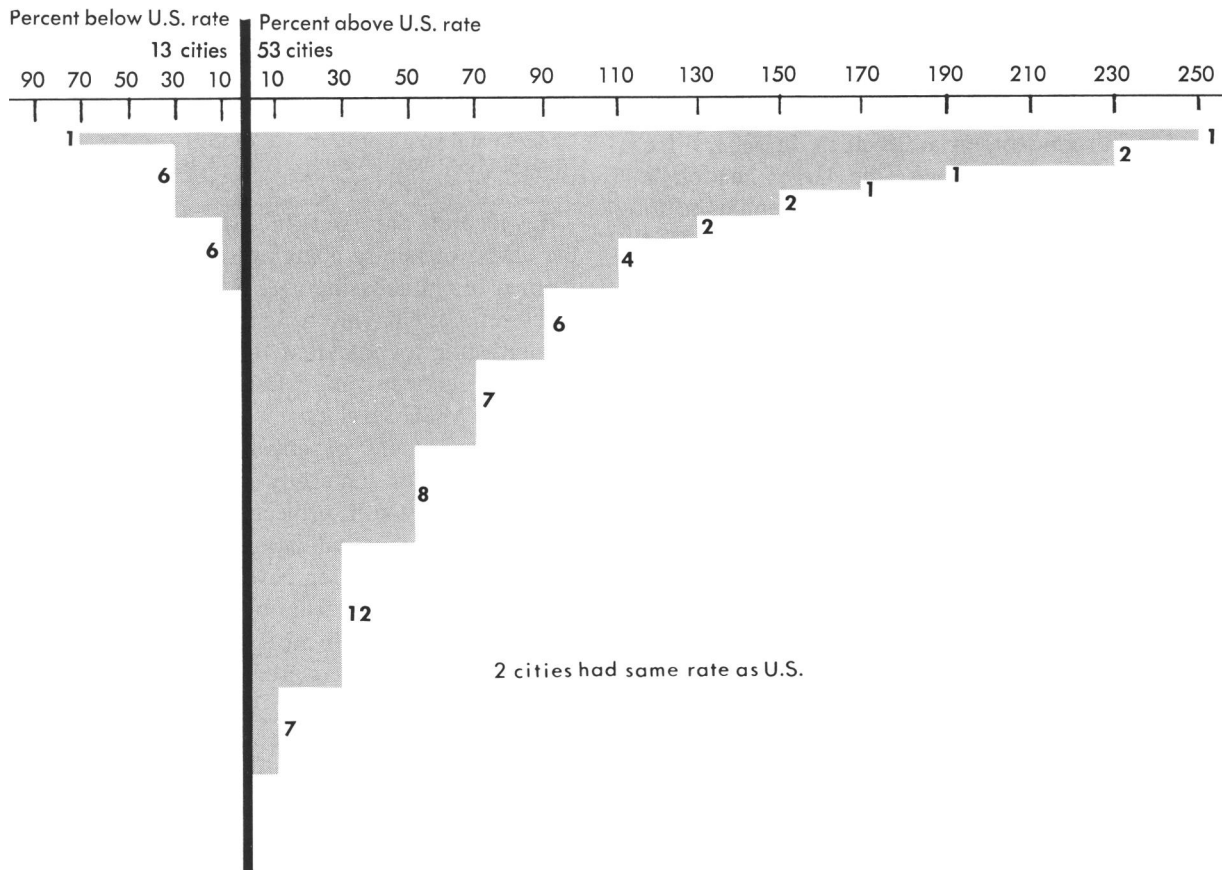
Prenatal care. Thirty respondents provided data on the number of patients seen annually in prenatal clinics. Of the 30, prenatal care was provided in 13 (43 percent) to less than 10 percent of the women who delivered a live infant. In 21 of the 30 cities (70 percent), prenatal care was provided to less than 20 percent of the women who delivered a live infant. The number of pregnant women potentially eligible for prenatal clinic care in each city was unknown to the authors; nevertheless, the extent of coverage would appear to be low because of the known relatively high percentage of indigency in these cities as shown in the

Figure 4. Percent distribution of postneonatal mortality rates that are below or above U.S. postneonatal mortality rate of 1967-68



NOTE: Boldface figures indicate number of cities.

Figure 5. Percent distribution of illegitimacy rates that are below or above the U.S. illegitimacy rate for 1967-68



NOTE: Boldface figures indicate number of cities.

following tabulation. (Significantly, 54 of the 84 respondents did not provide any information on this question.)

Coverage (percent)	Cities
0-4.9	7
5.0-9.9	6
10.0-14.9	4
15.0-19.9	4
20.0-24.9	1
25.0-29.9	5
30.0-34.9	0
35.0-39.9	2
40.0-44.9	1
Total	30

NOTE: Percent of coverage refers to reported number of individual pregnant women attending a prenatal clinic per year divided by annual number of live births in that year.

Although respondents from 10 of the 30 cities stated there was no waiting period in their prenatal clinics, 20 reported an average waiting period ranging from 1 to 2 days through 1 to 2 months. Of these, three reported an average waiting period of less than 1 week; 10, 1 week; and seven, more than 1 week.

Data were provided by 37 respondents on women receiving no prenatal care, and 35 respondents provided data on women receiving care that was begun in the third trimester of pregnancy. Six respondents reported that 10 percent or more of the women had no prenatal care, and respondents from 19 cities reported that 10 percent or more of women began care in the third trimester of pregnancy. More than half of the women in two cities began prenatal care in the third trimester of pregnancy (table 2).

Health supervision of young children. All 84 respondents reported providing well-child conferences and reported some data on attendance at them. Sixteen respondents reported less than 10 percent coverage of infants, and 36 of the 84 reported less than 25 percent coverage. Coverage of preschool children was even less; of the 84 respondents, 34 reported less than 10 percent coverage, and 43 reported less than 25 percent coverage of preschoolers (table 3).

In 24 cities there was no waiting period for infants to be seen, and in 23 there was no waiting period for preschoolers. Ten cities reported a waiting period of 4 weeks or more for infants, and seven cities, 4 weeks or more for preschoolers.

Special projects. Maternity and infant care projects or neighborhood health centers were listed by respondents from 28 cities. In general for all three types of projects, the larger the city's population, the more likely the city would be to have one or more of these special projects. This information is summarized in tables 4 and 5.

Table 2. Percent of women without prenatal care or with prenatal care begun in 3d trimester

Percent of women	No prenatal care	Care begun in 3d trimester
0-4.9	21	4
5.0-9.9	10	12
10.0-14.9	3	4
15.0-19.9	1	2
20.0-24.9	2	2
25.0-29.9		2
30.0-34.9		5
35.0-39.9		2
40.0-44.9		2
45.0-49.9		1
50.0-54.9		1
55.0-59.9		1
Total	37	35

NOTE: In 47 cities, data on percent of women not receiving prenatal care were not available; in 49 cities data on percent receiving prenatal care begun in the 3d trimester were not available.

Table 3. Extent of coverage of infants and preschool children by well-child conferences

Percent of coverage ¹	Infants	Pre-schoolers
0-4.9	9	25
5.0-9.9	7	9
10.0-14.9	8	5
15.0-19.9	2	1
20.0-24.9	10	3
25.0-29.9	8	1
30.0-34.9	2	
35.0-39.9	1	1
40.0-44.9	4	
45.0-49.9	2	1
50.0-54.9	3	
55.0-59.9	1	
Total	57	46

Percent of coverage is reported number of infants and preschool children attending well-child conferences per year, divided by the number of infants and preschoolers in the population.

NOTE: In 27 cities data on percent of infants attending well-child conferences were not available; in 38 cities data on percent of preschoolers attending well-child conferences were not available.

Table 4. Percent of cities of 28 respondents having special projects, by size of city's population

Project	Size of city		
	Under 250,000	250,000-499,999	500,000 or more
Maternal and infant care projects	13.6	43.5	70.6
Children and youth projects	15.9	52.2	52.9
Neighborhood health centers	13.6	43.5	70.6
Family planning services	56.8	95.6	58.8

In general, data were not available to indicate the extent of family planning services for girls and women of childbearing age. Respondents from 57 cities reported having a family planning clinic. It is interesting to note that the provision of family planning services varied less by size of city than did other MCH services.

Data on extent of coverage of the potential population with maternity and infant care and children and youth projects are summarized in table 6. These data indicate a higher percentage of the potential population covered by maternity and infant care projects than by children and youth projects, even though most of the maternity and infant care projects covered less than 20 percent of the potential population (table 6).

Generally, maternal and infant care projects, children and youth projects, and family planning projects do not require long waiting periods for service. Many respondents, however, did not answer the question as to whether there was a waiting period for services in their family planning clinics.

Almost 40 percent of the respondents provided information on children participating in Head Start programs. In general, the extent of coverage was small. For example, some 85 percent of the cities reported that less than 4 percent of the potential population was covered.

Care of handicapped children. Thirty-three (39.3 percent) of the respondents reported the total number of handicapped children served in their community, and 12 (14.3 percent) reported the age distribution of the handicapped children served. Many respondents replied that the care of handicapped children was under the State crippled children's program and that such data were not available locally (table 7).

Information was requested about the availability locally of services for handicapped children, their annual caseloads, waiting periods, and waiting lists, from both official and voluntary agencies. Information provided was generally meager, and

Table 5. Provision of selected projects, by size of city

Size of city	Respondents	Maternal and infant care	Children and youth	Family planning	Neighborhood health center
100,000-149,999	25	1	5	13	2
150,000-199,999	13	3	2	6	1
200,000-249,999	6	2	.....	6	3
250,000-299,999	6	3	3	6	3
300,000-349,999	6	2	3	5	2
350,000-399,999	3	1	1	3	.....
400,000-449,999	2	1	1	2	.....
450,000-499,999	6	3	4	6	5
550,000-599,999	3	2	1	2	1
600,000-649,999	2	1	1	1	1
700,000-749,999	2	1	1	1	1
750,000-799,999	2	1	1	1	1
850,000-899,999	1	.....	.....	1	1
900,000-949,999	2	2	.....	2	2
1,500,000-1,999,999	1	1	1	.....	1
2,000,000-2,499,999	2	2	2	1	2
3,500,000-3,999,999	1	1	1	1	1
4,000,000 and over	1	1	1	.....	1
Total	84	28	28	57	28

many respondents suggested that those questions be referred to the State crippled children's program. Waiting periods, however, varying from 2 weeks to 5 months were reported by 15 cities; eight cities reported that to their knowledge there was no waiting period. Five of the 16 respondents indicated they had a waiting list and gave its length; a sixth stated that a waiting list existed, size unknown; 10 reported no waiting list.

Major Unmet Needs

The unmet needs listed by respondents follow.

Category	Cities
Maternity and infant care	35
Medical care	32
Infant and preschool care	23
Dental services	16
Family planning	12
Mental health services	11
Care of school-age children and youth	10
Transportation	7
Nutrition	7
Child welfare services	10
Personnel in general	19
Health education	8
Handicapped children	35
Evaluation, diagnosis, treatment, and rehabilitation	11
Broader functions and needs	7
Special education	4
Residential care	4
Foster home care	1
Registry	1
Casefinding	3
Day care	3
Transportation	1
Funds in general	6
Miscellaneous	7

Maternal and infant care. The following unmet needs of mothers and children were given by 35 respondents. They mentioned more and improved services for prenatal care, more maternal

and infant care projects, and making existing ones available to all eligible patients. The respondents also indicated that they needed funds for more maternity services for low-income women and services for early identification and provision of more care for high-risk expectant mothers to prevent prematurity and its sequelae. They needed services to cope with abortion, reduce illegitimacy, increase psychiatric care, and to manage drug

Table 6. Extent of coverage of population with selected projects in cities

Coverage (percent)	Mater-nity ¹	Infant ²	Children and youth projects ³
0- 4.9	4	6	12
5.0- 9.9	3	1	4
10.0-14.9	2	2	2
15.0-19.9	2	2	0
20.0-24.9	4	0	0
25.0-29.9	2	1	0
30.0-34.9	0	1	0
35.0-39.9	1	0	0
40.0-44.9	0	1	0
45.0-49.9	0	2	0
50.0-54.9	1	0	0
55.0-59.9	1	0	0
Total	20	16	18

¹ In 8 cities data were not available on percent of mothers receiving care from maternal and infant care projects.

² In 12 cities data were not available on percent of infants receiving care from maternal and infant care projects.

³ In 10 cities data were not available on percent of children receiving care from the children and youth projects.

NOTE: Percent of coverage includes (a) women receiving care per year from a maternal and infant care project divided by the number of live births annually in the city, (b) infants per year receiving care from a maternal and infant care project divided by the number of live births annually in the city, and (c) number of children per year receiving care from a children and youth project divided by the number of children under 20 years of age in the city's population.

addiction of pregnant women. Better post partum followup generally and especially of those who had had obstetric complications was also listed.

Medical care. The medical care needs indicated by 32 respondents included medical care in general; decentralized medical care (additional neighborhood clinics, decentralization of medical facilities, emergency medical services for low-income families, firstline care for ill persons in community centers, better home medical care in ghettos, provision of satellite clinics and family services); improvement of care provided by hospitals (better services in tax-supported hospitals, less crowded services, more clinic and hospital space, better clinic care by hospitals); provision of more comprehensive care (reduction of fragmented services, more emphasis on continuity, provision of comprehensive care by medical centers); more followup services, such as followup of broken appointments and to encourage regular attendance; better planning, coordination of hospital and health care, and making better use of existing services; simplifying eligibility procedures; and providing these services in the evening.

Infants and preschool children. Respondents of 23 cities expressed the need to improve services for infants and preschool children, including comprehensive health care for children; more children and youth projects and extending such projects to all eligible children; more services for health supervision of and care for well children, with more emphasis on preschool children; funds and services for medical and hospital care of ill infants and children of low-income families; special programs and followup of infants having a low birth weight; more resources for referral of ill children; better followup of all high-risk infants; screening of preschoolers and followup to provide treatment for them; reduction of infant mortality; immunizations; and temporary housing for children with elevated blood lead levels.

Dental services. Respondents of 16 cities expressed the need for dental services, including general dental health services, care for school children and mothers, and fluoridation of water supplies.

Family planning. Respondents of 12 cities expressed the need for more family planning, including more services in general, encouraging better attendance and following up women receiving services at these clinics, and extending service to the entire community, especially to low-income women.

Table 7. Health departments reporting data on services for handicapped children, by size of city

Size of city	Total respondents	Reporting on—	
		Children served	Age of children
100,000–149,999.....	25	10	4
150,000–199,999.....	13	4	1
200,000–249,999.....	6	1	1
250,000–299,999.....	6	2	1
300,000–349,999.....	6	2	.....
350,000–399,999.....	3	3	1
400,000–449,999.....	2	2	.....
450,000–499,999.....	6	1	.....
550,000–599,999.....	3	2	1
600,000–649,999.....	2	.....	.....
700,000–749,999.....	2	1	.....
750,000–799,999.....	2	1	1
850,000–899,999.....	1	1	1
900,000–949,999.....	2	1	.....
1 million and over.....	5	2	1
Total.....	84	33	12

Mental health services. Respondents of 11 cities expressed the need for mental health services, including general mental health services, facilities for emotionally disturbed children, more child guidance services, and services for delinquents.

School children and adolescents. Respondents of 10 cities expressed the need for more health services for school children and adolescents, including services for unwed teenage parents, care of infants of teenage mothers, more school health services in general, better followup of defects found in children by school examinations, and arrangements for backup care at medical centers.

Child welfare services. Respondents of 10 cities expressed the need for child welfare services, including the need for day care, for foster care, for adoptive services, for protective services for children, for babysitting and home help for those not on welfare, and for adequate staff in State and local departments to supervise all child care facilities.

Health education. Eight respondents expressed the need for more health education in general. They indicated need for a health educator and for more health education to be given by public health nurses. They also needed more health education in maternity clinics and well-child conferences and family life and sex education programs to try to decrease illegitimacy, venereal disease, use of drugs, and abortions.

Nutrition. Seven respondents expressed need for more information on nutrition, including nutrition counseling and services; money to provide an

adequate diet, especially for needy children and young adults, and to provide supplementary food where needed. Better commodity distribution and food stamp programs that reach more people were also listed as needs.

Transportation. Seven respondents expressed need for better transportation, including transportation to clinics, well-child conferences, day care centers, and Head Start programs.

Staff. Respondents of 19 cities expressed the need for larger staffs, including more staff in general, public health nurses, statisticians, staff to evaluate programs, physicians and dentists in low-income areas, MCH directors, full-time health officers, staff in clinics and hospitals, and more medical and paramedical personnel to make visits and identify patients in need of care.

Funds. Six respondents expressed the need for funds, including general funds and funds for drugs for medically indigent families, for increasing salaries, and for expanding preventive and curative services for mothers and children.

Handicapped children. Respondents from 11 cities expressed the need for services for evaluation, diagnosis, treatment, and rehabilitation; seven, for more services or for a broader program or role by the crippled children's program; four, for residential care for the mentally retarded or emotionally disturbed; four, for special education programs; three, for day care; three, to improve casefinding; and one respondent each for transportation and foster home care; and a registry for neurological defects (table 8).

Discussion

The results of this survey show many of the problems and needs of the larger cities in the health care of mothers and children and their families.

The data showed that the smaller cities—those with total populations of under 200,000—were at a disadvantage. Some of the evidence for this statement was the low response to the study by the small cities (undoubtedly because they had fewer staff members to collect data), the lack of a full-time MCH director or a full-time MCH physician, and lack of some MCH services. Of the 38 cities with a total population of less than 200 000, 14 still had a municipal health department, rather than a health department which covered a larger geographic jurisdiction.

Since 1961, some progress has been made in meeting the needs and improving the health status of women and children in large cities.

Table 8. Unmet needs of handicapped children listed by respondents

Type of need	Cities
Educational.....	4
Casefinding (identification and management of hearing problems, audiovisual screening, multiphasic screening).....	3
Evaluation, diagnostic, treatment, and rehabilitation	11
Day care (handicapped and mental retardation).....	3
Transportation.....	1
Broader functions and needs (integrate health and comprehensive care programs, comprehensive followup and care for congenital defects and handicapping conditions).....	7
Residential care (training schools for mentally retarded children and youth, institutions for severe mental retardation, and emotionally disturbed children).....	4
Foster home care for mentally retarded.....	1
Registry of neurological defects.....	1

One example is the increase in employment of full-time physicians in cities of 200,000 or more—an increase from 25 to 34 cities.

A second example has been the development of such special programs as neighborhood health centers, maternity and infant care projects, children and youth care projects, and family planning clinics; all these are results of new Federal legislation and availability of funds in the 1960's.

A third example has been the decrease in infant mortality in the late 1960's, possibly related to care given in the maternity and infant care projects; availability of better medical care, such as more hospital beds, more nurseries for premature and newborn babies, and better treatment of infectious diseases; or the general improvement in the standard of living, especially that created by better nutrition and improved housing.

Nevertheless, the large cities have serious health problems. A considerable number still have maternal, infant, neonatal, and postneonatal mortality rates which are higher than the rates for the country as a whole. Illegitimacy is an increasingly serious problem. Coverage of high-risk populations with needed health services is still inadequate; considerable numbers of women receive little or no prenatal care; and large numbers of well and ill children are without medical, health, preventive, and treatment services. More comprehensive care services are needed by mothers and children and their families. Further experimentation with innovative methods of delivery of comprehensive health care is needed in preparation for the anticipated national health insurance program, and more funding is needed for such projects as

maternity and infant care and children and youth projects.

The detailed lists of unmet needs in large cities show that the cities recognize that health departments of the present and the future are being expected to play an even greater role in the delivery of medical and health care and of personal health services.

The ability or inability of large cities to provide data raises a question about the need to decentralize State crippled children's programs. Many services for handicapped children need to be delivered locally—casefinding (including screening), primary medical care, followup, therapy services, education, recreation, and day care. Much of the responsibility for the planning and administration of services for handicapped children also needs to be decentralized.

This need for decentralization is especially true in the large cities, which are probably the best provided (of all parts of our country) with services for handicapped children—with medical schools, larger hospitals, rehabilitation services, special schools or classes, and vocational agencies. In addition, satellite services for handicapped children need to be located in low-income neighborhoods of the larger cities.

The absence of some data and the lack of response by some large cities would seem to indicate the need for more maternal and child care services and backup biostatistical staff in organized local

health services. Furthermore, because of the lack of response by some cities, one wonders if the reported data are typical of all cities of 100,000 population and more. For example, did the cities that were able to provide data do so because of greater availability of staff? Does a greater availability of staff reflect more developed services to mothers and children?

One local MCH director seriously questioned the value of attempting to collect information on the health status and needs of mothers, children, and their families in the large cities by a mailed study form. Rather, he suggested that this information should be collected by one or more persons through personal visits and interviews. He is probably correct, and the data probably would have been more complete and possibly more reliable. Nevertheless, it is not possible to do this without additional funds and staff. If such a study is repeated in the future, it would be of interest to conduct it by personal visits and interviews.

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The major results of a survey questionnaire mailed in fall 1969 and winter 1970 to health departments of 130 cities with a population of 100,000 and more are presented. Of the 82 percent of the respondents replying to the request for information, only 65 percent were able to supply data.

Evidence of significant unmet health needs in the care of mothers and children in the large cities was shown by the responses. Major areas of unmet needs in the cities are maternity and infant care, care for preschool children, delivery of medical care,

dental services, family planning, mental health services, the care of children and youth of school age, transportation, child welfare services, health education, and in the many facets of comprehensive care of handicapped children and their families.