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Availability of
**SELECTED
HEALTH
CARE
RESOURCES**
in rural areas of Connecticut

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AVAILABILITY OF SELECTED HEALTH CARE RESOURCES IN RURAL AREAS OF CONNECTICUT

by Donald G. Hay¹ and Walter C. McKain, Jr.²

Introduction

AVAILABILITY OF PHYSICIANS, dentists, nurses, dental hygienists, hospitals, and other health care services involves their ready accessibility to health care consumers—individuals and families.

People who live in rural areas have particular interests in the availability of health care resources. Among other factors, the impact of suburbanization on existing health services in Connecticut is of high current concern. Suburbanization involving movement of people from cities to the more rural areas contributes to a stepped-up demand for health care in rural localities in two ways: (1) large increases in the rural-nonfarm population may be placing a strain on the supply of health personnel and facilities for some rural areas, and (2) urban attitudes and practices favorable to high use of health services are dispersed in rural areas.

This report is directed toward providing an inventory of selected health care resources available to individuals and families living in rural towns of Connecticut. For purposes of this study, "rural town" is defined as any town in Connecticut with less than 10,000 estimated total population as of July 1, 1959 and without any place of 2,500 population and over. Of the 169 towns in Connecticut, there were 105 towns which met these criteria of being "rural towns" (Figure 1). Conversely "urban town" in this report refers to any town having 10,000 or more total population and/or with a place of 2,500 population or over.³

Principal objectives of this report include:

(1) to identify and analyze the distribution⁴ and characteristics of selected health care resources available to people in rural towns of Connecticut and (2) to describe some health care developments in the rural towns. A subsequent report will examine availability of health care resources in relation to suburbanization and other socioeconomic situations in rural towns of Connecticut.

Sources of Data

Information on number, distribution, and characteristics of health care personnel and facilities was obtained from secondary sources including State and other agency records. The selected health care resources covered in this report include medical and health services for personal health care.

Data on existing health care programs and developments in rural towns were obtained by field interviews during April and May, 1960 with key health personnel in each rural town. Using a pre-tested fixed question schedule, interviews were held with the Director of Health, senior nurse of the Public Health and Visiting Nurse Association, and the school superintendent, principal, or school nurse in each of the 105 rural towns.

Selected Medical and Health Care Resources in Connecticut

Medical and Health Care Personnel

Physicians—As of July 1, 1960, there was a total of 3,897 physicians in active practice in Connecticut including both rural and urban areas (Table 1).

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³ On the basis of the above definition, the following towns classified as "rural" according to estimated population for July 1, 1959 were "urban" on April 1, 1960 based on the U. S. 1960 Census of Population: Cheshire, Cromwell, Farmington, Newtown, Ridgefield, Simsbury, and Windsor Locks. Guilford Town was "urban" by estimated population for July 1, 1959 but was "rural" as of April 1, 1960.

⁴ Burnight, Robert C., *Measures of Social Change, Connecticut Counties and Towns, 1940-1958*. Storrs AES Bulletin 347, January, 1960. For measures of change by counties and towns in a number of areas of community life in Connecticut including number of physicians and dentists, the reader is referred to the above report.

Figure 1. Rural Towns in Connecticut, 1959.

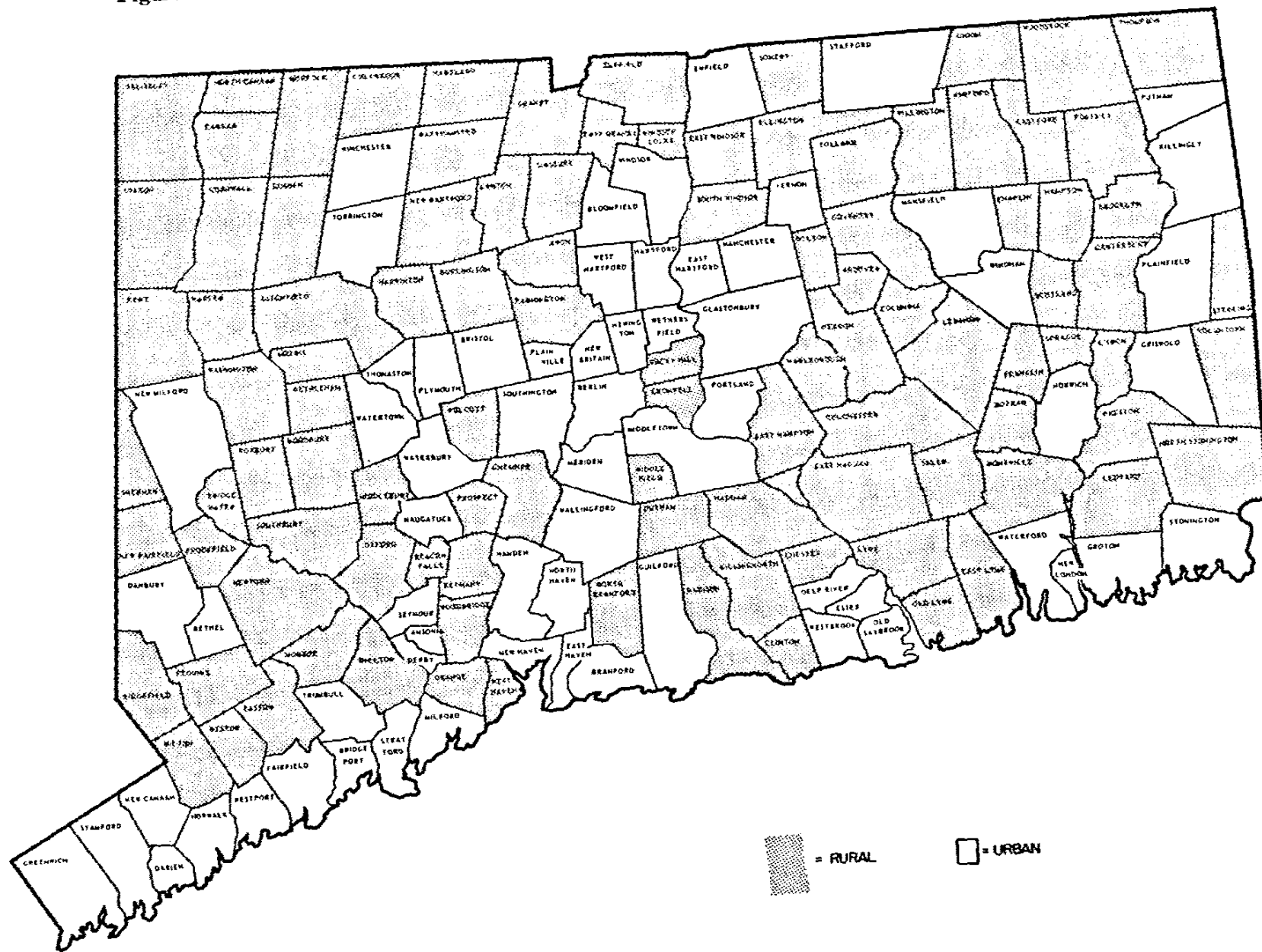


Table 1. Inventory of Medical and Selected Health Care Personnel by Location in Urban and Rural Towns of Connecticut, 1960

Personnel	Medical and Health Care Personnel					
	Total		Urban Towns		Rural Towns*	
	Number	Percent	Number	Percent	Number	Percent
Total Population	2,535,234	100	2,136,482	84	398,752	16
Physicians ¹	3,897	100	3,624	93	273	7
In private practice	3,061	100	2,829	92	232	8
Not in private practice ²	836	100	795	95	41	5
Dentists ¹	1,665	100	1,536	92	129	8
Nurses, Registered ¹	13,608	100	11,626	85	1,982	15
Nurses, Practical ¹	2,646	100	2,246	85	400	15
Dental Hygienists ¹	509	100	427	84	82	16
Physical Therapists ¹	246	100	224	91	22	9
Medical Social Workers ³	49	100	48	98	1	2

* "Rural towns" are defined on page 7.

¹ Licensure and Registration, Connecticut State Department of Health.

² Includes physicians in hospital service, teaching, research, public health, and in Federal Government service.

³ Estimated by medical social workers employed in State agencies.

Of all these active physicians, 3,061 were in private practice providing a ratio of 121 physicians per 100,000 population or 828 persons per physician in private practice. This compares with 93 physicians per 100,000 population or 1,080 persons per physician in private practice for the United States as of 1957.⁵ Connecticut occupies an advantaged position over the entire United States in physician-population ratios.

Connecticut had fewer physicians in relation to population in 1960 as compared to ten years earlier. In 1950 there were 790⁶ persons per physician in active private practice as compared to 828 persons per physician in 1960. The total population of the State increased 26 percent during the decade from 1950 to 1960, but the number of physicians in private practice increased only 21 percent.

It is recognized that many people living in rural areas use services of physicians and of other health personnel located in cities. Increased utilization of urban-centered health services is probably associated with the considerable degree of suburbanization characteristic of most rural areas in Connecticut. People living in rural towns are therefore not entirely dependent on medical and other health care services located within their immediate town.

The number of active physicians located in the urban towns and in the rural towns of Connecticut gives a general indication of distribution of physicians. Of all physicians in active private practice as of 1960, 92 percent were located in the urban towns and 8 percent of all physicians in private practice were headquartered in the 105 rural towns. As an overall basis of comparison, 16 percent of Connecticut's total population lived in these rural

towns. The relative concentration of physicians in urban areas is further shown in population-physician ratios. There were 755 persons per physician in private practice for all the urban towns while there were 1,719 persons per physician located within the rural towns. These relative population-physician ratios for urban and for rural towns indicate particularly the high concentration of physicians in urban areas. Again, the reader is reminded that medical service areas do not necessarily coincide with town boundaries. As reported in the field survey and discussed later in this report, people residing in rural towns often utilize physicians headquartered in urban centers.

The location of physicians in active practice is shown in Figure 2. In 1960, there were 41 rural towns or 39 percent of all 105 rural towns which did not have any physicians in active private practice with offices within these towns.

Along with the high concentration of physicians in urban areas, there is a very marked tendency in Connecticut for physicians to be located in towns having three or more physicians. Twelve of the 169 towns in the State had a single physician and 15 towns had only two physicians per town. A very high proportion, 99 percent, of all physicians in private practice in Connecticut were located in towns having three or more physicians. Medical care

⁵ Physicians for a Growing America, Report of the Surgeon General's Consultant Group on Medical Education, Public Health Service Publication 709, U. S. Department of Health, Education, and Welfare, October 1959 (derived from appendix table 6, p. 83). Number of physicians based on active physicians in private practice. Population estimate is of July 1, 1957 for civilian population of United States.

⁶ See footnote 4, page 7.

Table 2. Type of Medical Practices of Physicians in Private Practice by Location in Urban and Rural Towns of Connecticut, 1960

Type of Medical Practice	Physicians in Private Practice					
	Total		Urban Towns		Rural Towns	
	Number	Percent	Number	Percent	Number	Percent
Total Physicians in Private Practice	3,061	100.0	2,829	100.0	232	100.0
General Practice	888	29.0	759	26.8	129	55.6
Medical Specialty	2,173	71.0	2,070	73.2	103	44.4

often requires that a physician attend his patients in hospitals or at other centers possibly outside the immediate towns, and the availability of medical services is furthered when there are two or more physicians in a community.

Forty-eight percent of all physicians in private practice were located in towns having 100 or more physicians—an indication of the physician manpower concentration in large medical centers.

Type of medical practices of physicians—The extent of specialization has great impact on the medical care available to individuals and families.

Physicians in active private practice in Connecticut were tabulated by their reported type of medical specialty. In this analysis, a physician is credited with being a medical specialist if he is engaged either full-time or part-time in the particular specialty.

Of the 3,061 physicians in active private practice in Connecticut in 1960, 29 percent reported being general practitioners and 71 percent had a medical specialty full-time or part-time (Table 2). As would be anticipated, the proportion of physicians in specialty practice was considerably higher in the urban towns. Nearly three-fourths (73 percent) of all physicians in active private practice located in urban towns reported having a medical specialty while less than half (44 percent) of the physicians in rural towns of Connecticut reported a full-time or part-time medical specialty.

For improved medical and health care of individuals, considerable attention is currently given to the availability of family physicians. A Dept. of Health, Education and Welfare Report states:

"For many people the function of family physician is now served by the specialist in internal medicine and the pediatrician. These two groups, with the general practitioner, make up the family physician potential today."

For the entire State of Connecticut, family physicians, consisting of general practitioners and full-time and part-time specialists in pediatrics and internal medicine, make up slightly over half, 51.2 percent of all physicians in private practice. In urban towns, 49.1 percent of all physicians are family physicians and they make up over three-fourths, 76.7 percent, of all physicians in private practice with headquarters in rural towns.

The composition of the family physician potential varies in urban and rural towns (Table 3). As would be expected, more of the family physician potential in rural towns, 72.5 percent, is accounted for by those physicians in general practice than is the case in urban towns where they constitute 54.6 percent of the family physician group. Nevertheless, pediatricians and physicians in internal medicine account for considerable proportions, 9.6 percent and 18.0 percent respectively, of the family physician potential located in the rural towns.

Age of physicians—In considering the availability of physicians, their age composition has direct implications in terms of probable replacement needs. While there are about the same proportions of physicians under 35 years in both the urban and rural towns (Table 4), there is a considerably higher percentage of physicians 45-54 years in urban than

¹ See footnote 5, page 9.

Table 3. Family Physician Potential in Urban and Rural Towns of Connecticut, 1960

	Physicians in Private Practice					
	Total		Urban Towns		Rural Towns	
	Number	Percent	Number	Percent	Number	Percent
Family Physician Potential	1,567	100.0	1,389	100.0	178	100.0
Pediatrics	221	14.1	204	14.7	17	9.6
Internal Medicine	458	29.2	426	30.7	32	18.0
General Practice	888	56.7	759	54.6	129	72.5

Table 4. Age Distribution of Physicians in Private Practice by Location in Urban and Rural Towns of Connecticut, 1960

Age Distribution	Physicians in Private Practice					
	Total		Urban Towns		Rural Towns	
	Number	Percent	Number	Percent	Number	Percent
Total Physicians in Private Practice	3,061	100.0	2,829	100.0	232	100.0
Under 35 years	304	9.9	282	10.0	22	9.5
35-44 years	974	31.8	904	32.0	70	30.2
45-54 years	885	28.9	837	29.6	48	20.7
55-64 years	574	18.8	517	18.3	57	24.6
65 years and over	324	10.6	289	10.2	35	15.1

in rural towns. Larger percentages of physicians in rural towns in turn are 55-64 or 65 years and over. Rural towns may therefore be expected to have a relatively high replacement need for physicians. These age data suggest the possibility of attrition in total number of physicians in rural towns unless there is relatively strong in-movement of physicians.

Dentists—There were 1,665 dentists⁸ registered as in active practice in Connecticut as of July 1, 1960 providing a ratio of 66 dentists per 100,000 population or 1,523 persons per dentist (Table 1). As of 1959, there were 49 dentists per 100,000 population in the United States or 2,036 persons per dentist.⁹ Connecticut therefore enjoys a relatively advantaged situation as compared to the nation in dentist-population ratios.

The State was less adequately supplied with dentists in 1960 than it had been in 1950 in relation to total population. In 1950, there were 1,357 persons¹⁰ per dentist as compared to the ratio of 1,523 persons per dentist in 1960. While total population was gaining at the rate of 26 percent between 1950 and 1960, the number of dentists in active practice in Connecticut increased at a rate of 13 percent.

Ninety-two percent of the dentists in active practice in Connecticut were located in the urban towns;

only 8 percent were in rural towns. As in the case of physicians, the reader is cautioned against identifying availability of dentists by this location distribution. People living in rural towns are, of course, not wholly dependent on dental services within their own town as often dental services in a nearby urban center are generally available. The location of dentists in the State is shown in Figure 3. There were 51 rural towns or about half of all such towns in Connecticut which did not have any dentist in active practice within the towns.

Age of Dentists—Nearly a fifth of all dentists in Connecticut were under 35 years of age (Table 5). There are some marked differences in the age distribution of dentists in urban and rural towns. The proportion of dentists in rural towns who are under 35 years of age is nearly double that in urban towns. The rural towns have attracted many of the younger dentists. They have 15 percent of the dentists under 35 years of age while they have only 8 percent of all dentists in the State.

On the other hand, the proportion of dentists 65

⁸ Nine dentists were not in private practice. They are included, however, in the analyses of dentists in this report.

⁹ Health, Education, and Welfare Trends, 1960 edition, U. S. Department of Health, Education, and Welfare, 1960, p. 44.

¹⁰ See footnote 4, page 7.

Table 5. Age Distribution of Dentists by Location in Urban and Rural Towns of Connecticut, 1960

Age Group	Dentists					
	Total		Urban Towns		Rural Towns	
	Number	Percent	Number	Percent	Number	Percent
Total Dentists	1,628	100.0	1,502	100.0	124	100.0
Under 35	292	18.0	247	16.4	45	36.3
35-44	493	30.3	464	30.9	29	23.4
45-54	415	25.5	385	25.6	30	24.2
55-64	244	15.0	236	15.7	8	6.4
65 and over	182	11.2	170	11.3	12	9.7

years and over is slightly higher in the urban than in the rural towns.

Registered Nurses—There was a total of 13,608 registered nurses in Connecticut as of July 1, 1960 (Table 1). The State enjoyed a population-nurse ratio of 538 nurses per 100,000 population or 186 persons per registered nurse in active practice. In the United States as of 1958, there were 264 nurses per 100,000 population or 378 persons per graduate nurse.¹¹

Eighty-five percent of all registered nurses in Connecticut were located in the urban towns and fifteen percent of them were in rural towns.

As in the case of other health care personnel, the availability of registered nurses to population is not sharply delimited by location distribution. General hospitals are highly concentrated in urban areas and people living in rural territory will, of course, utilize graduate nurses serving hospitals in the cities.

Nearly half (47.9 percent) of all active registered nurses in the State reported they were in hospital or other institutional practice (Table 6). A fifth were engaged in private duty service. There was a marked similarity in the type of practice for nurses headquartering in both urban and rural towns. It is probable that the rural towns are indicated as having more registered nurses in public health and in school service than actual manpower use. Some of the rural towns have only part-time nurse services in those two types of practice.

Licensed Practical Nurses—On July 1, 1960, there were 2,646 licensed practical nurses in Connecticut (Table 1). This number provided a ratio of 104 nurses per 100,000 population or 958 persons per practical nurse.

The residence distribution of licensed practical nurses was the same as that of registered nurses

(Table 1). Eighty-five percent were in the urban towns and fifteen percent were located in the rural towns.

Three-fifths of all practical nurses were in hospital or other institutional practice and a fifth were in private duty (Table 7).

Dental Hygienists—Dental hygienists extend the available dental manpower.

"The dental hygienist is trained to perform prophylaxis, apply topical fluorides, and to assist the dentist in a variety of procedures concerned with the care of patients. . . . It has been estimated that the services she can perform in a dentist's office may account for as much as a quarter of his time, thus freeing the dentist for more highly specialized procedures."¹²

There were 509 dental hygienists registered in Connecticut as of July 1, 1960 (Table 1). This provided a population-dental hygienist ratio of 20 dental hygienists per 100,000 population or 4,981 population per dental hygienist in the State. In 1956, there were nearly 5,600 active dental hygienists in the United States which made a ratio of three dental hygienists per 100,000 population or 29,525 persons per dental hygienist. Connecticut therefore enjoyed a relatively strong position in supply of active dental hygienists as compared to the United States as a whole. Eighty-four percent of the dental hygienists in Connecticut in 1960 were located in urban towns and 16 percent in the rural towns.

Physical Therapists—The availability of physical therapists takes on increasing importance as reha-

¹¹ See footnote 9, p. 12.

¹² *Health Manpower Source Book, Dental Hygienists*, Public Health Service Publication 263, Section 8, U. S. Department of Health, Education, and Welfare, 1957, p. 1.

The birthplace of dental hygienists in the United States was in Bridgeport, Connecticut.

Table 6. Registered Nurses by Type of Practice and by Location in Urban and Rural Towns of Connecticut, 1960

Type of Practice	Registered Nurses					
	Total		Urban Towns		Rural Towns	
	Number	Percent	Number	Percent	Number	Percent
Total Active Registered Nurses	13,608	100.0	11,626	100.0	1,982	100.0
Hospital or Other Institution	6,521	47.9	5,601	48.2	920	46.4
Private Duty	2,766	20.3	2,375	20.4	391	19.7
Office Nurse	647	4.8	555	4.8	92	4.6
Public Health (other than school nurse)	563	4.1	457	3.9	106	5.3
School Nurse	384	2.8	309	2.6	75	3.8
Nursing Education	235	1.7	208	1.8	27	1.4
Industrial	543	4.0	482	4.1	61	3.1
Other fields	1,949	14.3	1,639	14.1	310	15.6

Table 7. Licensed Practical Nurses by Type of Practice and by Location in Urban and Rural Towns of Connecticut, 1960

Type of Practice	Licensed Practical Nurses					
	Total		Urban Towns		Rural Towns	
	Number	Percent	Number	Percent	Number	Percent
Total Active Licensed Practical Nurses	2,646	100.0	2,246	100.0	400	100.0
Hospital or Other Institution	1,595	60.3	1,343	59.8	252	63.0
Private Duty	530	20.0	460	20.5	70	17.5
Office Nurse	77	2.9	70	3.1	7	1.8
Public Health (other than school nurse)	7	0.3	6	0.3	1	0.2
School Nurse	3	0.1	3	0.1	0	0.0
Nursing Education	5	0.2	5	0.2	0	0.0
Industrial	55	2.1	51	2.3	4	1.0
Other fields	374	14.1	308	13.7	66	16.5

bilitation programs are expanded. There were 246 physical therapists registered as in active practice in Connecticut on July 1, 1960 (Table 1). Ninety-one percent of them were located in urban towns and nine percent were in rural towns. Approximately two-fifths of all physical therapists are in hospital or other institutional practice.

Medical Social Workers—Medical social workers in staff or caseworker situations provide direct service to individuals and families.

“They work as members of a medical team that contributes to the patient’s health care. The medical social staff worker ascertains facts concerning the patient’s social, emotional, and environmental situation. The observations and evaluations which she makes add to the team’s understanding of the patient and of methods of helping the patient and his family to make the best use of medical advice. The medical social staff worker may also help patients and their families to adjust to illness or handicapping conditions, and to use other health and welfare resources that they need.”¹²

These professional workers are not currently registered with the Connecticut State Department of Health and estimates of the number of medical social workers were obtained from several workers in this field. The estimated number of medical social workers in active practice in Connecticut in 1960 was 49.

As shown in Table 1, medical social workers are practically all concentrated in urban towns. Representatives of health agencies and other informants cited increasing demand for these professional workers in rural areas.

Physical Facilities for Medical and Health Care

Since many medical and health care facilities including hospitals serve areas embracing several towns, the following inventory of physical facilities is developed generally for the entire State of Con-

necticut. Both private and public health facilities are included in this inventory.

General Hospitals—There were 37 general hospitals in Connecticut with 8,508 beds on July 1, 1960 (Table 8). The location of general hospitals is shown in Figure 4. There was a ratio of 3.4 beds per 1,000 population or 298 persons per general hospital bed in the State.

Table 8. Inventory of Selected Physical Facilities for Medical and Other Health Care in Connecticut, 1960¹

Facilities	Total Number
General Hospitals	37
Number of general hospital beds	8,508
Tuberculosis Hospitals	3
Number of tuberculosis hospital beds	701
Mental Hospitals	14
Number of mental hospital beds	8,957
Chronic Disease Hospitals	6
Number of chronic disease hospital beds	1,099
Nursing Homes	228
Number of nursing home beds	6,364
Diagnostic and Diagnostic-treatment Centers	40
Rehabilitation Centers	4
Public Health Centers	16

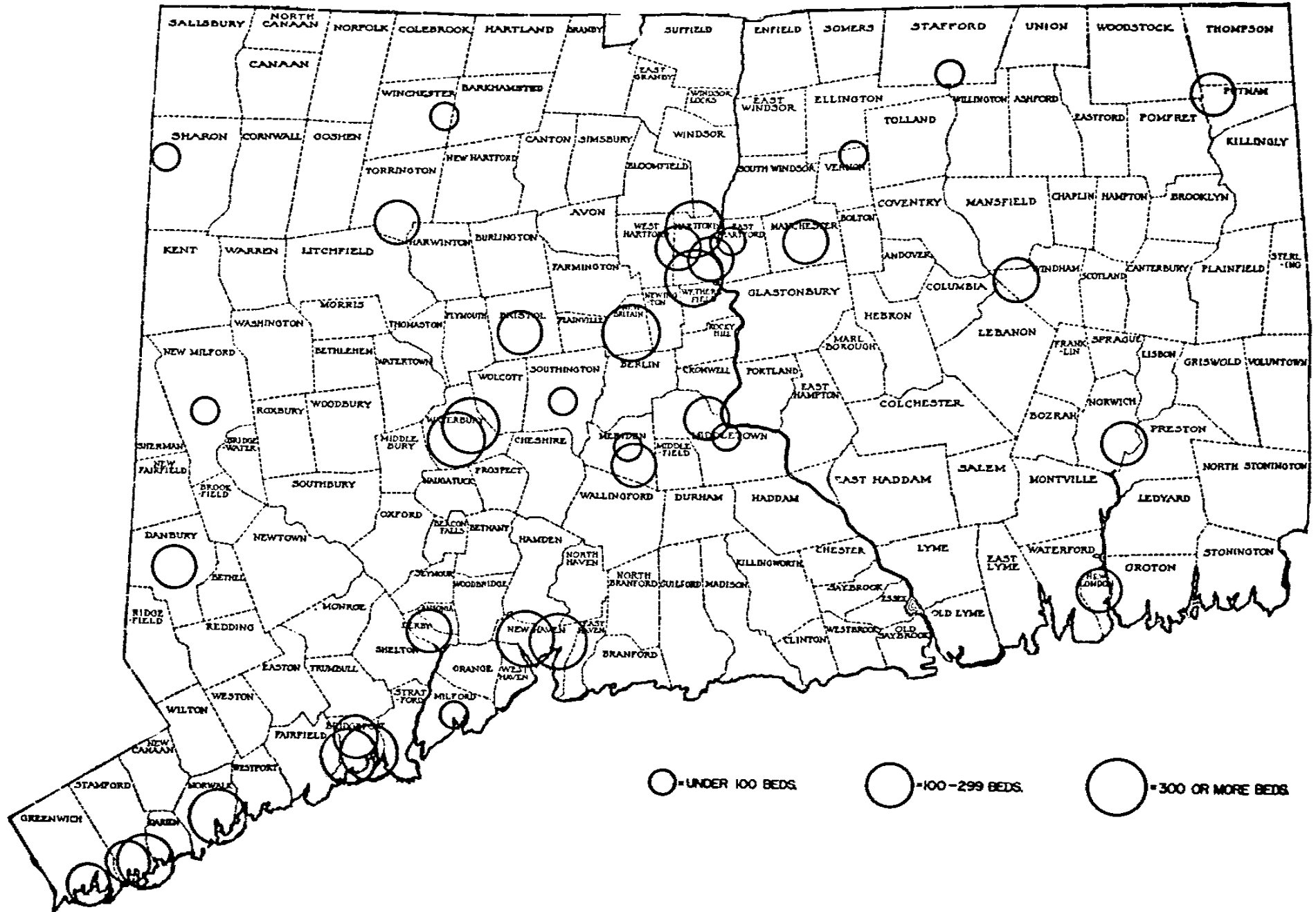
¹Data from Annual Report of Connecticut State Department of Health, 1959-1960, p. 6.

For a State-wide evaluation of the availability of physical hospital facilities, data are available from the Connecticut State Department of Health.

“The Department is the designated agency in Connecticut for the allocation and distribution of federal grants to

¹²Health Manpower Source Book, Medical Social Workers, Public Health Service Publication 263, Section 3, U. S. Department of Health, Education, and Welfare, 1953, p. 9.

Figure 4. Location of General Hospitals, Connecticut, 1960.



assist in constructing and equipping nonprofit health facilities which provide a community service. . . . In order to determine the needs for health facilities in the State, the existing health facilities are surveyed each year and statistics gathered on bed complements, patient days, percentage of occupancy, and out-patient and in-patient services. Annual determination of the needs for additional health facilities required to serve all the people of the State is made and plans are drawn and published each year showing the geographical areas of the State needing additional health facilities and services."¹⁴

On the basis of this annual determination, there was an indicated need for 2,805 more general hospital beds as of July 1, 1960 with existing hospital beds meeting 75 percent of total considered needs.

Data pertaining to general hospital service areas have been developed by the Connecticut State Department of Health in cooperation with the Connecticut Hospital Association and the general hospitals of the State. Delineation of general hospital service areas is based on hospital patient data for each general hospital in the State. All towns, both urban and rural, are grouped into hospital areas. The areas are delineated in accordance with the distribution of hospital patients by town of residence. These hospital areas are then used for planning and in establishing priorities of Federal (Hill-Burton) funds to assist in construction and equipping of additional general hospital facilities.

The general hospital areas as of July 1, 1960 based on data from the Division of Hospitals, Connecticut State Department of Health, are shown in Figure 5.

Tuberculosis Hospitals—Cedarcrest, Laurel Heights and Uncas on Thames hospitals are available for treatment of adults with tuberculosis. Children under the age of fifteen years are treated in a separate unit at Uncas on Thames (Table 8). These three tuberculosis hospitals have a total of 701 beds which was considered adequate on July 1, 1960 to meet hospitalization needs for the treatment of tuberculosis.¹⁵

During the latter part of 1960, tuberculosis hospitals were grouped with chronic disease hospitals for the Connecticut Hospital and Medical Facilities Survey, Planning, and Construction Program.

Mental Hospitals—These health care facilities including bed capacities are developed on a statewide basis. In 1960, there were 14 mental hospitals located in 12 different places in Connecticut.

Psychiatric units in general hospitals are a continuing development in the State. Such units in general hospitals provide "for more effective screening and early treatment of patients and to lessen the load on the mental hospitals."¹⁶

There was a total capacity of 8,957 beds for mental patient care on July 1, 1960 (Table 8). This included beds in mental hospitals and psychiatric beds in

general hospitals. There was an estimated need for 3,613 additional mental hospital beds in Connecticut. Only 71 percent of the estimated mental hospital bed need was available in 1960.

Chronic Disease Hospitals—A total of 1,099 beds were available for care and treatment of chronically ill persons on July 1, 1960 (Table 8). Of all types of hospitals in Connecticut, there was greater need indicated for more chronic disease hospital beds. A total of 3,929 additional chronic disease hospital beds were needed.¹⁷ The existing chronic disease hospital beds met only 22 percent of the estimated need.

Nursing Homes—There were 226 nursing homes with a total of 6,364 beds on July 1, 1960 (Table 8 and Figure 6). Nursing homes in Connecticut are generally known as chronic and convalescent nursing homes.

A total of 1,178 more nursing home beds were estimated to be needed; the existing nursing home beds met 84 percent of the total estimated need in 1960.¹⁸

The nursing homes are distributed generally over the State (Figure 6). This distribution of nursing homes throughout Connecticut contributes to the availability of these health care facilities to patients and to their relatives.

Diagnostic and/or Treatment Centers—A diagnostic and/or treatment center is defined as:

"A facility providing community service for the diagnosis or diagnosis and treatment of ambulatory patients, which is operated in connection with a hospital, or in which patient care is under the professional supervision of persons licensed to practice medicine or surgery in the State, or, in the case of dental diagnosis or treatment, under the professional supervision of persons licensed to practice dentistry in the State. This includes outpatient departments and clinics of public or non-profit hospitals."¹⁹

The basic minimum services in such a center are clinical laboratory and diagnostic X-ray. These centers for comprehensive diagnosis or diagnosis and treatment of patients are generally found in the larger general hospitals which are fully accredited and approved for physician internships and residencies in several specialties. Such physical facilities in the State are also located in local public health

¹⁴ Annual Report, Connecticut State Department of Health, Hartford, Connecticut, 1959-1960, pp. 5-6.

¹⁵ See footnote 12, p. 14.

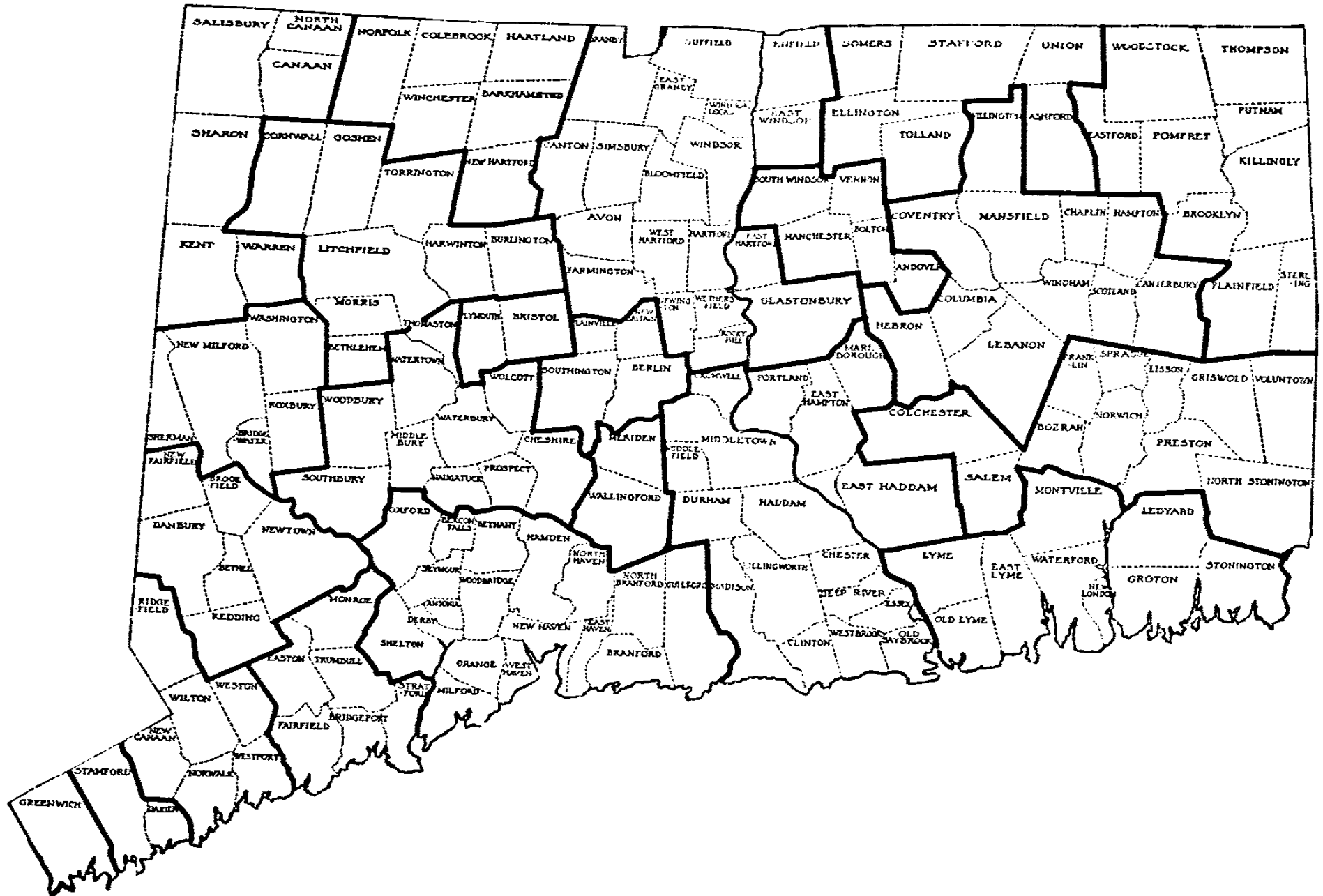
¹⁶ The 1959-1960 Revision of the Connecticut State Plan for the Hospital and Medical Facilities Survey and Construction Program, Division of Hospitals, Connecticut State Department of Health, Hartford, Connecticut, 1959, p. 45.

¹⁷ See footnote 12, p. 14.

¹⁸ See footnote 12.

¹⁹ See footnote 14.

Figure 5. General Hospital Areas in Connecticut, July 1, 1960.



department centers and in some of the tuberculosis, mental, and chronic disease hospitals.

On July 1, 1960, there were 40 diagnostic and/or treatment centers in Connecticut. These constituted only 32 percent of the evaluated need for such facilities as 86 more such centers were listed as a determined need.²⁰

Planning for the diagnostic and/or treatment centers in Connecticut is based on the general hospital service areas (Figure 5).

"Such centers are generally found in the larger hospitals fully accredited and approved for internship and residencies in several specialties. Special consideration is given to this type of facility, as not only the opportunities for teaching and training are available, but also, in such centers, the public receives the most valuable of diagnostic and treatment services."

"The smaller diagnostic and treatment center is encouraged particularly in areas unable to support a hospital of fifty or more beds. At these smaller centers, usually staffed by general practitioners, referrals are readily made to the larger more comprehensive centers usually found in our larger hospitals."²¹

Rehabilitation Facilities—There are 24 rehabilitation facilities located in 15 different places in Connecticut (Figure 7).

At each of the facilities, professional personnel carry out a rehabilitation program including medical, social, psychological, and vocational services. The rehabilitation facilities are planned on a statewide basis for disabled persons of all ages including those who are capable of being able to care for themselves as well as those who are being rehabilitated for employment.

Official Health Agencies

Some of the functions of the State Department of Health and of the State Department of Mental Health are briefly outlined. Emphasis is given to illustrative ways in which activities pertaining to personal health care of these official health agencies are available to people in communities throughout the State.

State Department of Health—The Connecticut State Department of Health is comprised of the following major offices: Office of Public Health, Office of Tuberculosis Control, Hospital Care and Rehabilitation, and the Office of Mental Retardation. These three major offices were recently set up as a result of a major realignment and consolidation of health programs provided for by the 1959 General Assembly.

The Office of Public Health, comprising the Health Department program prior to the recent reorganization, includes the following Divisions: Community Health, Laboratory, Medical Service, Preventable Diseases, and Sanitary Engineering.

The Office of Tuberculosis Control, Hospital Care

and Rehabilitation has responsibility for control of tuberculosis, for operation of chronic disease hospitals of the Department, and for medical rehabilitation of persons disabled from a chronic disease.

The Office of Mental Retardation operates the two State Training Schools in Mansfield and in Southbury, and aids in the development of comprehensive community services for the mentally retarded.

The State Department of Health is involved with town, district, and other local area programs in health along with statewide health responsibilities including administration of health laws and the sanitary code.

There are 16 full-time public health departments in Connecticut—all of these are in urban towns (Figure 8). In the other 153 towns of the State including all of the rural towns, a physician in private practice serves as a part-time director of health.

When communities do not have a large enough population to justify full-time public health units, the joining together of two or more towns, cities, or boroughs for such purpose is recommended for efficient and economical public health services.

"A preferable alternative to the one-town part-time director of health is the district health department. This unit can be formed by groups of towns not large enough alone to support full-time professional public health personnel. Enabling laws to encourage this orderly system of local health administration date from the 1920's. Today's provisions give member towns representation on a board which sets policy and names a full-time executive to carry out board policy. State aid is offered to assist this joint service."^{22, 23}

As an illustration of the technical assistance, consultation and limited supplementary services on a statewide basis of the Connecticut State Health Department, a brief summary of the Well Child Conference is made.

"The well child conference is a means of providing health supervision to children who would not otherwise receive it. It proposes to educate parents in methods of child care and in the desirability of continuous health supervision of their children. Its function is to *keep the well child well and to promote his best possible state of health.*"²⁴

Figure 9 shows the distribution of Well Child Conferences held in 1959 in Connecticut. There were

²⁰ See footnote 12, p. 14.

²¹ See footnote 14, p. 17.

²² Foote, Franklin H., *Local Health Improvements Recommended*, Connecticut Government 14:7 (November 1960).

²³ For a statement on arrangements for establishing full-time district health departments including General Statutes of Connecticut pertaining to such departments, see *Are You Among the 47 Percent in Connecticut*, Connecticut State Department of Health, Hartford, 1959.

²⁴ Standard Procedures for Local Well Child Conferences, Manual for Physicians. Connecticut State Department of Health, May 22, 1952, mimeographed statement.

Figure 7. Location of Medical Rehabilitation Facilities, Connecticut, 1960.

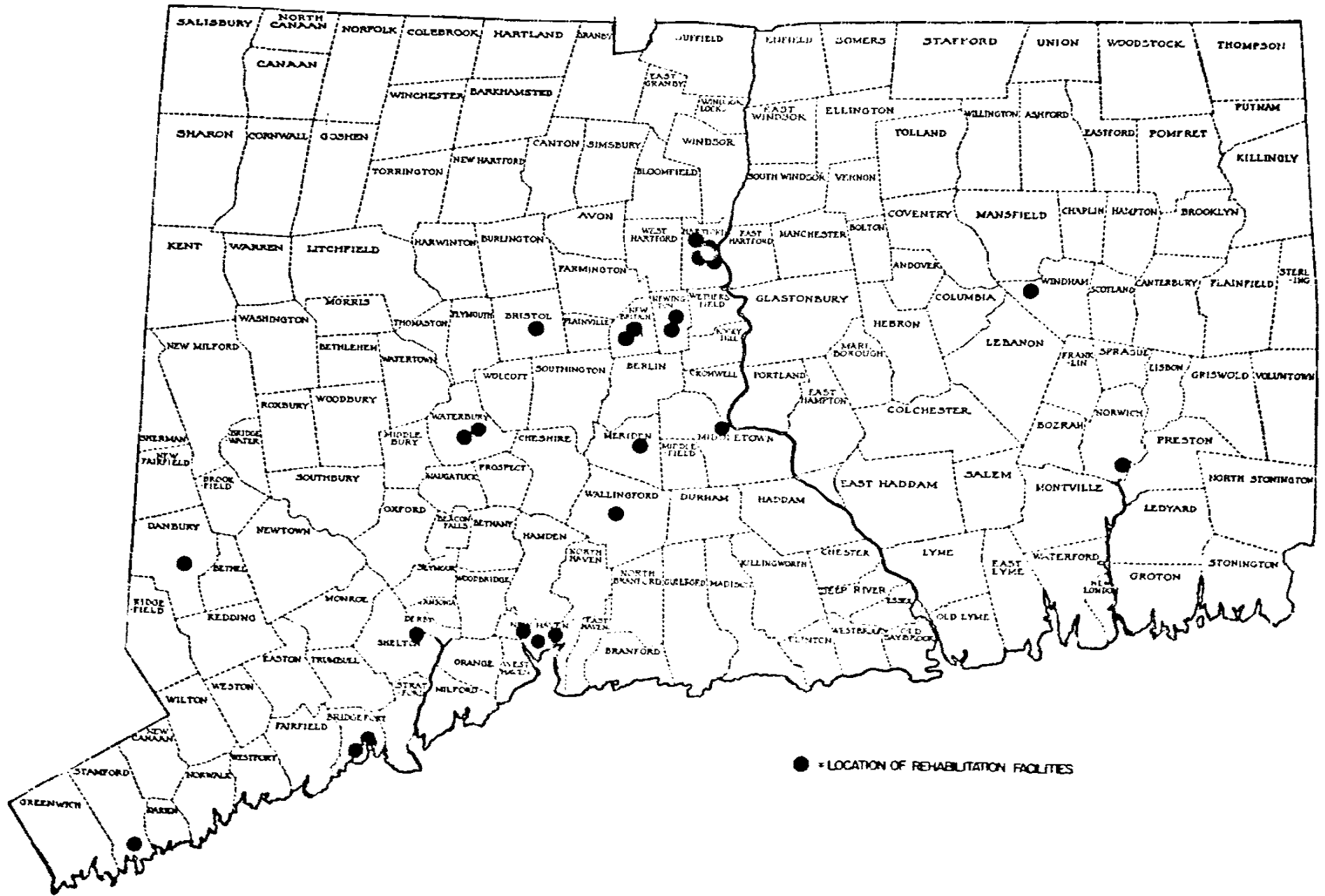


Figure 8. Full-Time Departments of Health, Connecticut, 1960.

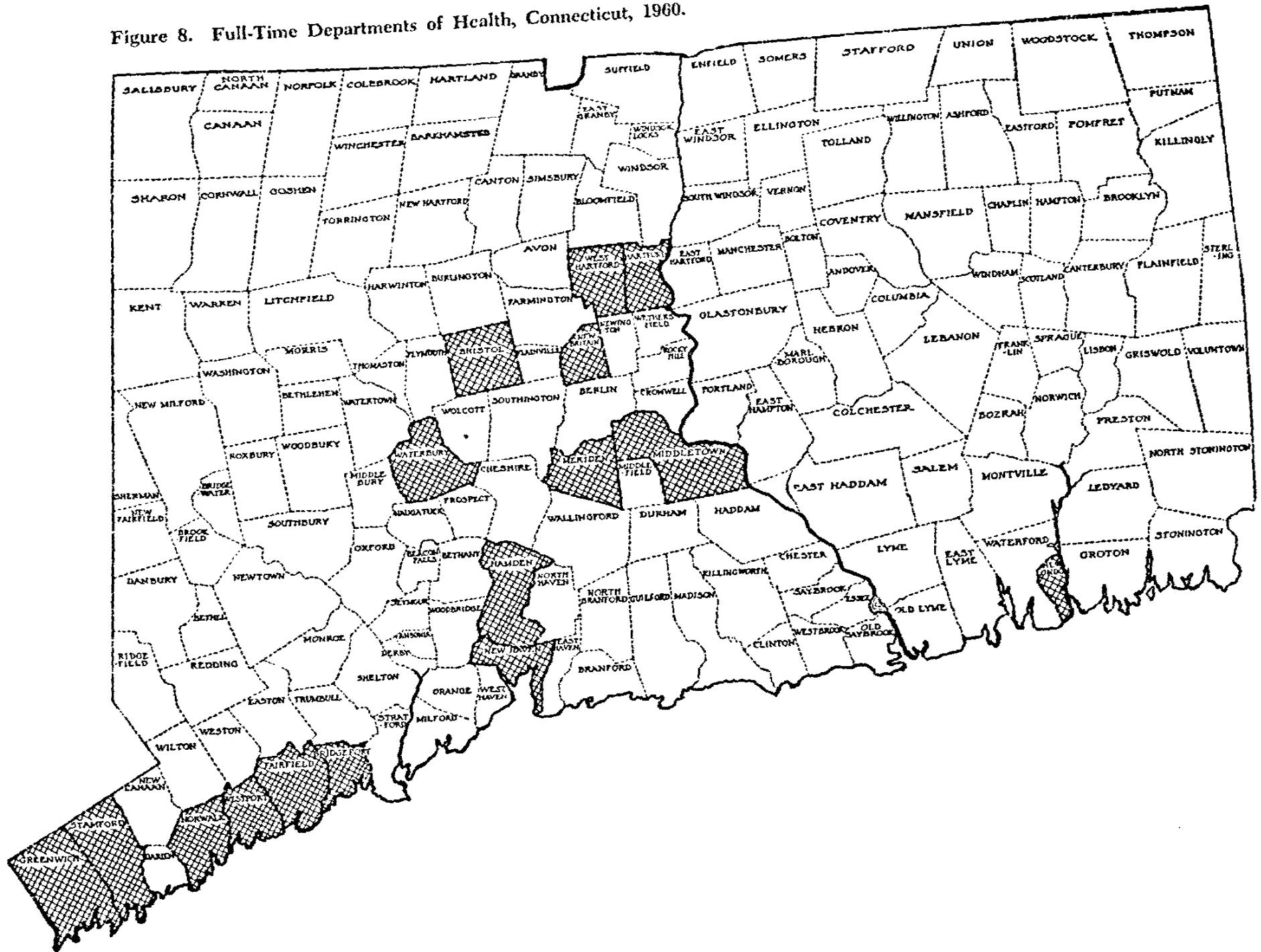
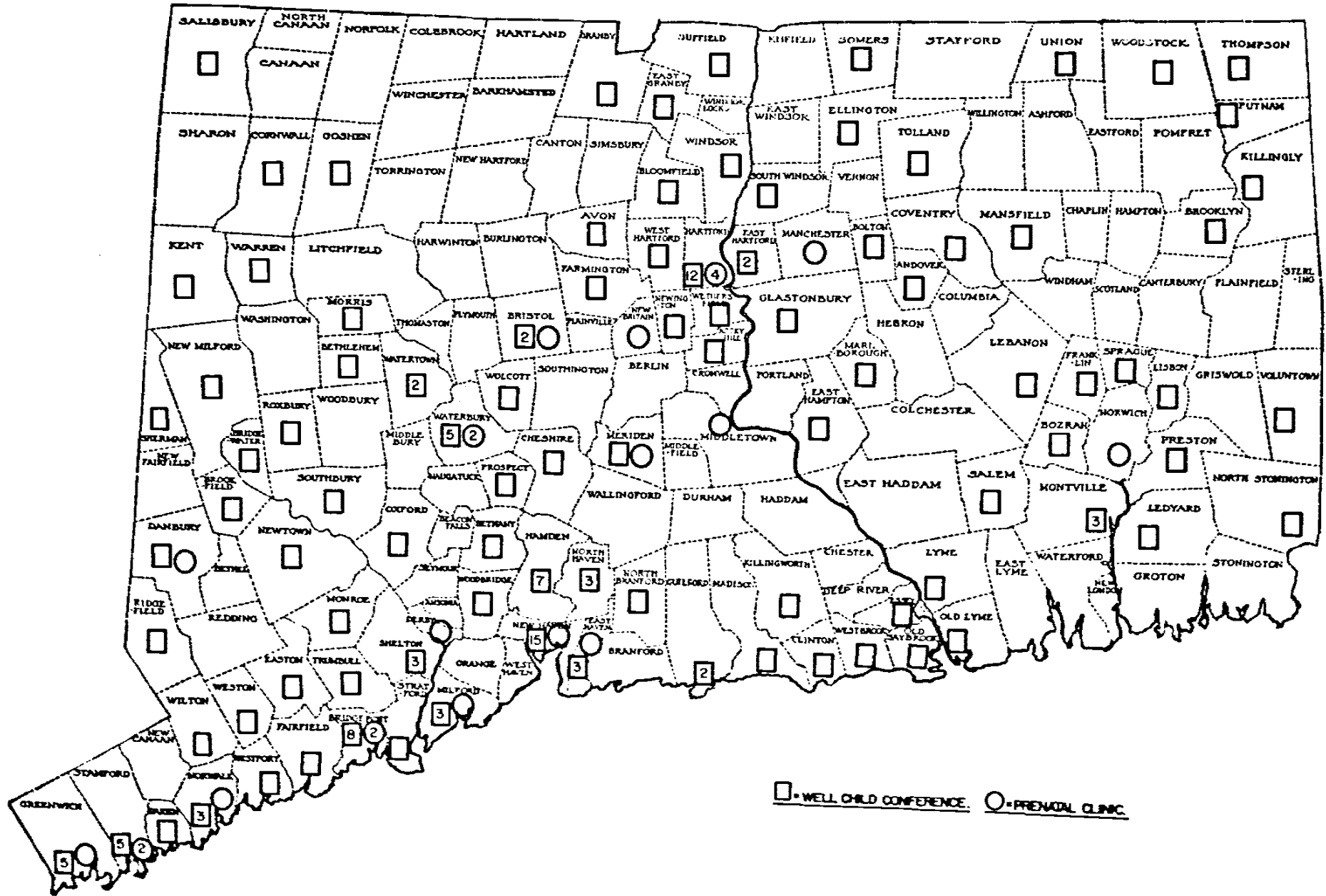


Figure 9. Well Child Conferences and Prenatal Clinics, 1960.



162 different centers where these Conferences were held. The urban towns with their heavier concentration of population tend to have locally sponsored Well Child Conferences while such Conferences in the rural towns are often sponsored by the State Department of Health.

State Department of Mental Health—The Connecticut State Department of Mental Health has the following operating units: Connecticut State Hospital at Middletown, Norwich State Hospital at Norwich, Fairfield State Hospital at Newtown, Undercliff Hospital in Meriden serving as a small rehabilitation hospital, the Connecticut Child Study and Treatment Home in Hamden for emotionally disturbed children, and the Division of Community Services.

In extending mental health services on a state-wide basis, the Division of Community Services conducts psychiatric clinic services for children and administers grant-in-aid programs for community psychiatric clinics and psychiatric services in general hospitals. As briefly noted earlier in the discussion of hospitals, the development of psychiatric units in general hospitals is a recent trend in the State. The Division of Community Services also works with community groups in both urban and rural areas seeking to establish psychiatric services.

The State Department of Mental Health provides financial support and consultation services to 22 psychiatric clinics which are under community auspices.

In 1960, there were psychiatric clinics in 20 different centers (Figure 10). As shown in Figure 10, these psychiatric clinics are concentrated in urban centers.

Voluntary Health Agencies

Voluntary health agencies with headquarters in Connecticut include the following:

American Cancer Society, Arthritis and Rheumatism Foundation, Children's Cystic Fibrosis Association, Connecticut Association for Mental Health, Connecticut Association for Retarded Children, Connecticut Diabetes Association, Connecticut Heart Association, Connecticut Hemophilia Chapter, Connecticut Rheumatism Foundation, Connecticut Society for Crippled Children and Adults, Connecticut Tuberculosis Association, Epilepsy Service League, Multiple Sclerosis Society, Muscular Dystrophy Association, National Foundation for Infantile Paralysis, National Hemophilia Foundation, National Society for Prevention of Blindness, and United Cerebral Palsy Association.

The state-wide distribution of offices and chapters for all the above voluntary health agencies is

shown in Figure 11. Availability of the activities for several of these health agencies is further extended by district and/or community boards and advisory groups. A key characteristic is that both lay people and professional health care personnel constitute the local and State governing boards of the voluntary health agencies.

Representative activities of each of the voluntary health agencies include informational activities, financing of research and of control work, and development of improved health care including prevention and control of illness and rehabilitation. Each agency usually emphasizes health programs and activities pertaining to specific illnesses or for selected age groupings.

Several of the voluntary health agencies participate or sponsor clinic services and/or detection centers (Figure 12). These health care activities tend to be concentrated in larger urban places but they are found in most areas of the State.

Selected Health Care Programs in Rural Towns of Connecticut

The remainder of the report applies only to the 105 rural towns of the State.

Directors of Health

Each of the 105 rural towns is served by a Director of Health or local health officer. All of the Directors of Health for rural towns are physicians in private medical practice who serve on a part-time basis as local health officers.

There are 41 rural towns which do not have a resident physician and these towns are all served by non-resident Directors of Health. Eighteen additional rural towns have a non-resident Director of Health making a total, then, of 59 rural towns in the State which are served by non-resident Directors of Health.

Many of the Directors of Health serving any rural towns carried such responsibilities for more than one town in 1960. Of the 83 different physicians serving as Directors of Health in rural towns, 68 served one town only, 11 directors served two different towns apiece, one served three towns, and three Directors of Health each served four different towns.

Public Health and Visiting Nurse Associations

Sixty-four of the 105 rural towns in Connecticut were served by Public Health and Visiting Nurse Associations.

Figure 10. Psychiatric Clinics, 1960.

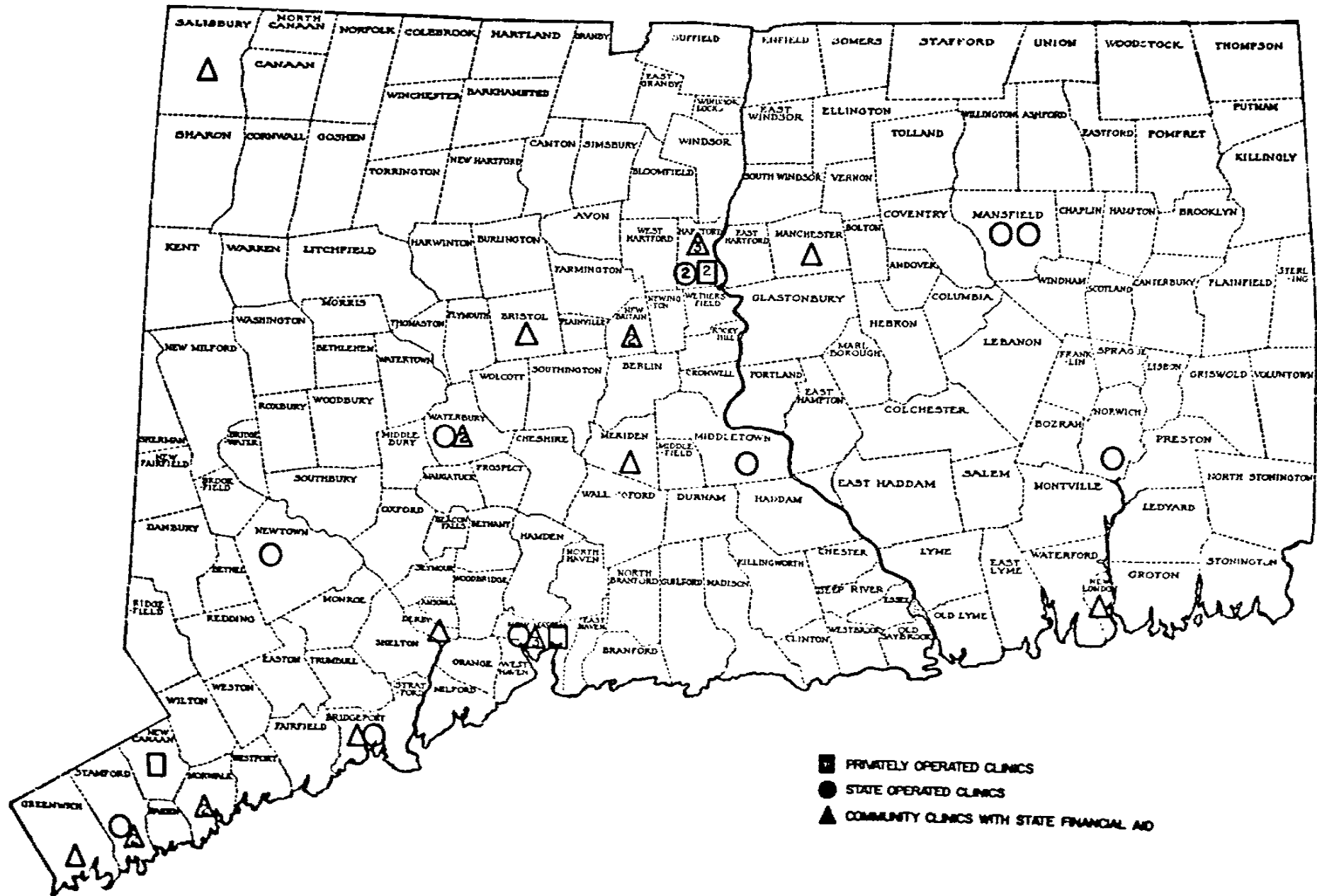


Figure 11. Location of Office and Chapter Headquarters of Voluntary Health Agencies, Connecticut, 1960.

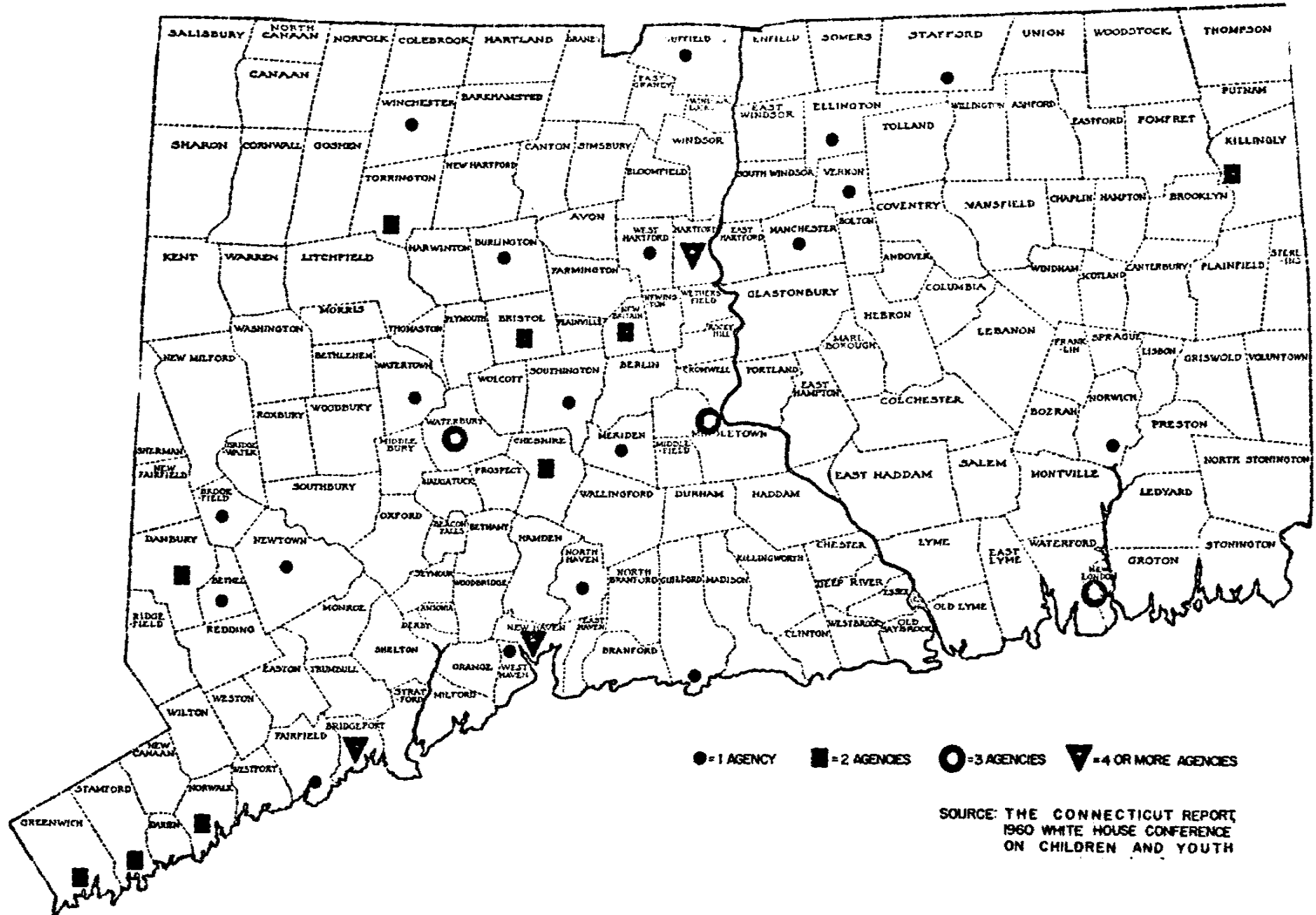
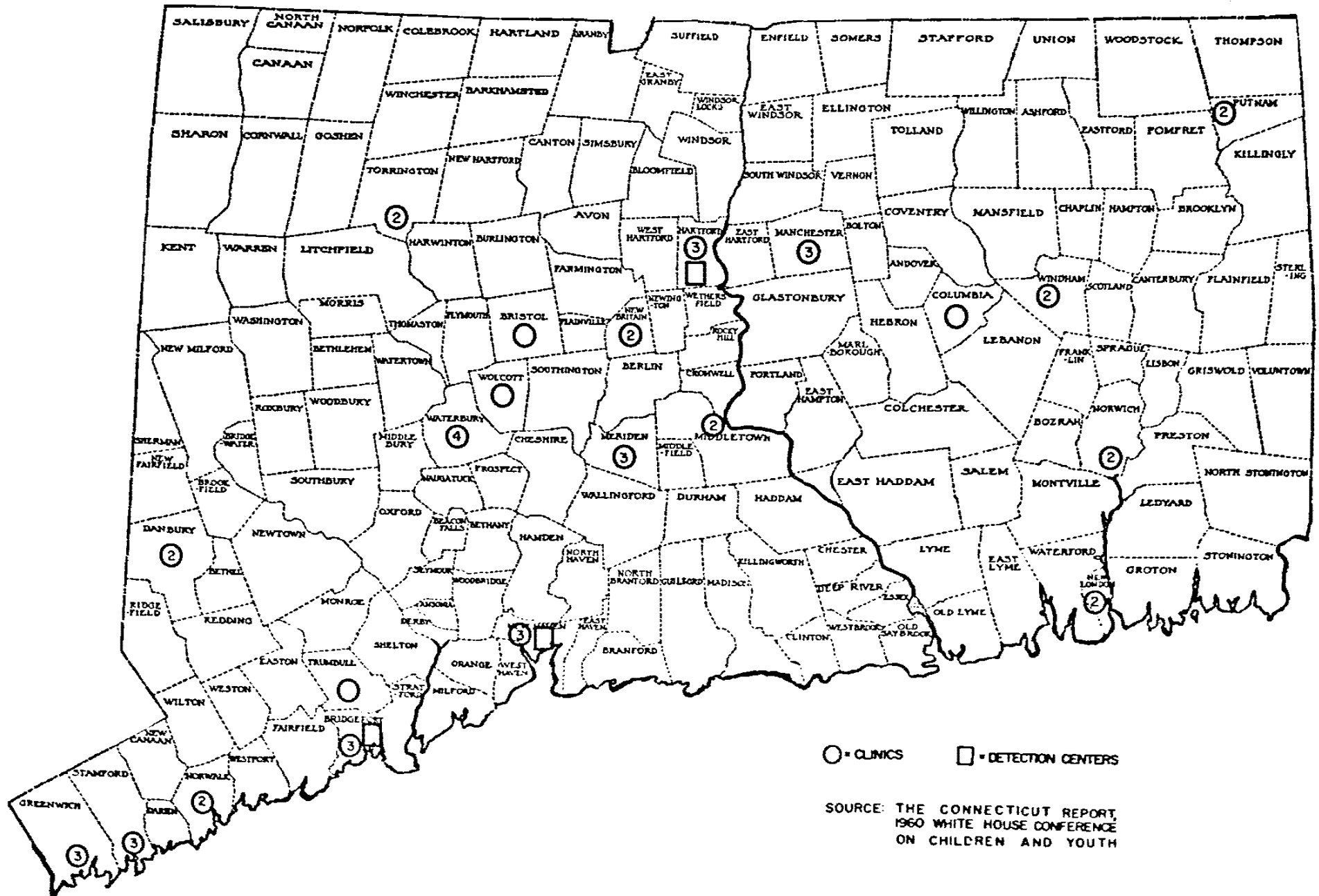


Figure 12. Clinic Services and/or Detection Centers Sponsored by Voluntary Health Agencies.



A wide range of nursing services characterizes the activity program of these Associations. In 43 of the rural towns served by an Association, the health care activities included generalized nursing, bedside nursing, maternal nursing, well child conferences, and communicable disease nursing care including tuberculosis.

Public Health and Visiting Nurse Associations usually employ one or more full-time registered nurses, some of whom also have public health nurse training. Only a twelfth of all rural towns having such nursing services were served by an Association employing only a part-time registered nurse. In over two-fifths of the rural towns the Association staff included more than one registered nurse. One full-time nurse and a part-time nurse or two full-time registered nurses were frequent staff patterns in such towns. In five of the rural towns, the Public Health and Visiting Nurse Association staff had three or four registered nurses.

A full-time or part-time office clerk further strengthened the program in nearly a fifth of the rural towns having Association services. Regular clerk services contribute to the availability of the nursing services of the Association by relieving the nurse of many clerical responsibilities and in taking service calls at the office when the nurse is on visiting duties.

School Health Programs

Information was obtained from the school nurse or school principal on the health care activities in the local elementary school for each of the 105 rural towns.

The important function of school health programs is increasingly recognized.

"Over the years the school systems have assumed the important role of assisting parents in the child's development in preparation for healthy personal and social adaptation as an adult. The realization has gradually come that good health and freedom from illness are important factors in establishing a healthy adult personality."²⁵

As required by State law, medical examinations of school children every three years and the annual vision examination are school health services in each school system. In 7/10 of the 105 rural towns, periodic dental examinations were reported in the school health program and most of the same towns have topical fluoride applications.

The elementary schools in all 105 rural towns had services of a physician, and in all but one rural town there was a school nurse. In less than half of the rural towns the nurse was on a full-time basis. In a fifth of all the rural towns, a dentist served on a part-time basis in the school health program and in over a third of the towns a dental hygienist was employed by the local schools.

Other Health Care Programs in Rural Towns

In 15 of all rural towns in Connecticut, a health council was active according to the key health informants. A wide range of health activities was reported for the health councils during 1959. The usual functions of such councils included joint planning and coordination of effort of the several health care resources in the community. Supportive effort for immunization programs including poliomyelitis vaccine injections or shots, dental fluoride applications, and stimulation of town effort for improved sanitation were other reported activities of health councils.

All but one of the 105 rural towns were reported to have available organized ambulance services. In half of the towns having ambulances, the sponsoring agency had one ambulance available to serve the immediate town while in the other half of the towns there were two or more ambulances available. Commercial ambulance services were the most frequent type of sponsoring group—they served nearly a third of all rural towns. About a sixth of these towns had a fire department as the sponsoring agency for ambulance service.

Developments In Availability of Health Care Resources in Rural Areas

In examining the availability patterns of health care personnel and facilities in rural areas, the following are considered: the service areas of such resources, linkages between health resources in rural and urban areas, banding of rural towns in health care services, and opinions of key health care informants as to availability of health services in rural towns.

Service Areas of Medical and Health Care Resources

As a study basis, it was premised that all health care resources function with reference to generalized community situations including identifiable service areas. It will again be noted that only situations involving rural towns are considered here. The recognized service areas may include only rural towns or, as more frequently the case, a combination of rural towns with one or more urban towns.

Service Areas—General Practitioners (M.D.)—The Director of Health and the senior nurse of the Public Health and Visiting Nurse Association in each of

²⁵ The Connecticut Report, 1960 White House Conference on Children and Youth, Connecticut State Planning Group, State Office Building, Hartford 15, Connecticut, p. 75.

the rural towns were independently asked, "What are the principal centers (villages, cities) where most people of this town go for services of a physician (general practitioner)?"

In this analysis, the first reported center by the key health informants is considered the "principal center" for services of general practitioners.

The Director of Health and the Public Health and Visiting Nurse Association agreed on identification of principal center for general practitioner services for about 90 percent of the rural towns (64) for which both the key informants reported. Since there was such high agreement of the two informants and because data from the Director of Health were available for all 105 rural towns while there were 41 towns without Public Health and Visiting Nurse services, the ensuing analyses are based on reports from the Directors of Health.

For over two-fifths of the rural towns, only one center was reported while for the other three-fifths of these towns two or more villages or cities were identified as "principal centers" where most people of the towns went for general practitioner services.

Places within rural towns were reported as principal center for general practitioner (M.D.) services for two-thirds of all 105 rural towns (Table 9 and Figure 13). In one-half of all rural towns,

Table 9. Population Size of Principal Centers Reported for General Practitioners' (M.D.) Services

Population Size of Principal Center Reported for General Practitioner Services	Number of Rural Towns
Total	105
Rural town ¹	70
Urban center: 2,500-9,999 pop.	15
Urban center: 10,000-24,999 pop.	9
Urban center: 25,000-49,999 pop.	4
Urban center: 50,000 pop. or over	7

¹ "Rural towns" are defined on page 7.

most people used a general practitioner within their own town, and in one-sixth of all rural towns most people were reported to use general practitioners from other rural towns.

In a third of all rural towns, most people used general practitioners located in urban centers. As shown in table 9, these urban centers ranged in population size from the places of 2,500-9,999 population up to the metropolitan centers of 50,000 population and over.

Distances of travel to principal center for general practitioner care were within the same town or less

Table 10. Distance¹ from Rural Towns to Principal Centers for General Practitioners' (M.D.) Services

Distances	Number of Rural Towns
Total	105
Within rural town	51
Less than 5 miles	8
5-9 miles	37
10 miles or over	11

¹ Distances based on mileage from geographical center of rural town to principal center via nearest paved State highway.

than five miles for 57 of the rural towns (Table 10). For about a third of the towns, distances were 5-9 miles and for only 11 rural towns distances were 10 miles or over to the principal center for general practitioner services.

Many population centers serve more than one rural town. Nearly three-fifths of all the rural towns shared with one or more other rural towns in the same principal center for general practitioner services. For most of such linked towns, two rural towns were involved—26 different rural towns were so linked. There were six general practitioner service areas in which three rural towns were linked per area—involving a total of 18 towns. At the upper range in size of general practitioner service areas, there was one area having four rural towns and there was one general practitioner service area serving five rural towns.

Service Areas—Medical Specialists—The Director of Health and senior nurse of the Public Health and Visiting Nurse Association also were asked, "What are the principal centers (villages, cities) where most people of this town go for the services of medical specialists?"

Using the first center reported by the key health informants as the "principal center" for medical specialists' services, there was relatively high agreement between the two informants on identification of such "principal center." In 80 percent of the 64 rural towns for which both informants were available, they agreed as to such center. The following analyses are derived from reports of the Director of Health for all 105 rural towns.

Similar to the situation for general practitioners, two-fifths of all rural towns were reported to use only one center for medical specialists and the other three-fifths of such towns were identified as utilizing from two to as many as six different centers for specialty care.

Centers within rural towns were named as principal center for medical specialists for only 12 towns (Table 11 and Figure 14). Of all rural towns, only nine of them had places within the immediate town

Figure 13. Principal Centers for Physician Services, Rural Towns, 1960.

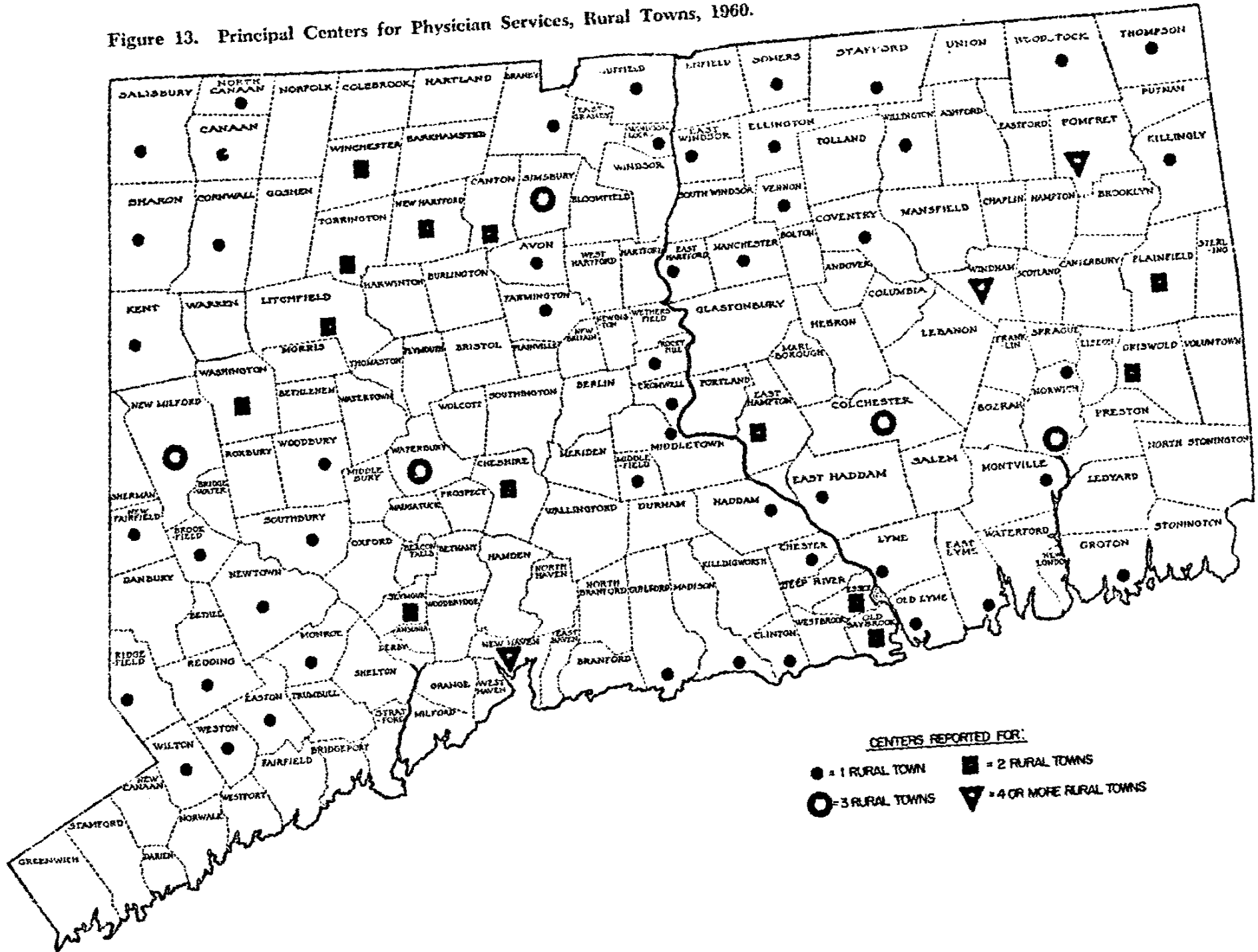


Figure 14. Principal Centers for Medical Specialist Services, Rural Towns, 1960.

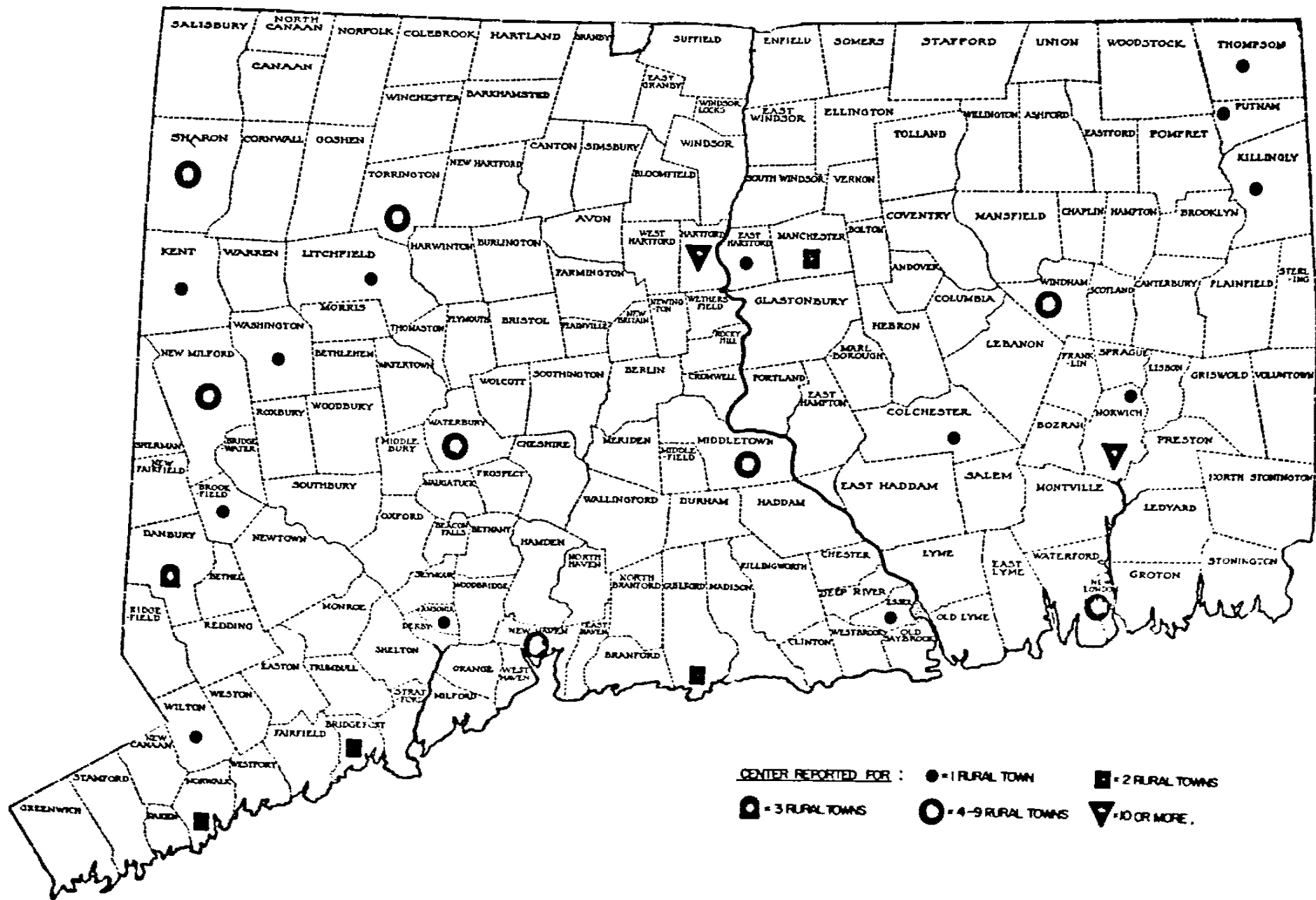


Table 11. Population Size of Principal Centers Reported for Medical Specialists' Services

Population Size of Principal Center Reported for Medical Specialist Services	Number of Rural Towns
Total	105
Rural town	12
Urban center: 2,500-9,999 pop.	10
Urban center: 10,000-24,999 pop.	21
Urban center: 25,000-49,999 pop.	26
Urban center: 50,000 pop. or over	36

and 3 towns were reported to use villages in other rural towns as principal centers for services of medical specialists.

About nine-tenths of all rural towns, then, were reported to be linked with urban centers for major use of medical specialists. Metropolitan centers of 50,000 population and over served as principal centers for the largest proportion of rural towns—a third of them. As shown in Table 11, there was a consistent increase in number of rural towns involved as population size of centers increased.

For 45 rural towns, the principal center for medical specialists' services was either located in the same town or was less than 10 miles distant. People in 46 towns traveled 10-19 miles and families in 14 rural towns were 20 miles or over from their principal center used for medical specialists (Table 12).

Table 12. Distance¹ from Rural Towns to Principal Centers for Medical Specialists' Services

Distances	Number of Rural Towns
Total	105
Within rural town	8
Under 10 miles	37
10-19 miles	46
20 miles or over	14

¹ Distances based on mileage from geographical center of rural town to principal center via nearest paved State highway.

Almost nine-tenths of all rural towns were banded with one or more rural towns in reported use of the same principal center for medical specialists' care. There was a wide range in number of towns included in such groupings—from 2 to 20 different rural towns were involved in such linkages with principal place for medical specialists' services. About three-fourths of all rural towns were in groupings of 5 or more such towns using the same principal centers and almost half of all the towns were in groups of 8 or more rural towns reported to have the same principal center for medical specialists.

Dental Service Areas—There was high agreement, 86 percent, of Directors of Health and the senior nurse of the Public Health and Visiting Nurse Association as to "principal center" where people in the towns obtained dental services. The first center reported by the Director of Health was used as the "principal center" for dental care in the following analysis.

About two-fifths of all 105 rural towns for which data from Directors of Health were analyzed were reported to use only one center for dental services. People in nearly a third of these towns used two centers, and people in less than a third of the rural towns utilized three or more centers for dental services.

Places within rural towns predominated as the identified principal centers with 59 rural towns being so situated (Table 13 and Figure 15). Two-

Table 13. Population Size of Principal Centers Reported for Dental Services

Population Size of Principal Center Reported for Dental Services	Number of Rural Towns
Total	105
Rural town	59
Urban center: 2,500-9,999 pop.	16
Urban center: 10,000-24,999 pop.	18
Urban center: 25,000-49,999 pop.	5
Urban center: 50,000 pop. or over	7

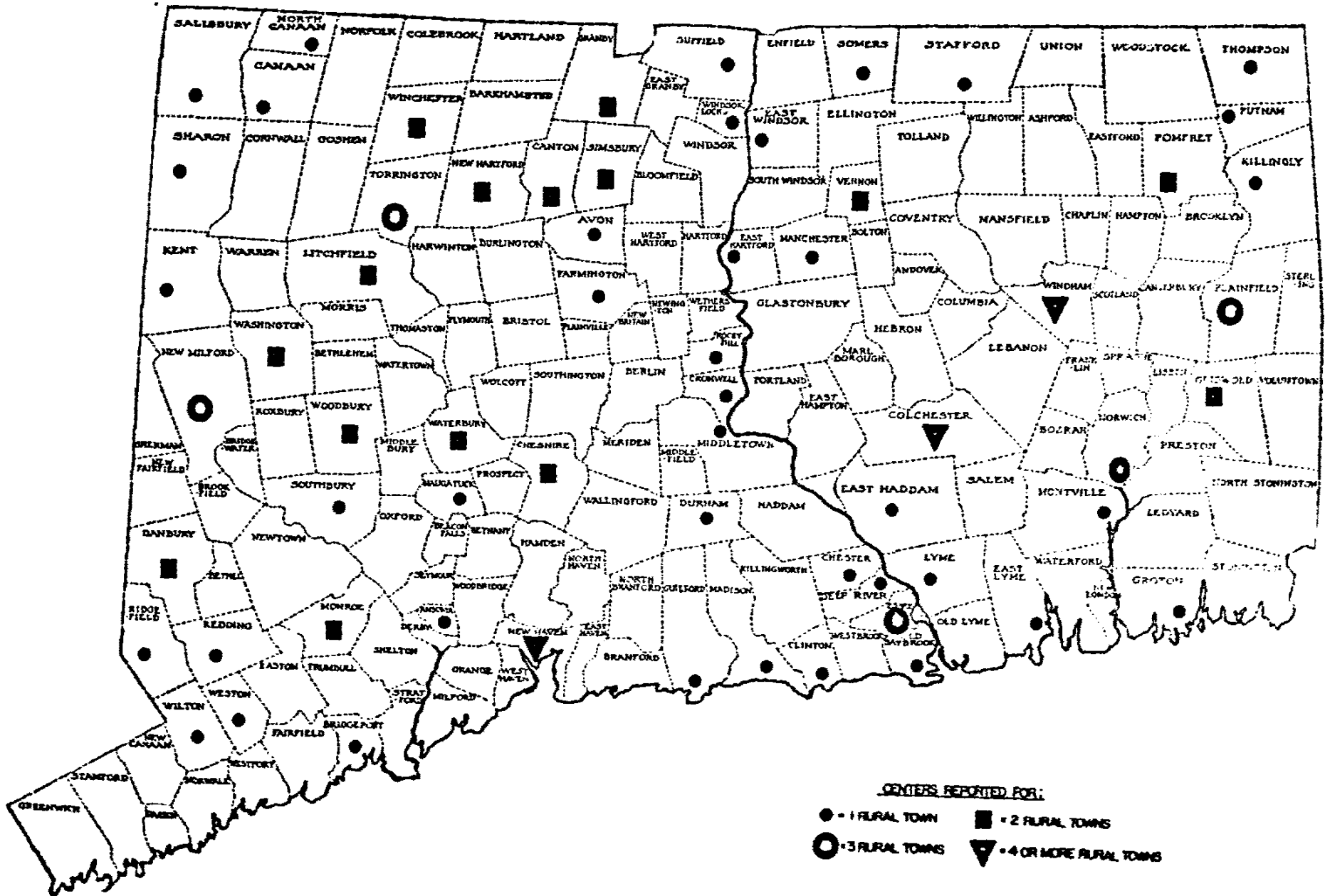
fifths of all rural towns had such places within the immediate town and in 17 towns the principal center for dental care was in another rural town. People in 46 rural towns in Connecticut were reported to have their major center for dental services in urban places. Those urban places of 2,500-9,999 population and of 10,000-24,999 population were most frequently reported. Utilization of metropolitan centers of 50,000 population and over were reported as principal dental care center for only seven of all the rural towns.

The principal center used for dental services was either in the immediate rural town or less than five miles distant in 46 of the rural towns (Table 14).

Table 14. Distance from Rural Towns to Principal Centers for Dental Services

Distances	Number of Rural Towns
Total	105
Within rural town	40
Under 5 miles	6
5-9 miles	44
10 miles or over	15

Figure 15. Principal Centers for Dentist Services, Rural Towns, 1960.



About the same number of towns were reported to have their principal dental center 10 miles or more distant.

About one-half of the rural towns were linked with one or more other rural towns in the use of a principal center for dental services. For one-half of such linked towns, only two rural towns were involved. There were four identified principal centers having three rural towns sharing in the service area, two centers having four rural towns, and one city was reported as the principal dental care center for eight rural towns.

General Hospital Service Areas—As in the identification of places used by people in the rural towns for services of general practitioners, medical specialists, and dentists, the Directors of Health and the representatives of the Public Health and Visiting Nurse Association were asked, "What are the principal centers (villages, cities) where most people of this town go for services of general hospitals?" The first reported center was again considered as the "principal center" for hospital services. The two key health informants were in high agreement, 94 percent, as to the "principal center."

In two-fifths of all 105 rural towns for which the Directors of Health provided data, people were reported to use only one center for general hospital services. In a third of the towns, people used two centers and in a fourth of all rural towns three centers were reported as used by most people for general hospital care.

Places within rural towns were identified as "principal center" for hospital services for only five of all rural towns (Table 15 and Figure 16). Among all

Table 15. Population Size of Principal Centers Reported for General Hospital Services

Population Size of Principal Center Reported for General Hospital Services	Number of Rural Towns
Total	105
Rural town	5
Urban center: 2,500-9,999 pop.	26
Urban center: 10,000-24,999 pop.	21
Urban center: 25,000-49,999 pop.	28
Urban center: 50,000 pop. or over	25

the towns, only one had such a hospital center within the immediate town and for four rural towns the principal center for general hospital care was in another rural town. For well over nine-tenths of all rural towns in Connecticut the principal center for hospital service was located in urban places. Identified centers for such health care by most people in each of the rural towns were about equally distributed in all four specified population-sized urban

places. Nearly one-fourth of all rural towns were reported to use a metropolitan center, population of 50,000 or over, as their principal place for general hospital services.

There was nearly an equal distribution of the rural towns in distances to major center for general hospital care between under 10 miles and for 10 miles and over (Table 16). Most people in two-fifths of

Table 16. Distance¹ from Rural Towns to Principal Centers for General Hospital Services for People in Rural Towns

Distances	Number of Rural Towns
Total	105
Within rural town	1
Under 10 miles	50
10-19 miles	44
20 miles or over	10

¹ Distances based on mileage from geographical center of rural town to principal center via nearest paved State highway.

all rural towns were reported to go 10-19 miles for their principal center of hospital service. Persons in only 10 rural towns used general hospital centers 20 miles or more away from their towns.

A comparison was made between the banding of rural towns by "principal center" for general hospital services as reported by Directors of Health and the grouping of such towns in the general hospital areas (Figure 5) determined by the State Department of Health. For 88 percent of all rural towns, there was full agreement in the service area identification of "principal centers" for hospital care by Directors of Health with the general hospital areas determined by the Connecticut State Department of Health.

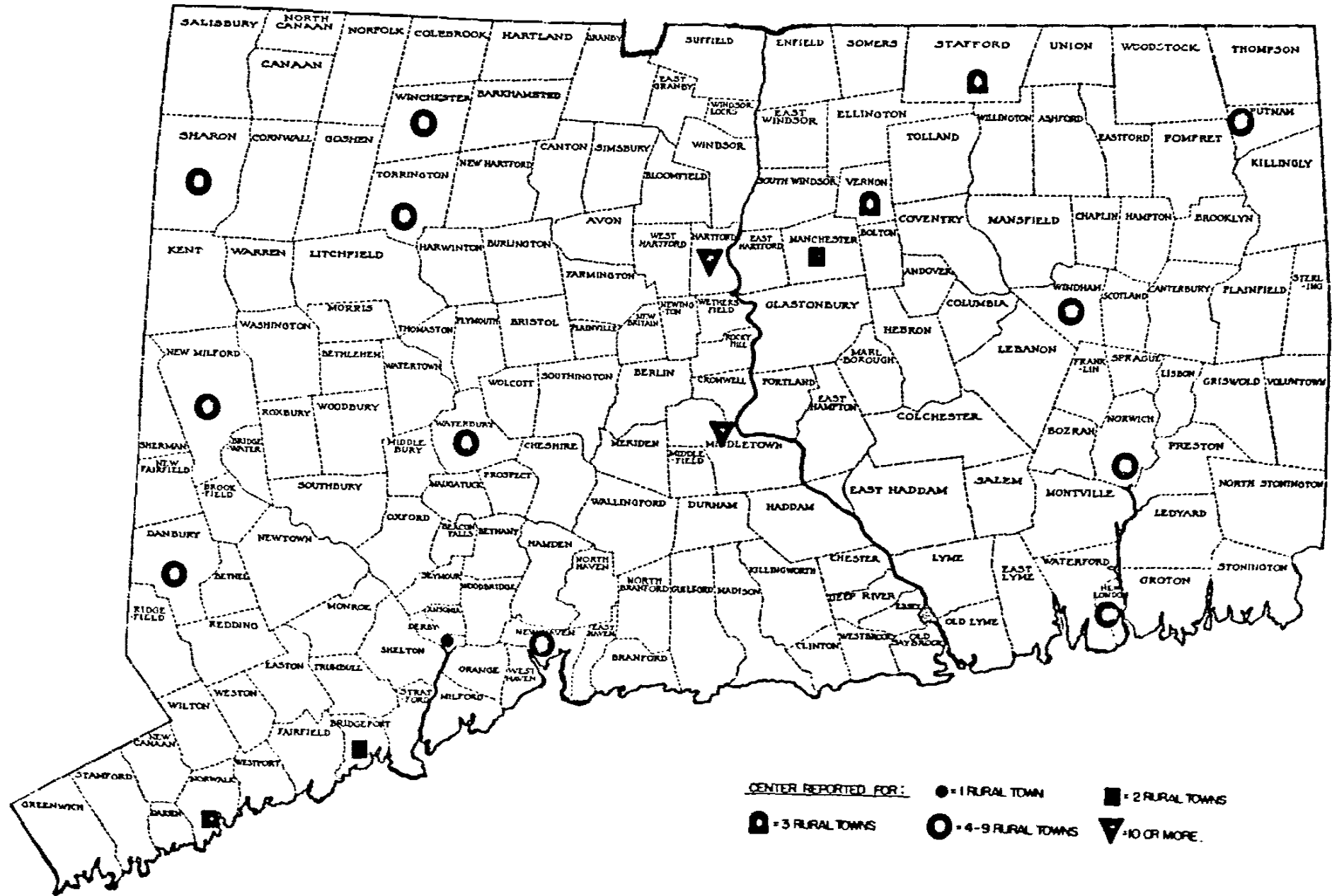
Linkages of Medical and Other Health Personnel in Rural and Urban Areas

An important aspect of the availability of health care resources in rural areas is the interrelationship of medical and other health personnel located in urban and rural areas. The general hypothesis was explored that health care personnel in rural areas have working relationships with their professional counterparts in urban centers.

Interrelationships of Physicians in Rural and Urban Areas—In each of the 105 rural towns, the physician serving as Director of Health was asked, "In what urban centers do physicians of this locality have active professional activities or other relationships such as hospital staff appointments, medical conferences, etc.?"

A total of 23 different urban centers were identified as centers for active professional activities of

Figure 16. Principal Centers for General Hospital Services, Rural Towns, 1960.



physicians serving rural localities. Eighteen of these urban centers were each reported to have such a medical center role for three or more rural towns (Table 17). Hartford and New Haven led in being

Table 17. Number of Directors of Health Reporting Urban Centers Where Physicians Serving Rural Localities Have Active Professional Activities

Urban Centers	Number of Directors of Health Reporting Urban Centers
Total Directors of Health reporting	105 ¹
Hartford	20
New Haven	18
Middletown	15
Norwich	13
Torrington	11
Waterbury	11
New London	9
Putnam	8
Willimantic	7
Danbury	5
New Milford	5
Manchester	4
Sharon	4
Stafford Springs	3
Winsted	4
New York City, N.Y.	4
Derby	3
Boston, Mass.	3
Other urban centers	8
Not applicable—no physician in rural localities	11

¹ Totals to more than 105 since some Directors of Health named two or more urban centers.

identified by the largest number of Directors of Health serving rural towns. It will also be noted that New York City and Boston were mentioned by four and three Directors of Health respectively as being centers for professional activities of physicians in rural areas.

It is indicative of the recognized interrelationships of physicians in rural and urban areas that all Directors of Health identified some urban centers for active activities of rural physicians except for 11 Directors who reported there were no physicians in their rural towns. According to this "image" of interrelationships then, physicians in all rural areas of Connecticut have professional on-going linkages with urban centers.

The Directors of Health were also asked, "During the past five years, has there been any change in the extent to which physicians of this locality have worked with physicians and other health services in urban centers?" Of the Directors reporting, about three-fourths stated there had been "no change,"

over a fifth that there had been an increase, and only one-twentieth of the Directors of Health reported there had been a decrease in the extent of physicians in rural localities working with physicians and other health personnel in cities. A relative stability in such active relationships is therefore indicated with some three-fourths of the Directors reporting no change. The number of Directors citing an increase was much larger than the number of Directors reporting a decline in such working relationships among physicians in rural and urban areas over a five-year period.

The Directors of Health who reported an increase in the interrelationship of rural and urban located physicians were asked, "In what types of health care activities have such changes occurred?" They reported, "Increases in activities of rural physicians in hospital services including out-patient clinical activities," "Increased number of medical professional meetings and conferences," and "More consultations of physicians in rural areas with urban medical and health services."

Some Interrelationships of Nurses in Rural and Urban Areas—In each of the 105 rural towns of Connecticut the representative of the Public Health and Visiting Nurse Association or the school nurse was asked, "In what urban centers do nurses of this locality have active professional activities or other relationships including educational meetings?" Thirty-three different urban centers were reported with 13 such centers identified as serving as location for professional activities of nurses for three or more rural towns (Table 18). Hartford, Torrington, and New Haven were named by informants for the largest number of rural towns.

Table 18. Nurse Informants Reporting Urban Centers Where Nurses Have Active Professional Activities

Urban Centers	Number of Nurse Informants Reporting Urban Centers
Total nurse informants reporting	105 ¹
Hartford	27
Torrington	15
New Haven	12
Middletown	8
Norwich	8
New London	7
East Hartford	5
Storrs	5
Waterbury	4
Bridgeport	3
Putnam	3
Rockville	3
Willimantic	3
Other urban centers	23

¹ Totals to more than 105 towns since some informants named two or more urban centers.

The nurse informant in each of the 105 rural towns was asked, "During the past five years, has there been any change in the extent to which nurses of this locality have worked with nurses and other health services in urban centers?" For the informants reporting, two-thirds stated that there had been "no change," and the remaining third that there had been an increase in the extent of nurses of the locality working with nurses and other health personnel in urban centers. The informants reporting an increase were asked, "In what types of health care activities have such changes occurred?" Educational activities including "better communication and understanding" and "more public health nursing conferences," more participation in health care programs in cities including "psychiatric and mental health programs" and a wide range of clinics, more patient referrals, more use of State Department of Health resources, and a growing interest in regional health activities including "regional health councils" were cited as types of interrelationships which had increased between rural and urban places.

Banding of Rural Towns in Health Care Services

Rural towns are banded together for several types of health services.

Public Health and Visiting Nurse Associations—For two-thirds of the 64 rural towns with Public Health and Visiting Nurse Associations, the service areas of the Associations were coterminous with the town. In a fourth of rural towns having such programs, two towns were served by the same Public Health and Visiting Nurse Association. For a tenth of all rural towns with this public nursing service, the Associations served three or more towns. The largest number of towns served by the same Association was a five-town area.

In half of the situations where rural towns banded with other towns for Public Health and Visiting Nurse Association services, only rural towns were involved. For the other half of such linkage situations in which rural towns participated, both rural and urban towns were in such multiple town service areas for the Associations.

In addition to the formalized cooperation of two or more towns in the operation of their local Public Health and Visiting Nurse Association, some cities, including Hartford, are serving as regional centers for specified nurse services such as supervision from the urban center association to the associations in outlying towns. This arrangement is reported to contribute to improved quality of nursing activities and to economical services.

Nurse Registries—The senior nurse of the Public Health and Visiting Nurse Association or the school nurse were asked as to availability of a nurse

registry for registered nurses of the area. Two-fifths of all rural towns were reported to have a nurse registry. A local hospital was identified most frequently as the organization maintaining such a registry.

Ambulance Service Areas—As already noted, all but one of the 105 rural towns reported having ambulance service available. Two-thirds of all the rural towns had linkages with one or more other towns in their ambulance service arrangements.

Opinions of Key Health Care Informants as to Availability of Health Care Resources

The Directors of Health and the senior nurse of the Public Health and Visiting Nurse Association were asked for opinions on the adequacy of numbers of physicians, dentists, nurses, and other selected health services available to people in the rural towns. These "images" of relative availability are therefore based on the informed judgment of these professional health informants.

These two key informants were asked, "In your opinion, do you think there are enough physicians in or readily available to this town?" In over 70 percent of the rural towns for which both informants reported, there was full agreement between them as to the availability situation locally. The responses from Directors of Health are analyzed here.

In over seven-tenths of the rural towns, the Directors of Health reported there were enough physicians, a fourth answered "no," and three percent were "undecided." Those Directors answering "no" or "undecided" to the physician availability question were then asked, "What is needed?" The predominant suggestion was "more physicians in rural areas." Half of the towns for which such were suggested were reported to "need a physician" while "need for more physicians generally in rural areas" was cited for the other half of towns where physicians were reported as needed.

The two key health informants in each rural town were also asked, "Are there enough medical specialists in or readily available to this town?" In practically all of the rural towns, 101 out of 105, services of medical specialists were reported by Directors of Health as readily available.

Satisfaction with the available supply of dentists was reported generally by the two key health informants for each of the rural towns.

Opinions regarding the adequacy of the number of registered nurses in or readily available to each rural town were ascertained for public health nursing, hospital nursing, and for private duty nursing. According to the Directors of Health, there were 47 rural towns lacking in registered nurses for

private duty nursing, 32 of the rural towns were short of registered nurses in hospitals, and 26 towns were reported as deficient in number of registered nurses for public health nursing.

In one-half of the rural towns, Directors of Health reported that there were enough practical nurses.

As a summary question pertaining to availability of health resources, the two key health informants were asked, "Are there any other things that might be done in this town to improve the medical and health care for the people?"

According to the Directors of Health, about half of the rural towns had such "other things" that might be done to improve health care of people of the towns. The Directors responding there were such other things to be done were then asked, "What should be done?" Improved environmental health including improved water supply, improved sewage disposal, improved building codes, and zoning led in the specific suggestions. Such environmental health improvements were cited by a fourth of the rural towns for which any other things were reported. About as many of the towns were said to need more public health and visiting nurse services. The need for a full-time public health program was the third leading suggestion—this was reported for a sixth of all rural towns identified as having "other things" that might be done to improve medical and health care.

Summary

Interest in the availability of physicians, dentists, nurses, dental hygienists, hospitals, and of other health care resources is accentuated by a rapid increase of population in Connecticut as well as by high awareness among people generally of the advantages of health care.

For both rural and urban areas of Connecticut, there was a total of 3,897 physicians in active practice in 1960. The 3,061 physicians in private practice provided a ratio of 828 persons per physician. However, the State had fewer physicians in relation to population in 1960 as compared to ten years earlier. The total population increased 26 percent from 1950 to 1960, but the number of physicians in private practice gained only 21 percent.

There were 1,665 dentists in active practice in the State in 1960 which gave a ratio of 1,523 persons per dentist. The number of dentists increased 13 percent from 1950 to 1960 or at only half the rate of total population growth.

In 1960 Connecticut had 13,608 registered nurses, 2,646 licensed practical nurses, 509 dental hygienists, 228 physical therapists, and 49 medical social workers.

Among the physical facilities for medical and other health care in the State in 1960, there were 37 general hospitals, 14 mental hospitals, 6 chronic disease hospitals, 226 nursing homes, and 40 diagnostic and diagnostic-treatment centers.

The official health agencies, the Connecticut State Department of Health and the Connecticut State Department of Mental Health, have responsibilities for health activities distributed over the State including such illustrative services as Well Child Conferences and psychiatric clinics.

Voluntary health agencies extend their availability through district and community boards and advisory groups along with participating in clinic services and detection centers dispersed in most areas of Connecticut.

Each of the 105 rural towns of Connecticut is served by a part-time Director of Health or local health officer. All of the Directors of Health for rural towns are physicians in private medical practice who agree to do some public health work for the town.

Sixty-four of all rural towns were served by Public Health and Visiting Nurse Associations. These Associations have a wide range of nursing services including generalized nursing, bedside nursing, maternal nursing, well child conferences, and communicable disease nursing care.

Health programs in elementary schools in the rural towns of Connecticut are served by part-time services of local physicians along with those physical examinations provided by the family physician, by school nurses in full-time or part-time service, by part-time services of dentists in one-fifth of the towns, and by dental hygienists in over a third of all rural towns.

Identified medical and other health care service areas involving rural towns in Connecticut include areas served chiefly by rural centers and other areas which depend upon urban centers. Most people in two-thirds of all rural towns were reported to use rural centers for general practitioner (M.D.) services while in one-third of these towns people usually had such medical services in urban centers. For medical specialists, most people in nine-tenths of the rural towns went to urban centers. In over one-half of the rural towns, most people used dental services in rural centers.

Other developments in the availability of health care resources in rural areas of Connecticut include working relationships of medical and other health personnel located in rural places with their counterparts in urban centers and the banding together of rural towns for several types of health services such as for the services of Public Health and Visiting Nurse Associations.