

Health  
Services  
in  
City  
Schools

by *H. F. Kilander*  
*Specialist for Health Education*

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**FEDERAL SECURITY AGENCY . . . Oscar R. Ewing, *Administrator***  
**Office of Education . . . Earl James McGrath, *Commissioner***

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## FOREWORD

IN RESPONSE to increasing interest in the school health program, the Office of Education, since 1930, has made studies at regular 10-year intervals of the school health services of our Nation. This study is the third one in the series to be reported.

The study, undertaken in cooperation with the Public Health Service of the Federal Security Agency and the American Medical Association, shows the present status of many phases of school health services in cities having a population of 2,500 or more in Continental United States. Certain trends are also indicated.

Dr. Cyrus H. Maxwell, formerly Chief of Administration of School and College Health Services, Office of Education, originated the study. Dr. Kilander who has carried the report to completion has been assisted in the preparation of the statistical data by Albert Pelley, Research Assistant.

The report should be of special interest to school administrators, school health service personnel, public health officials, medical and dental societies, parent-teacher associations, and many other individual groups.

• WAYNE O. REED  
*Assistant Commissioner  
Division of State and Local School  
Systems*

GALEN JONES  
*Director  
Instruction, Organization, and  
Services Branch*

# Health Services in City Schools

**A** SCHOOL HEALTH PROGRAM is usually thought of as comprising three broad areas: (1) health education, including both separate and integrated instruction; (2) healthful school environment, including both physical and social aspects; and (3) school health services.

The study reported here deals with the school health service area of the school health program. Presented is certain information of a statistical nature regarding health services in school systems of the 3,430 cities in Continental United States with populations of 2,500 and above.

The findings in this study indicate that considerable increase has occurred since the last previous study in the number of school systems having health services and in the scope of their school health programs. The study also shows that much still needs to be done in the United States if all our 30,000,000 school children are to have adequate school health service programs.

## ***Historical Background of School Health Programs***

Certain significant landmarks in the growth of the school health programs prior to 1900 are here presented.<sup>1</sup>

In 1872, a "sanitary superintendent" was employed by the Board of Education in Elmira, N. Y., because of the "alarming prevalence of smallpox."

In 1894, 50 "medical visitors" were appointed in Boston. These physicians visited the schools daily and examined "all children thought by their teachers to be ailing."

<sup>1</sup> James F. Rogers. *Health Services in City Schools*. Washington, U. S. Government Printing Office, 1942. p. 1-2. (Federal Security Agency, U. S. Office of Education, Biennial Survey of Education in the United States, 1938-40, Vol. I, Ch. 5)

New York City followed the example of Boston in 1897 by the appointment of 134 medical inspectors.

In 1902, the first staff of school nurses was appointed in New York City.

In 1899, the State of Connecticut required the examination of all school children by teachers for defects of vision and, by 1905, many school physicians had become interested in the search for these and other physical faults. Laws in this field are now on the statutes of nearly all States.

Since 1900, the development of the school health service has been rapid as compared with that of prior years.

### **Survey of School Health Programs**

The first Nation-wide survey of school health programs, including school health services, was made in 1922. Periodically since that time additional studies have been made. These studies are here briefly listed and described.

1922: The Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association issued a report <sup>2</sup> on certain phases of the school health service program.

1923: A survey <sup>3</sup> was made by the Bureau of Education, Department of Interior, to "determine present efforts and ways and means put forth for health work in schools." It included cities of all sizes and dealt with health services, physical education, and health education.

1930: A survey <sup>4</sup> was conducted by the Office of Education, Department of the Interior, in response to a request from the Committee on the School Child of the White House Conference on Child Health and Protection. The study dealt with "a series of questions in regard to what is being done by special means toward the conservation and promotion of the health of children." The questionnaires went to superintendents in cities over 2,500 population and to county school superintendents.

1940: The Office of Education, Federal Security Agency, made a survey <sup>5</sup> of school health services. The study concerned various phases of the health services, similar to the study in 1930, but cities with a population of less than 10,000 were not included.

<sup>2</sup> *Health Services in City Schools*. Report of Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association. Washington, The National Education Association, 1922.

<sup>3</sup> James F. Rogers and Frank M. Phillips. *Progress and Prospect in School Health Work*. Washington, Bureau of Education, Department of Interior, 1923.

<sup>4</sup> James F. Rogers. *School Health Activities in 1930*. Washington, U. S. Government Printing Office, 1931. U. S. Office of Education, (Pamphlet No. 31.)

<sup>5</sup> James F. Rogers. *Health Services in City Schools*. Op. cit.

In addition to these earlier studies of school health services, several related and supplementary reports have appeared in recent years, as follows:

1947: The Academy of Pediatrics study of child health services.<sup>6</sup> Certain aspects of school health services were included in the comprehensive nation-wide study of child health services. This study was carried out by the Academy with the cooperation of the Public Health Service and the Children's Bureau of the Federal Security Agency. Each of the 3,000 counties in the United States was included in the survey.

1947: A status study<sup>7</sup> was made by the Office of Education of the State administration of school health, physical education, and recreation.

1949: A study<sup>8</sup> was conducted by the National Education Association of personnel and relationships in school health, physical education, and recreation in cities over 2,500 population.

1950: A study<sup>9</sup> was made of physician participation in school health service programs by the American Medical Association. A questionnaire was directed to all local medical societies in the 48 states, the District of Columbia, and the Territories in order to determine the extent of medical society interest and physician participation in the school health program. The study was made in cooperation with the Office of Education.

1950: A report<sup>10</sup> was prepared by the Office of Education, in cooperation with the American School Health Association, of the organization of health instruction in the secondary schools.

## Survey Procedures

The information presented in this report has been obtained through two questionnaires. The first one was mailed out during the school year 1949-50, and the second one, during the school year 1950-51. To simplify the use of dates in the report, the year 1950 is used as the reference date.

*The first questionnaire*—On the first questionnaire, information was requested as to whether a school system had school health services avail-

<sup>6</sup> The Commonwealth Fund. *Child Health Services and Pediatric Education*. New York, The Commonwealth Fund, 1949.

<sup>7</sup> Frank S. Stafford. *State Administration of School Health, Physical Education, and Recreation*. Washington, U. S. Government Printing Office, 1947. (Federal Security Agency, Office of Education, Bulletin 1947, No. 13.)

<sup>8</sup> Personnel and Relationships in School Health, Physical Education, and Recreation. *Research Bulletin*, October 1950. Washington, D. C., The National Education Association.

<sup>9</sup> Fred V. Hein and Donald A. Dukelow. *Physician Participation in School Health Services*. Chicago: The American Medical Association, 1950.

<sup>10</sup> H. F. Kilander. *Health Instruction in the Secondary Schools: An Inquiry into Its Organization and Administration*. Washington, U. S. Government Printing Office, 1951. (Federal Security Agency, Office of Education, Pamphlet No. 110.)



able. Also requested was information about the authority administering and financing the school health program and the personnel available for school health services. (The questionnaire is shown on page 65.)

This questionnaire was mailed to superintendents of schools in each of the 3,430 cities in Continental United States having a population of 2,500 or more, as based on the latest (1940) census information available at that time. Of this number of cities, 3,186, or 92.9 percent, replied.

*The second questionnaire.*—The second questionnaire included a variety of questions concerning specific phases of the school health service program. (This questionnaire is shown on pages 66-68.)

The Public Health Service and the American Medical Association cooperated in the preparation of the questionnaire. As the American Medical Association was conducting its own related study in 1950, consideration was given to having the two studies supplement each other where desirable.

The questionnaire was sent to each of the 1,012 cities with a population of 10,000 or more which had reported having school health services. A 50 percent sampling was made of the 1,874 cities with a population of 2,500 to 9,999 which had reported school health services. The total number of usable returns was 1,566, or 79.4 percent. Table 21 gives further information in regard to responses to the questionnaire. In order to weight Group IV correctly when computing the percentage totals for regions and the United States, the number of responses for the various questions has been doubled.

Of the 2,866 cities which had reported having a school health service, 315 had indicated that the program was administered by the local Boards of Health. The Public Health Service cooperated further by arranging to have the second questionnaire sent to these cities through the State health officers who, in turn, sent them to the local health officers.

*Analysis by city groups and regions.*—The data have been presented for city population groups based on the Federal Census of 1940, as follows: Group I, 100,000 and over; Group II, 30,000 to 99,999; Group III, 10,000 to 29,999; and Group IV, 2,500 to 9,999.

The information has also been studied by State groupings based on the nine census regions as follows:

**NEW ENGLAND:** Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont.

**MIDDLE ATLANTIC:** New Jersey, New York, and Pennsylvania.

**EAST NORTH CENTRAL:** Illinois, Indiana, Michigan, Ohio, and Wisconsin.

**WEST NORTH CENTRAL:** Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, and South Dakota.

**SOUTH ATLANTIC:** Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, and West Virginia.

**EAST SOUTH CENTRAL:** Alabama, Kentucky, Mississippi, and Tennessee.

WEST SOUTH CENTRAL: Arkansas, Louisiana, Oklahoma, and Texas.

MOUNTAIN: Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming.

PACIFIC: California, Oregon, and Washington.

### **Number of School Systems Having Health Services**

The school superintendents to whom the questionnaires were sent were asked to check whether health services were available in their respective school systems. The following statement, intended to serve as a guide to the respondent in answering the question, appeared on the questionnaire: "For the purposes of this questionnaire, the ONLY phases of the school health service program to be considered are (a) the medical examination, and (b) the dental examination or inspection." In interpreting the data here presented, these qualifying remarks need to be kept in mind.

A summary of the number and percent of school systems having a school health service is presented in table 1. Similar information for regions and groups is given in table 22.

Table 1—Number of cities in the United States having a school health service in 1950

City population group <sup>1</sup>	Number of cities	Cities reporting		Cities having a school health service	
		Number	Percent	Number	Percent
1	2	3	4	5	6
Continental United States.....	3,430	3,186	92.9	2,886	90.6
Group I (100,000 and above).....	93	93	100.0	93	100.0
Group II (30,000 to 99,999).....	259	253	97.7	251	99.2
Group III (10,000 to 29,999).....	724	687	94.9	668	97.2
Group IV (2,500 to 9,999).....	2,354	2,153	91.5	1,874	87.0

<sup>1</sup> Based on the 1940 census.

*United States.*—Replies to the first inquiry were received from 3,186 school systems in Continental United States having populations of 2,500 or more. Of this number, 2,886, or 90.6 percent, reported the presence of school health services.

In table 2 a comparison is made between the number of school systems reporting school health services for the years 1930, 1940, and 1950. It is shown in this table that there has been a progressive increase in the number of cities having a school health service in some stage of development. For example, in 1930, of the 60 percent of cities replying, 90 percent in Group II and 83 percent in Group III reported a school health service. In 1940, the corresponding percentages were 99 and 98 with about 70 percent of the cities replying. In 1950, the percentages were about the same as for 1940, but with nearly all (93 percent) school systems returning the questionnaire.

Table 2.—Comparison of the number of health services reported in 1930, 1940, and 1950

City population group	1930 <sup>1</sup>						1940 <sup>2</sup>						1950 <sup>3</sup>					
	Number of cities		Cities reporting		Health services available		Number of cities		Cities reporting		Health services available		Number of cities		Cities reporting		Health services available	
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Group I.....	70	49	70.0	49	100.0	93	71	76.3	71	100.0	93	93	100.0	93	100.0	93	100.0	93
Group II.....	181	112	61.9	101	90.0	227	162	71.4	161	99.4	259	253	97.7	251	97.2	251	97.2	251
Group III.....	514	308	59.9	253	83.2	665	497	74.7	487	98.0	724	687	94.9	668	92.2	668	92.2	668
Group IV.....											2,354	2,163	91.5	1,874	87.0	1,874	87.0	1,874

<sup>1</sup> U. S. Office of Education. *School Health Activities in 1930*. James F. Rogers. Washington, U. S. Government Printing Office, 1931 (Pamphlet No. 21). (City size based on the 1930 census.)

<sup>2</sup> U. S. Office of Education. *Health Services in City Schools*. James F. Rogers. Washington, U. S. Government Printing Office, 1942. (City size based on the 1930 census.)

<sup>3</sup> City size based on the 1940 census; also applies to subsequent tables.

Additional information classified by State, city size, and region follows:  
*State.*—On the basis of individual replies classified by State, the following percentages of cities report that they have school health services:

*100 percent:* All the New England and Middle Atlantic States, Delaware, District of Columbia, New Mexico, and Nevada.

*90-99 percent:* California (98.6), North Carolina (98.3), Oregon (97.0), Florida (96.8), Utah (95.6), Virginia (95.2), Arizona (93.7), Michigan (93.2), Ohio (93.1), Iowa (92.7), Washington (92.5), Illinois (91.7), Tennessee (91.6), Minnesota (90.5), Maryland (90.4), and Kentucky (90.3).

*80-90 percent:* West Virginia (89.7), Wisconsin (89.0), Nebraska (87.8), Indiana (87.3), Idaho (86.3), Mississippi (86.1), Louisiana (85.7), Colorado (85.1), South Dakota (84.2), Wyoming (83.3), Georgia (82.6), and Kansas (81.3).

*Below 80 percent:* South Carolina (79.5), Alabama (72.9), Texas (72.5), Montana (71.4), Oklahoma (70.3), North Dakota (66.6), Missouri (60.4), and Arkansas (52.1).

*NOTE:*—As most of the States (41) had 85 to 100 percent replies to the questionnaire, the above percentages would seem to represent close to the true situation. The States having less than 85 percent replies are as follows: Tennessee (84.2), Georgia (83.1), Alabama (81.3), Virginia (79.2), Louisiana (77.7), Mississippi (75.0), and Nevada (60.0).

*Group I.*—All the 93 cities in Group I, which comprises the cities with a population of 100,000 or more, replied and all reported that they had a school health service.

In studies conducted in 1930 and 1940, all the cities which replied also indicated that they had school health services. However, in 1930 only 49 of the 70 cities at that time in Group I replied and in 1940 only 71 of the 93 cities replied. Just how many of those cities which did not report actually had health services is not known. The 1950 study does show that all cities in this group now have some type of school health service.

*Group II.*—Of the 259 cities in Group II, comprising cities with a population of 30,000 to 99,999, 253 replied to the first questionnaire. Of these cities, all except 2, or 99.2 percent, reported that they had school health services.

In 1930, of the 181 cities at that time in Group II, 112 replied; of the 112 cities, 101, or 90.0 percent, stated that they had health services. In 1940, of the 227 cities at that time in this group, 162 replied to the questionnaire; all but one of the 162 reported that they had health service.

In seven of the nine geographical regions, 100 percent of the school systems in this second group reported health services. South Atlantic

with 97.0 percent and East North Central with 98.5 percent were the other regions.

*Group III.*—Of the 724 cities in the third group, consisting of cities with populations of 10,000 to 29,999, 687 replied to the questionnaire. Of this number, all except 19, or 97.2 percent, reported that they had school health services.

In 1930, of the 514 cities in this group, 303, or 59.0 percent, replied, of which number, 252, or 83.2 percent, reported health services. In 1940, of the 665 school systems at that time in Group III, 497, or 74.7 percent, replied to the questionnaire. Of this number, 487, or 98.0 percent, reported health services in some stage of development.

Three of the nine regions—New England, Middle Atlantic, and Pacific—reported that all school systems in Group III had health services. Four other regions—East North Central, West North Central, South Atlantic, and Mountain—reported between 95 and 99 percent with health services. The remaining two regions are East South Central with 86.2 percent and West South Central with 85.5 percent.

*Group IV.*—There are 2,354 cities in Group IV, which includes the cities with populations of between 2,500 and 9,999. Of this number, 2,153, or 91.5 percent, replied to the questionnaire. Of those replying, 1,874, or 87.0 percent, reported that they had some type of school health service. Comparable figures for 1930 and 1940 are not available.

Only two regions—New England and Middle Atlantic—reported that 100 percent of their cities in Group IV had health services. The other seven regions ranged in percent as follows: Pacific (95.8), East North Central (88.2), South Atlantic (88.1), Mountain (85.3), East South Central (83.5), West North Central (75.9), and West South Central (65.1).

*Regions.*—Two of the nine regions—New England and Middle Atlantic—report that all school systems have health services. The percentages of cities in the other seven regions having health services are, in descending order: Pacific (97.3), East North Central (91.5), South Atlantic (91.2), Mountain (88.3), East South Central (85.3), West North Central (81.4), and West South Central (71.0).

On the basis of city size, by regions, those reporting less than 90 percent are as follows:

<i>Region and Group</i>	<i>Percent</i>
East North Central, Group IV.....	88.2
South Atlantic, Group IV.....	88.1
East South Central, Group III.....	86.2
West South Central, Group IV.....	85.5
Mountain, Group IV.....	85.3
East South Central, Group IV.....	83.5
West North Central, Group IV.....	75.9
West South Central, Group IV.....	65.1

## Administration and Financing of School Health Programs

Two questions on the first questionnaire dealt with the agencies administering and financing the school health program. For each question there were four choices, namely, "Board of Education," "Board of Health or Health Department," "Jointly," and "Other (specify)."

Table 3 summarizes the information received. Table 22 includes data by regions and groups. In table 3, following the percentage figures under Groups I, II, and III, are several numbers in parenthesis which indicate the corresponding percentages for 1940.

Table 3. Agencies responsible for financing and administering school health services in cities over 2,500 by city population group: 1950

City population group and function	Number of cities reporting	Percent of school health services under —			
		Board of Education	Board of Health	Joint authority	Other authority
1	2	3	4	5	6
United States.....	2,886				
Financing.....		54.9	10.5	23.3	11.3
Administering.....		60.2	10.9	23.0	5.9
Group I.....	93				
Financing.....		60.2(71)	16.1(25)	19.4(5)	4.3
Administering.....		61.3(65)	12.9(31)	22.6(4)	3.2
Group II.....	251				
Financing.....		63.3(70)	13.5(21)	19.6(6)	3.6
Administering.....		66.1(71)	13.9(28)	18.7(6)	1.3
Group III.....	668				
Financing.....		61.1(77)	7.8(7)	22.3(11)	8.8(5)
Administering.....		66.0(75)	8.1(9)	22.3(16)	3.7
Group IV.....	1,874				
Financing.....		51.2	10.8	24.4	13.6
Administering.....		57.3	11.4	24.0	7.3

NOTE.—Figures in parentheses are percentages for 1940 from: U. S. Office of Education. *Health Services in City Schools*. By James F. Rogers. Washington, U. S. Government Printing Office, 1942.

The survey of 1940 did not include cities under 10,000. If we exclude these from the 1950 study, the figures are more readily comparable. In an attempt to compare the administration and financing of the program in 1940 and 1950, the data was recalculated, omitting Group IV. This comparison is shown in table 4.

Administration of the school health program is ordinarily done by the group which finances it. This was also the situation in 1940.

Data presented indicate that there is a definite trend towards joint administration and financing of the school health programs. However, the school health program is still predominantly administered and financed by Boards of Education.

Table 4.—Agencies responsible for financing and administering school health services in cities over 10,000: 1940 and 1950

Year and function	Number of cities reporting	Percent of school health services under —			
		Board of Education	Board of Health	Joint authority	Other authority
1	2	3	4	5	6
<b>1940<sup>1</sup></b>					
Financing.....	699	75.4	12.1	9.2	3.3
Administering.....	692	73.4	14.3	12.6	.0
<b>1950</b>					
Financing.....	1,011	61.6	10.0	21.3	7.1
Administering.....	1,011	65.6	10.0	21.3	3.1

<sup>1</sup> U. S. Office of Education. *Health Services in City Schools*. By James F. Rogers. Washington, U. S. Government Printing Office, 1942.

By regions, Boards of Education administration and financing is highest for Middle Atlantic and West North Central and lowest for South Atlantic and East South Central.

Correspondingly, these responsibilities for the Board of Health are reported as highest for South Atlantic and East South Central and lowest for Middle Atlantic, West North Central, and West South Central.

Joint authority is highest for South Atlantic and East South Central and lowest for West North Central and Middle Atlantic.

On the basis of city size, where there are enough cities in the various regions to be significant, the general trend was largely the same the country over with a higher percentage reported administered and financed by the Board of Education in the larger cities, and a relatively smaller percentage in the smaller cities. The exceptions are Middle Atlantic where there is no clear-cut trend, and New England where the Health Department and joint administration and financing are relatively more important in the cities of Group I than in any other region of the country.

This information is in keeping with that obtained in the Academy of Pediatrics' Study <sup>11</sup> of 1947. This study reported only organizations and not communities sponsoring the program. It showed that there was a tendency for the more densely populated areas to be administered by educational departments and the semi-rural areas to be sponsored by health departments. The study also showed the relative lack of health service in rural areas.

The percentage of programs (11.3) financed by "other" authorities, such as County Courts, and Parent-Teacher Associations, exceeded the percentage (5.9) administered by such agencies. This difference in percentage is explained by the fact that, of the programs financed by non-official agencies, many are administered by Boards of Education and a few by Boards of Health.

<sup>11</sup> John P. Hubbard, Katherine Bain, and Maryland Y. Pennell. *School Health Services*. *Journal of School Health*, 19: 142-48, June 1949.

### Administration

For all the 2,886 cities reporting school health services, 60.2 percent were administered by the Board of Education; 10.9 percent by the Board of Health; 23.0 jointly by Boards of Education and Health; and 5.9 percent by other authorities.

In 1940, for all cities of 10,000 and above, 73.4 percent were administered by the Board of Education; 14.3 percent by the Board of Health; and 12.6 percent by joint authority. There were no other administering agencies. In 1950, the Board of Education administration for cities of 10,000 and above had dropped from 73.4 percent to 65.6 percent; the Board of Health administration from 14.3 percent to 10.0 percent; the joint authority administration had increased from 12.6 percent to 21.3 percent; and "other" authorities had increased from 0.0 to 3.1 percent.

Certain other comparisons between 1940 and 1950 for Groups I, II, and III are shown in tables 5, 6, and 7.

Table 5.—Trends in the administration of school health services in cities of 100,000 or more population (Group I) 1923-1950

Responsible authority	Percent, by year			
	1923 <sup>1</sup>	1930 <sup>2</sup>	1940 <sup>3</sup>	1950
1	2	3	4	5
Board of Education.....	51	60	65	61
Board of Health.....	27	26	31	13
Joint.....	22	14	4	23
Other.....	0	0	0	3
Total.....	100	100	100	100

<sup>1</sup> *Health Services in City Schools*. Report of Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association, New York, 1922. p. 4.

<sup>2</sup> U. S. Office of Education. *School Health Activities in 1930*. By James F. Rogers. Washington, U. S. Government Printing Office, 1931.

<sup>3</sup> U. S. Office of Education. *Health Services in City Schools*. By James F. Rogers. Washington, U. S. Government Printing Office, 1942.

**Group I.**—Of the 93 cities reporting in Group I, 57, or 61.3 percent, indicated that the Board of Educations was the administering agency; 12, or 12.9 percent, the Board of Health; 21, or 22.6 percent, joint administration; and 3, or 3.2 percent, other methods.

The percentage range by regions for Board of Education administration is 100.0 to 30.0 with West North Central and West South Central highest and South Atlantic and New England lowest.

**Group II.**—Cities in the second group have the following percentages for administrative authority: Board of Education, 66.1; Board of Health, 13.9; joint administration, 18.7; and other methods, 1.3.

By regions, the percentages of cities in this group having administration by the Board of Education range from 93.9 to 20.0 percent. It is



Table 6.—Trends in the administration of school health services in cities from 30,000 to 100,000 population (Group II) 1922-1950

Responsible authority	Percent, by year			
	1922 <sup>1</sup>	1930 <sup>2</sup>	1940 <sup>3</sup>	1950
1	2	3	4	5
Board of Education	77	78	71	66
Board of Health	10	14	23	14
Joint	10	5	6	19
Other	0	0	0	1
Private	2	0	0	0
Health and other	0	1	0	0
Educational, health, and other	0	2	0	0
Not stated	1	0	0	0
Total	100	100	100	100

<sup>1</sup> *Health Services in City Schools*. Report of Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association, New York, 1922. p. 4. (This column includes cities of 35,000 to 100,000 population.)

<sup>2</sup> U. S. Office of Education. *School Health Activities in 1930*. By James F. Rogers. Washington, U. S. Government Printing Office, 1931.

<sup>3</sup> U. S. Office of Education. *Health Services in City Schools*. By James F. Rogers. Washington, U. S. Government Printing Office, 1942.

highest in Middle Atlantic and Pacific and lowest in East South Central and South Atlantic.

Highest in the percentage of cities reporting the Board of Health as the administrative agency is New England with 33.3 percent and South Atlantic with 26.5 percent. Three regions—West North Central, West South Central, and Mountain—report no cities in Group II under Board of Health administration.

Joint administration ranges from 60.0 to 2.0 percent. It is the highest in East South Central and South Atlantic and lowest in Middle Atlantic and Pacific.

*Group III.*—Cities in the third city group indicated the following agencies as the administrative authorities: Board of Education, 66.0 percent; Board of Health, 8.1 percent; joint administrations, 22.2 percent; and other, 3.7 percent.

The percentages of cities in this group having the administration done by Boards of Education range, by regions, from 89.4 to 11.1 percent. The highest percentage is in Middle Atlantic and West North Central and lowest in South Atlantic and East South Central.

Administration under Boards of Health varies from 31.7 to 0.0 percent with South Atlantic and East South Central being highest and Mountain and Middle Atlantic lowest.

Joint administration ranges from 50.8 to 5.9 percent with South Atlantic and East South Central having the highest percentages and Middle Atlantic and West North Central the lowest.

Table 7.—Trends in the administration of school health services in cities from 10,000 to 30,000 population (Group III) 1922-1950

Responsible authority	Percent, by year			
	1922 <sup>1</sup>	1930 <sup>2</sup>	1940 <sup>3</sup>	1950
1	2	3	4	5
Board of Education	77	76	75	66
Board of Health	9	16	9	8
Joint	11	5	16	22
Other	0	0	0	4
Private	1	2	0	0
Education or health and private	0	1	0	0
Not stated	1	0	0	0
Total	99	100	100	100

<sup>1</sup> *Health Services in City Schools*. Report of Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association, New York, 1922. p. 4. (This column includes cities of 10,000 to 25,000 population.)

<sup>2</sup> U. S. Office of Education. *School Health Activities in 1930*. By James F. Rogers. Washington, U. S. Government Printing Office, 1931.

<sup>3</sup> U. S. Office of Education. *Health Services in City Schools*. By James F. Rogers. Washington, U. S. Government Printing Office, 1942.

**Group IV.**—Of the four city population groups, Board of Education administration is lowest in Group IV, with 57.3 percent reporting this agency. The Board of Health administers in 11.4 percent of the cities. Joint administration is highest in this city size with 24.0 percent reported.

The percentage range by regions for Board of Education administration is 84.0 to 15.0 with West North Central and Middle Atlantic highest and South Atlantic and East South Central lowest.

Board of Health administration varies from 38.8 to 1.2 percent. The highest percentages occur in East South Central and South Atlantic and the lowest in New England and Middle Atlantic.

Joint administration ranges from 53.3 percent to 6.3 percent. Highest are South Atlantic and East South Central and lowest are West North Central and Middle Atlantic.

**Regions.**—For the United States as a whole, the percentages of cities, by regions, administered by Boards of Education range from 83.3 to 17.1 percent. It is highest in West North Central and Middle Atlantic and lowest in South Atlantic and East South Central.

The percentages for Boards of Health administration vary from 33.8 to 2.0 percent. The highest is in East South Central and South Atlantic and the lowest in Middle Atlantic and Mountain.

Joint administration ranges from 50.2 percent to 7.8 percent with the highest in South Atlantic and East South Central and the lowest in West North Central and Middle Atlantic.

On the basis of city size by region, those reporting for joint administration are, in percent, as follows:

Region and city size	Percent
East South Central, Group II	60.0
South Atlantic, Group IV	53.3
South Atlantic, Group III	50.8
Mountain, Group I	50.0

## HEALTH SERVICES IN CITY SCHOOLS

Region and city size	Percent
East South Central, Group III.....	44.0
South Atlantic, Group I.....	40.0
East South Central, Group IV.....	38.8
Mountain, Group III.....	34.6
East North Central, Group I.....	33.3
South Atlantic, Group II.....	32.4
Pacific, Group IV.....	30.1
West South Central, Group III.....	30.0

*States:* Those States ranking highest and lowest for each of the three types of administration of school health programs are here listed.

**Board of Education:** The 10 States reporting 80 percent or more of their cities with the school health program administered by the Board of Education are, in descending order: New York, Iowa, Nebraska, New Jersey, Minnesota, South Dakota, Arizona, Delaware, Vermont, and Texas. The 9 States reporting less than 20 percent are, in descending order: Alabama, Florida, New Hampshire, Mississippi, Georgia, Louisiana, Maryland, North Carolina, and Nevada.

**Board of Health:** Only one state (New Hampshire with 89 percent) reported more than 55 percent of its school health programs administered by the Board of Health. The District of Columbia is under Board of Health administration. Eight other States reporting between 54 and 30 percent are, in descending order: Alabama, Mississippi, Georgia, Ohio, Florida, Louisiana, Arkansas, and South Carolina. The 9 states having less than 5 percent are, in descending order: New Mexico, Minnesota, Utah, Colorado, Missouri, Pennsylvania, Indiana, New York, and Texas. The following 9 States reported "no" cities: Arizona, Delaware, Idaho, Iowa, Maine, Nebraska, Nevada, New Jersey, and Vermont.

**Joint administration:** The following 11 states reported that 40 percent or more of their cities had the school health program administered jointly by the Boards of Education and Health: Nevada, North Carolina, Maryland, Tennessee, Kentucky, Ohio, South Carolina, Florida, Virginia, West Virginia, and Montana. There were 9 States which indicated that 10 percent or less of their cities are so administered, as follows: Missouri, Vermont, New Jersey, Iowa, New Hampshire, South Dakota, Minnesota, New York, and Nebraska.

### **Financing**

For all the 2,886 cities reporting, 54.9 percent were financed by the Board of Education; 10.5 percent by the Board of Health; 23.3 percent jointly by Boards of Education and Health; and 11.3 percent by other methods.

In 1940, for all cities of 10,000 and above, 75.4 percent were financed by the Boards of Education; 12.1 percent by the Board of Health; 9.2 percent jointly; and 3.3 percent by other authorities. In 1950, the Board of Education financing for cities of 10,000 and above had dropped from 75.4 percent to 61.6 percent; Health Department financing had dropped from 12.1 to 10.0 percent; joint financing had increased from 9.2 to 21.3 percent; and other authority had increased from 3.3 to 7.1 percent.

*Group I.*—Of the 93 cities in Group I, 56, or 60.2 percent, reported that the financing agency was the Board of Education; 15, or 16.1 percent, the Board of Health; 18, or 19.4 percent, jointly financed; and 4, or 4.3 percent, financed by other methods.

By regions, the percentages of cities in this group having their school health programs financed by Boards of Education range from 100.0 to 25.0 percent. It is highest in West North Central and Pacific and lowest in New England and South Atlantic.

Corresponding percentages for cities having the financing done by Boards of Health range from 50.0 percent for New England to 0.0 percent for four Western regions.

Joint financing ranged from 50.0 to 0.0 percent, being highest in Mountain and South Atlantic and lowest in West North Central and Middle Atlantic.

*Group II.*—The financing agency in the second group is as follows: Board of Education, 63.3 percent; Board of Health, 13.5 percent; joint financing, 19.6 percent; and other methods, 3.6 percent.

By regions, the range for Board of Education financing is from 86.7 to 30 percent. It is highest in West North Central and Pacific and lowest in East South Central and New England.

The percentages for cities financed by Boards of Health are from 30.8 to 0.0 percent, with New England and East South Central highest and West North Central, West South Central, and Mountain reporting no financing by this plan.

Joint financing for cities in Group II ranges from 50.0 to 8.2 percent, being highest in East South Central and South Atlantic and lowest in Middle Atlantic and East North Central.

*Group III.*—In the third group, the financing agency is as follows: Board of Education, 61.1 percent; Board of Health 7.8 percent; joint financing, 22.3 percent; and other methods, 8.8 percent.

By regions, the percentages being financed by Board of Education range from 76.9 to 15.9 percent with West North Central and Middle Atlantic highest and South Atlantic and East South Central lowest.

The extent of financing by Boards of Health varies from 28.0 to 0.6

percent, being highest in East South Central and South Atlantic and lowest in Middle Atlantic and Pacific.

Joint financing ranges from 49.2 to 8.2 percent with South Atlantic and Mountain highest and Middle Atlantic and West North Central lowest.

*Group IV.*—The financing agency in Group IV is as follows: Board of Education, 51.2 percent; Board of Health, 10.8 percent; joint financing, 24.4 percent; and other methods, 13.6 percent.

By regions, the range for Board of Education financing is from 82.4 to 9.8 percent with West North Central and Middle Atlantic highest and South Atlantic and East South Central lowest.

Corresponding percentages for cities where the financing is done by the Board of Health range from 31.9 to 2.4 percent with East South Central and South Atlantic highest and West North Central and New England lowest.

Joint financing varies from 42.5 to 7.3 percent for the nine regions. It is highest in South Atlantic, East South Central and Pacific, and lowest in West North Central and Middle Atlantic.

*Regions.*—By regions, the percentages for all cities having financing by Boards of Education are highest in West North Central, Middle Atlantic and Pacific and lowest in South Atlantic, East South Central and Mountain. The range is from 82.0 to 15.0 percent.

Corresponding percentages for cities having the financing by Boards of Health range from 30.6 to 2.4 percent, being highest in East South Central and South Atlantic and lowest in West North Central and Middle Atlantic.

Joint financing ranges from 43.3 to 8.2 percent for the nine regions. It is highest in South Atlantic and East South Central and lowest in West North Central and Middle Atlantic.

### **Personnel Available for School Health Services**

The extent to which school health service personnel, such as physicians, nurses, dentists, and dental hygienists, are available in the various school systems is indicated in table 8. More detailed information by regions and city groups is included in table 23. The percentages shown in these two tables are based on the total number (3,186) of school systems reporting. This number includes the 300 cities which have no school health services.

*United States.*—The number of school systems having various kinds of school health personnel is as follows: physicians, 2,004 or 62.9 per-

**Table 8.—Percent of school systems reporting the availability of personnel for school health services, by type**

City population group	Percent of school systems reporting personnel, by type					
	Physician	Nurse	Dentist	Dental hygienist	Others	No personnel <sup>1</sup>
1	2	3	4	5	6	7
United States...	62.9	85.4	40.4	15.9	11.7	9.4
Group I.....	94.6	100.0	80.6	51.6	39.8	0.0
Group II.....	81.8	97.6	59.7	31.6	18.2	0.8
Group III.....	71.9	94.6	47.0	21.8	11.2	2.8
Group IV.....	56.4	80.4	34.2	10.6	9.8	12.0

<sup>1</sup> This column represents the school systems which reported that they had no school health service and consequently no personnel.

cent; nurses, 2,720 or 85.4 percent; dentists, 1,286 or 40.4 percent; dental hygienists, 506 or 15.9 percent; other school health personnel, 372 or 11.7 percent; and "no" personnel, cities with no school health services, 300 or 9.4 percent.

In general, such personnel was more available along the seaboard States and least available in the mountain and central States. The larger cities had the highest percentages of professional personnel employed, whereas the smaller communities had relatively less help. Nearly all the cities of 2,500 in population and above had nursing service or consultants available.

**City population groups.**—The availability of professional personnel on the staffs of school-health services for cities of varying size is here presented.

**Group I.**—Of the 93 cities in Group I, 88, or 94.6 percent, have physicians; all have nurses; 75, or 80.6 percent, have dentists; 48, or 51.6 percent, have dental hygienists; and 37, or 39.8 percent, report other personnel available.

**Group II.**—Percentages for the 253 cities in the second group are: physicians, 81.8 percent; nurses, 97.6 percent; dentists, 59.7 percent; dental hygienists, 31.6 percent; other personnel, 18.2 percent; and "no" personnel, no school health service, 0.8 percent.

**Group III.**—Percentages for the 687 cities in the third group are: physicians, 71.9 percent; nurses, 94.6 percent; dentists, 47.0 percent; dental hygienists, 21.8 percent; other personnel, 11.2 percent; and "no" personnel, no school health service, 2.8 percent.

**Group IV.**—There were 2,153 cities reporting in Group IV. The percentage of cities having various personnel are: physicians, 56.4 percent; nurses, 80.4 percent; dentists, 34.2 percent; dental hygienists,

10.6 percent; other personnel, 9.8 percent; and "no" personnel, no school health service, 13.0 percent.

*Availability by profession.*—The relative availability of professional personnel by regions and city size follows.

*Physicians.*—The employment of physicians ranges from 97.3 percent for Middle Atlantic and 92.7 percent for New England to 34.6 percent for West South Central and 33.0 percent for West North Central. By city size, it ranges from 94.6 percent for Group I to 56.4 percent for Group IV.

*Nurses.*—The extent to which nurses are employed varies, by regions, from 99.1 percent in New England and 97.6 percent in Middle Atlantic to 62.4 percent in West South Central and 72.3 percent in West North Central. By city size, the range is from 100 percent for Group I to 80.4 percent for Group IV.

In 1951<sup>12</sup> according to the Public Health Service, 6,088 nurses, including 139 supervising nurses, were employed by local Boards of Education. This figure indicates an increase of 51.8 percent over the number employed in 1941, as compared with a 24.6 percent increase in the total number of nurses in all fields for that period. This number of school nurses also represents 23.9 percent of the 25,461 nurses in all fields in that year as compared with 19.6 percent in 1941.

These data indicate that during the past decade there have been increases both in the total number of nurses employed by local Boards of Education as well as in the relative percentage of all nurses so employed.

Local official health agencies, by comparison, employed 12,556 nurses in 1951, which figure represents an increase of 31.4 percent over the figure for 1941. Local non-official agencies employed 4,774 nurses in 1951, which figure represents a 17.7 percent decrease from 1941.

*Dentists.*—The availability of dentists ranges, by regions, from 70.6 percent for Middle Atlantic and 59.4 percent for New England to 19.0 percent for West South Central and 18.6 percent for Mountain. By city size, the range is from 80.6 percent for Group I to 34.2 percent for Group IV.

*Dental Hygienists.*—The extent to which dental hygienists are employed varies, by regions, from 32.9 percent in New England, 21.5 percent for Pacific, and 20.5 percent for Middle Atlantic to 4.1 for Mountain, 3.0 for West North Central, and 2.8 percent for West South Central.

### ***The Medical Examination***

The medical examinations can ordinarily be grouped under three classifications: the periodic examination required of all students, the

<sup>12</sup> Total Number of Nurses Employed for Public Health Work in the United States, in the Territories of Alaska and Hawaii, Puerto Rico and the Virgin Islands on January first of 1937, 1941, 1946, 1951. Public Health Service, Federal Security Agency, Washington, D. C., 1951.

examination of athletes, and supplementary examinations for special students and special occasions. This study deals primarily with the medical examination required of all students.

Information was requested on the questionnaire in regard to the number of examinations required of all pupils and the years in which such examinations are given. The questionnaire did not provide for information as to whether the required examination is given by school physicians in the school or by private physicians in their offices.

Since parents should have an important role in the periodic examination to assure a more adequate follow-through on the correction of remedial defects, and for other reasons, information was also requested about the presence of parents at the examination and at school conferences to discuss the examination. These and related topics are here presented.

### ***Number of Medical Examinations Per Pupil***

A considerable variation in the number of medical examinations required of all pupils in the elementary and secondary years exists between cities, States and regions. Some authorities believe that annual or biennial examinations are needed, whereas others consider that less frequent examinations are desirable, particularly if they are more thorough. The question of availability of medical personnel is a determining factor in the frequency of examinations given in the public schools.

A summary of this subject for the Nation is presented in Table 9.

Table 24 gives similar information by regions and city size. These tables, and the discussion which follows, only concern the medical examination required of each pupil. A large percentage of the schools reporting that they have "no" required examination do indicate that (1) examinations are "offered" but not "required," and (2) that special examinations are given to athletes and others. These special examinations are also given in many of the cities which have the required examinations for all pupils.

*United States.*—The information for all cities reporting is, in percent, as follows: no medical examination required, 17.0; 1 examination, 18.0; 2 examinations, 7.9; 3-4 examinations, 21.6; 5-6 examinations, 16.4; 7-8 examinations, 5.0; 9-10 examinations, 1.6; 11-12 examinations, 4.0; and 13-14 examinations, 8.5.

Seventeen percent of the school systems report that they require 8 to 14 medical examinations. Many of these systems are actually reporting that they have examinations annually, since some of them do not have school beyond the eighth grade. Those cities reporting 13 to 14 examinations give one before the child enters kindergarten and annually thereafter.



**Table 9.—Percent of school systems reporting varying numbers of medical examinations required of each pupil enrolled in school, including personnel**

City population group	Number of cities reporting	Percent reporting, by number of medical examinations for each pupil								
		0	1	2	3-4	5-6	7-8	9-10	11-12	13-14
1	2	3	4	5	6	7	8	9	10	11
United States.....	1566	17.0	18.0	7.9	21.6	16.4	5.0	1.6	4.0	8.5
Group I.....	84	17.8	6.0	2.4	38.1	20.3	2.4	0.0	7.1	5.9
Group II.....	211	12.8	10.0	6.6	30.3	19.0	6.6	1.9	2.4	10.4
Group III.....	563	13.0	15.3	8.5	19.4	20.0	7.3	.9	4.1	11.5
Group IV.....	708 <sup>1</sup>	19.0	20.9	8.2	20.2	14.4	4.0	2.0	4.1	7.2

<sup>1</sup> The cities in Group IV represent a 50 percent sampling. Therefore, in order to weight Group IV correctly when computing the percentages in totals for "United States," the number of cities in each column of Group IV has first been doubled. This procedure has also been followed with other tables related to the second questionnaire when determining the final percentages for geographical regions and for the United States.

**City population groups.**—Groups I and II have approximately the same ranking frequency plans for medical examinations. The rank for the plans most often reported, with percent shown, is as follows:

Group I—3-4 examinations (38.1); 5-6 examinations (20.3); no examination (17.8); 1 examination (6.0); and 13-14 examinations (5.9).

Group II.—3-4 examinations (30.3); 5-6 examinations (19.0); no examination (12.8); 13-14 examinations (10.4); and 1 examination (10.0).

Group III.—5-6 examinations (20.0); 3-4 examinations (19.4); 1 examination (15.3); no examination (13.0); and 13-14 examinations (11.5).

Group IV.—1 examination (20.9); 3-4 examinations (20.2); no examination (19.0); 5-6 examinations (14.4); and 2 examinations (8.2).

Of the 250 cities which reported that they required no examination, 15 were in Group I; 27 in Group II; 73 in Group III; and 135 in Group IV.

Of the 260 cities reporting that they required only 1 examination, 5 were in Group I; 21 in Group II; 86 in Group III; and 148 in Group IV.

**Regions.**—Middle Atlantic reports the highest number of examinations, per pupil with all except two cities requiring at least three examinations. Ranking first is the 5-6 examination plan and second, the 13-14 examination plan.

Information for the other regions, with the plan ranking first, is as follows: New England, 5-6 examination plan; East North Central and East South Central, 3-4 examination plan; West North Central, South Atlantic and Pacific, one examination plan; and West South Central and Mountain, "no" examination plan.

The regions reporting the highest percentages of their cities with no required examination are: Mountain (40.0); West South Central (35.3); West North Central (27.3); and Pacific (23.2).

### ***Grades in Which Required Medical Examinations are Given***

The 80 percent of the 1,556 cities which reported that they required one or more medical examinations of each pupil also indicated the grade or grades in which the examinations were most frequently given. Pertinent information on this subject follows:

*One examination.*—Of the 260 cities reporting that they required only one medical examination, 121 indicated that it was given as a preschool examination; 39 reported it as given in the kindergarten; and 87 stated first grade. The remaining 13 cities gave the examination in other grades.

*Two examinations.*—Of all the cities reporting, 122 indicated that they required two examinations of each pupil during his years in school. Of the 244 examination grades reported by these cities, 37 are given as preschool examinations; 35 in kindergarten; 69 in first grade; 56 in grades 2-6; 38 in grades 7-9; and 9 in grades 10-12.

*Three examinations.*—There were 196 cities reporting three required examinations of all pupils. Of the 588 examination grades involved, 30 are preschool; 35 in kindergarten; 142 in first grade; 166 in grades 2-6; 176 in grades 7-9; and 39 in grades 10-12.

*Four or more examinations.*—In instances where four or more examinations are required, there tended to be a spacing between the years so as to cover preschool, lower elementary grades, intermediate elementary grades, upper elementary or junior high school grades, senior high school grades, and a terminal examination. The examinations tended to be given more frequently in preschool, kindergarten and first grade than in any other comparable period. The senior high school years were next in frequency, with grades 2-6 being lowest. Many of the schools which reported 4-6 examinations gave the last one in the tenth or eleventh grade rather than in the twelfth grade.

### ***Parents Present at Medical Examinations in Elementary Schools***

When parents are present at a medical examination, it is more likely that they will understand their child's condition and needs. Consequently, there is a greater possibility that there will be a follow-through to see that remedial defects are corrected. Table 10 gives data in regard to the frequency with which parents are present at medical examina-

Table 10.—Percent of school systems reporting various extents to which elementary school children are accompanied by one or both parents at medical examination

City population group	Percent <sup>1</sup> reporting, for —									
	Initial entrance examination					Subsequent examinations				
	0	Under 5 percent	5—14 percent	15—49 percent	50—100 percent	0	Under 5 percent	5—14 percent	15—49 percent	50—100 percent
1	2	3	4	5	6	7	8	9	10	11
United States..	14.2	19.5	6.6	6.8	52.9	14.2	56.1	12.8	7.6	9.3
Group I.....	7.1	17.9	13.1	10.7	51.2	7.1	33.3	34.6	14.3	10.7
Group II.....	11.4	18.5	6.1	7.1	56.9	11.4	50.3	18.5	9.5	10.4
Group III.....	12.8	20.3	6.0	6.3	54.7	12.8	57.3	12.8	6.6	10.6
Group IV.....	15.5	19.5	6.5	6.8	51.7	15.5	57.9	10.7	7.4	8.5

<sup>1</sup> To be read as follows: 14.2 percent of the school systems reporting indicate that no elementary school children are "accompanied by one or both parents at the initial entrance examination."

tions in the elementary school. Table 25 indicates corresponding information by regions and groups.

*At initial examination.*—For the United States as a whole, 52.9 percent of the cities report that the elementary school children are accompanied by one or more parents at 50 to 100 percent of the initial medical examinations. Additional statistics are: 6.8 percent of the cities indicate that parents are present at 15 to 49 percent of the examinations; 6.6 percent at 5-14 percent of the examinations; 19.5 percent at less than 5 percent of the examinations; and 14.2 percent report that no parents are present at the initial medical examination.

The extent to which parents are present does not vary much by city population groups; the range for cities reporting 50-100 percent of examination with parents present is from 51.2 percent for Group I to 56.9 percent for Group II. The range for "no parents present" is from 7.1 percent of the cities in Group I to 15.5 percent in Group IV.

*At subsequent examinations.*—Parents are much less likely to accompany children at subsequent medical examinations in the elementary schools. Only 9.3 percent of cities report parents present at 50-100 percent of the examinations. The largest number of cities—56.1 percent—report that this practice occurs in less than 5 percent of the examinations. There are 14.2 percent of the cities which report that no parents accompany the children at the examination.

By city groups, there are no important variations from the national percentages. Group I has a slightly higher percentage of cities reporting that parents accompany children at the subsequent examinations. For cities reporting "no parents present," the range is from 7.1 percent for Group I to 15.5 percent for Group IV.

The questionnaire did not provide for information about parents accompanying children attending the secondary schools. In general, the practice there is even less common than that indicated for the elementary school.

### ***Parent Conferences in Regard to Examinations***

A conference held with the parent either at the time of the medical examination or shortly afterwards, to plan for the follow-through to secure medical or other care, is recommended by school health authorities. The school person at such a conference may be a teacher, the principal, or a representative of the school health service. This procedure, similar to having a parent present at the medical examination, may help to assure that there is a follow-through. The extent to which such conferences are held is indicated in Table 11.

**Table 11.**—Percent of school systems reporting varying extents to which the school holds a conference with a parent following a medical examination of the child to plan for the follow-through

City population group	Percent reporting, by frequency of the school-parent conference			
	Regularly	Only for special cases	Seldom	No provision
1	2	3	4	5
United States.....	43.8	41.1	2.3	12.8
Group I.....	67.9	25.0	0.0	7.1
Group II.....	59.7	31.8	.0	8.5
Group III.....	46.7	44.0	.7	8.5
Group IV.....	38.8	42.2	3.4	15.5

For the United States, 43.8 percent of the cities report that such conferences are held "regularly" with parents. Another 41.1 percent report that such conferences are held "only for special cases." Only 2.3 percent indicate that the conferences are "seldom" held; and 12.8 percent state that there are "no provisions" for parent conferences.

Such parent conferences are held regularly in 67.9 percent of the cities in Group I; in 59.7 percent in Group II; in 46.7 percent in Group III; and in 38.8 percent in Group IV.

The statistics for cities reporting "no provision" for such conferences are as follows: Group I, 7.1 percent; Group II, 8.5 percent; Group III, 8.5 percent; and Group IV, 15.5 percent.

The percentages for "only special cases" are: Group I, 25.0 percent; Group II, 31.8 percent; Group III, 44.0 percent; and Group IV, 42.2 percent. Few cities list "seldom" as an answer.

### ***Clothing in the Medical Examination***

The extent to which clothing is removed during a medical examination is one guide to the quality of the examination. The questionnaire provided for the recording of the various practices in the removal of

clothing both for the elementary and secondary school levels and for boys and girls. Table 12 gives the percentages of cities reporting each type of practice.

**Table 12.—Percent of school systems reporting varying extents to which clothing is removed during a medical examination**

Practice	Percent reporting, by school level and sex			
	Elementary schools		Secondary schools	
	Boys	Girls	Boys	Girls
	1	2	3	4
No set school policy.....	34.4	37.4	44.9	46.7
No clothing removed.....	5.7	6.1	3.8	5.3
Outer clothing removed only.....	7.0	11.9	4.8	11.4
Shoes and stockings removed only.....	2.0	2.1	1.5	2.9
Stripped to waist only.....	18.9	15.5	17.1	13.9
Shoes and stockings removed and stripped to waist.....	24.0	20.6	18.8	18.3
Entirely stripped.....	8.0	6.4	9.1	4.5

Clothing is removed more extensively during the medical examination of elementary school boys than for any other group. The combined percentages for "stripped to the waist," "shoes and stockings removed and stripped to waist," and "entirely stripped," are as follows: elementary school boys, 50.9 percent; elementary school girls, 42.5 percent; secondary school boys, 45.0 percent; and secondary school girls, 33.7 percent.

The large cities more frequently have policies on the matter of removal of clothing during examinations than do small cities. These cities also practice more complete removal of clothing than do the smaller cities.

As regards "no set school policy" in relation to the removal of clothing during a medical examination, the percentages are: elementary school boys, 34.4 percent; elementary school girls, 37.4 percent; secondary school boys, 44.9 percent; and secondary school girls, 46.7 percent.

### ***Teacher Referral of Children with Suspected Defects or Health Problems***

Information on the extent and type of established methods whereby teachers may refer children with suspected defects or health problems are here presented. Table 13 and table 26 supply information on this topic.

Most school systems in the United States report some type of referral method. Many report more than one method. The percentages are as follows: "to school health service," 85.3 percent; "through family to family physician," 42.4 percent; and "to others," 5.2 percent.

**Table 13.—Percent of school systems reporting various established methods whereby teachers may refer children with suspected defects or health problems**

City population group	Percent reporting, by type of referral <sup>1</sup>		
	To school health service	Through family to family physician	To others
1	2	3	4
United States.....	85.3	42.4	5.2
Group I.....	95.2	46.4	7.2
Group II.....	91.0	47.4	7.6
Group III.....	90.4	42.1	4.1
Group IV.....	81.8	41.5	5.2

By city groups, corresponding percentages range for "to school health service" from 95.2 percent for Group I to 81.8 percent for Group IV; for "through family to family physician" from 47.4 percent for Group II to 41.5 percent for Group IV; and "to others" from 7.6 percent for Group II to 4.1 percent for Group III.

By regions, referral "to school health service" ranges from 96.0 percent in New England to 77.2 percent in West South Central. Referral "through family to family physician" ranges from 54.7 percent for South Atlantic to 31.3 percent for Mountain. Referral by "other methods" varies from 16.0 percent for Pacific to 0.0 for Middle Atlantic.

### **The Dental Examination**

The dental health examination is considered to be a regular part of the school health service program. Information is here presented on the following related topics: the number of dental examinations required of each pupil; individuals making the dental examination; the follow-through by the school and the dentist; community methods of providing needed dental care for those who cannot afford to pay for such services; and services through which sodium fluoride treatment of the teeth can be obtained.

#### **Number of Dental Examinations Per Pupil**

A summary of the number of dental examinations required of each pupil enrolled in school, including preschool, is presented in table 14. More detailed information is shown in table 27.

Table 14.—Percent of school systems reporting varying numbers of dental examinations required of each pupil enrolled in school, including pre-school

City population group	Number of cities reporting	Percent reporting, by number of dental examinations for each pupil									
		0	1	2	3-4	5-6	7-8	9-10	11-12	13-14	
1	2	3	4	5	6	7	8	9	10	11	
United States	1,566	41.1	8.1	2.9	10.3	14.1	6.2	2.6	13.2	1.5	
Group I.....	84	27.4	2.4	.0	114.3	16.7	13.1	4.8	17.8	3.3	
Group II.....	211	32.7	3.8	3.3	14.2	15.7	7.1	6.3	13.7	3.3	
Group III.....	583	26.4	5.3	2.8	8.9	16.7	9.2	29.0	15.8	2.0	
Group IV.....	708	44.1	10.3	3.0	10.0	12.7	4.5	1.8	11.9	.8	

<sup>1</sup> The cities in Group IV represent a 50 percent sampling. Therefore, in order to weight Group IV correctly when computing the percentages in totals for "United States," the number of cities in each column of Group IV has first been doubled. This procedure has also been followed with other tables related to the second questionnaire when determining the final percentages for geographical regions and for the United States.

*United States.*—The number of dental examinations required of each pupil while enrolled at school was reported as follows: no examination, 41.1 percent; 1 examination, 8.1 percent; 2 examinations, 2.9 percent; 3-4 examinations, 10.3 percent; 5-6 examinations, 14.1 percent; 7-8 examinations, 6.2 percent; 9-10 examinations, 2.6 percent; 11-12 examinations, 13.2 percent; and 13-14 examinations, 1.5 percent.

Nearly 25 percent of the school systems require seven or more dental examinations, which means that these examinations are being given annually in many of these cities.

There were 616 school systems which indicated that they did not make dental examinations of each pupil. Information was requested from these systems as to whether provisions are made by the school for the dental inspection of those children not examined by a private dentist. "Yes" was checked by 40.7 percent. The percentages by groups are: Group I, 65.2 percent; Group II, 42.8 percent; Group III, 44.4; and Group IV, 35.1.

*City population groups.*—The rank for the plans most often reported is as follows:

Group I.—11-12 examinations, 17.8 percent; 3-4 examinations, 14.3 percent; 5-6 examinations, 16.7 percent; and 7-8 examinations, 13.1 percent. Group I ranked lowest in the percentage of "no" dental examinations with 27.4 percent of the cities so reporting.

Group II.—5-6 examinations, 15.7 percent; 3-4 examinations, 14.2 percent; 11-12 examinations, 13.7 percent; and 7-8 examinations, 7.1 percent. About one-third (32.7 percent) of the cities reported "no" required dental examinations.

Group III.—5-6 examinations, 16.7 percent; 9-10 examinations, 29.0 percent; 11-12 examinations, 15.8 percent; and 7-8 examinations, 9.2 percent. Slightly over one-third (36.4 percent) of the cities in this group do not require dental examinations of all pupils.

Group IV.—5-6 examinations, 12.7 percent; 11-12 examinations, 11.9 percent; 1 examination, 10.2 percent; and 3-4 examinations, 10.0 percent. Nearly one-half (45.1 percent) of the cities do not require a dental examination.

*Regions.*—Middle Atlantic with 90.6 percent has the highest percentage of cities requiring one or more dental examinations and New England is second with 63.6 percent. The lowest numbers are reported by Pacific with 42.3 percent and Mountain with 34.8 percent.

Information in regard to the number of examinations ranking highest in each region is as follows: New England, Middle Atlantic, and West North Central, 11-12 examinations; East North Central, East South Central, and Mountain, 3-4 examinations; and South Atlantic, West South Central, and Pacific, 1 examination.

### **Personnel Who Make School Dental Examinations**

Consideration is here given to the personnel who make school dental examinations in those school systems which reported having such examinations. A summary of this topic is presented in table 15. Similar information by regions and city groups is given in table 28 on page 56.

In the 950 cities reporting that they provide for dental examinations of each pupil, the examinations are made by various individuals, expressed in percent, as follows: dentists, 89.2 percent; dental hygienists, 25.7; and others, 68.9 percent.

School doctors and nurses are those most frequently mentioned under "others". Also mentioned are: family doctor, State dentist, health teacher, health commissioner, county health officer, and summer clinic.

*Table 15.—Percent of school systems reporting personnel, by type, who make school dental examinations*

City population group	Number of cities reporting dental examinations	Percent reporting extent to which the school dental examinations are made by —		
		Dentist	Dental hygienist	Others
1	2	3	4	5
United States.....	950	89.2	25.7	68.9
Group I.....	61	80.9	37.7	44.3
Group II.....	143	79.6	34.6	57.0
Group III.....	258	83.3	28.3	59.5
Group IV.....	388	68.8	22.5	77.4

*Note.*—Many school systems reported more than one type of personnel.

<sup>1</sup> The cities in Group IV represent a 50 percent sampling. Therefore, in order to weight Group IV correctly when computing the percentages in totals for "United States," the number of cities in each column of Group IV has first been doubled. This procedure has also been followed with other tables related to the second questionnaire when determining the final percentages for geographical regions and for the United States.



### Extent of Follow-Through by School in Regard to Dental Supervision

It is also essential that, in addition to making dental examinations, there be plans for follow-through by the school to see that children obtain dental supervision and care following the examination, or independently of the examination.

The schools were asked to indicate (1) the extent to which they carry out such a follow-through to see that the children visit a dentist at least once annually for dental supervision and care, and (2) the extent to which a report is made to the school by the dentist of such visits. The summaries to these two questions are shown in table 16. The information by groups and regions is given in table 29 on pages 57 and 58.

Table 16.—Percent of school systems reporting varying extents of follow-through by the school to see that children obtain dental supervision and care

City population group	Percent reporting —					
	Extent of follow-through to see that child visits dentist annually			Extent to which dentists report to school such visits		
	Regularly	Occasionally	No provision	Regularly	Occasionally	No provision
1	2	3	4	5	6	7
United States.....	47.5	21.8	30.7	53.9	28.4	17.7
Group I.....	80.0	13.0	7.0	60.2	21.8	9.0
Group II.....	64.4	18.0	16.6	63.1	22.7	14.2
Group III.....	54.4	19.6	26.1	54.1	30.8	15.1
Group IV.....	40.3	23.7	36.1	50.7	28.9	20.4

*The follow-through to obtain dental care.*—There were 1,123 cities, or 69.3 percent, which reported a follow-through by the school to see that the children visit a dentist at least once annually for dental supervision and care. This information is further analyzed as follows:

**United States:** Data in regard to those reporting this procedure shows: "regularly," 47.5 percent; "occasionally," 21.8 percent; and "no provision," 30.7 percent.

**City groups:** The range by city groups for those reporting "regularly" is from 79.8 percent for Group I to 40.3 percent for Group IV. For "occasionally," the range is from 13.1 percent for Group I to 23.7 percent for Group IV. For "no provision," the range is from 7.1 percent for Group I to 36.0 for Group IV. /

**Regions:** The two regions having the highest percentages of cities reporting "regularly" are Middle Atlantic with 70.7 percent and West North Central with 59.4 percent. The two regions with the lowest percentages are: West South Central with 28.1 percent and Mountain with

25.2 percent. The range for those reporting "no provision" is from Middle Atlantic with 11.4 percent and North Central with 32.6 percent to South Atlantic with 42.0 percent and Mountain with 49.6 percent.

*Reports to school by dentist.*—Of the 1,123 cities which reported that they planned either "regularly" or "occasionally" for the follow-through to see that children obtain dental supervision and care, 53.9 percent stated that the dentists "regularly" made a report to the school and 28.4 percent that they did this "occasionally." The range for city groups for reporting "regularly" was from 69.2 percent for Group I to 50.7 percent for Group IV. By region, the range was from 76.4 percent for West North Central to 34.9 percent for West South Central.

### **Provision for Needed Dental Care**

Information is presented in table 17 concerning the extent to which the community has methods of providing needed dental care for children whose families cannot afford to pay for such services.

*Table 17.—Percent of cities in which provision is made for needed dental care of children whose families cannot afford to pay for such services*

City population group	Percent of cities providing needed dental care through —			
	Public (tax) funds	Other methods	Combination of of cols. 2 and 3	No provision
1	2	3	4	5
United States .....	31.4	48.5	7.8	31.1
Group I .....	78.6	53.6	20.2	2.4
Group II .....	55.9	43.1	18.7	19.0
Group III .....	37.8	52.9	8.7	21.8
Group IV .....	22.5	47.3	6.8	38.4

It is reported that provisions for dental care in needy cases are available through public (tax) funds in 31.4 percent of the cities; by other methods in 48.5 percent of the cities; and by a combination of tax funds and other methods in 7.8 percent. Many cities checked more than one method of provision. There are no provisions in 31.1 percent of the cities.

Examples of "other" methods are: private dentist, service clubs, American Legion, Junior Chamber of Commerce, fraternal organizations, women's clubs, Salvation Army, Red Cross, Parent-Teacher Associations, community chest, family welfare, hospital clinic, and U. S. Public Health Service.

Provisions for dental care are made most frequently in large cities, the range being from 78.6 percent for Group I to 22.5 percent in Group IV. Provision by "other" methods ranges from 53.6 percent for Group I to 43.1 percent in Group II. Percentages having no provision for needed care varies by groups from 2.4 percent in Group I to 38.4 percent in Group IV.

### Sodium Fluoride Treatment of Teeth

The extent to which sodium fluoride treatment of teeth is available to school children by direct (local, topical) application is here reported for the first time. Data on this topic for the spring of 1951 are given in table 18. Similar information by regions and city size is found in table 30, page 59. This study does not include information concerning the fluoridation of the local water supply.

Table 18.—Percent of cities in which sodium fluoride treatment of teeth is available to school children, by method

City population group	Number of cities reporting	Percent of cities providing sodium fluoride treatment through —				
		Private dentist	Public clinic in or out of school	Combination of private dentist and public clinic	Other means	No provision
1	2	3	4	5	6	7
United States...	1,566	46.2	10.7	4.2	2.3	42.7
Group I.....	84	65.5	28.6	14.3	8.3	15.7
Group II.....	211	54.5	16.1	7.1	2.4	30.3
Group III.....	563	45.1	13.1	5.9	2.7	41.2
Group IV.....	1 708	44.2	7.9	2.5	1.8	46.8

<sup>1</sup> The cities in Group IV represent a 50 percent sampling. Therefore, in order to weight Group IV correctly when computing the percentages in totals for "United States," the number of cities in each column of Group IV has first been doubled. This procedure has also been followed with other tables related to the second questionnaire when determining the final percentages for geographical regions and for the United States.

Sodium fluoride treatment of teeth is available to school children through the following means, as expressed in percentage of cities having a school service: private dentist, 46.2 percent; public clinic in or out of school, 10.7 percent; a combination of private dentist and public clinic, 4.2 percent; other means, 2.3 percent; and "no" provision, 42.7 percent. Many cities report more than one means. Examples of "others" listed are family doctor, health-department, U. S. Public Health Service demonstration, State teams, and school hygienist.

*City groups.*—Group I ranks highest in each of the methods whereby sodium fluoride treatments are available and Group IV ranks lowest.

The percentage range where private dentists provide such treatment is from 65.5 percent for Group I to 44.2 percent for Group IV.

For public clinics in or out of school, the range is from 28.6 percent for Group I to 7.9 percent for Group IV.

The percentage range for a combination of private dentist and public clinic is from 14.3 percent for Group I to 2.5 percent for Group IV.

*Regions.*—Sodium fluoride treatment through private dentists is available most frequently in West North Central with 58.1 percent and Pacific with 55.7 percent of the cities so reporting. The regions lowest in percentage are Middle Atlantic with 40.4 percent and East South Central with 29.4 percent.

Such treatments through public clinics in or out of school are reported most frequently in New England with 30.4 percent and South Atlantic with 12.8 percent and least frequently in West North Central with 5.1 percent and Mountain with 4.3 percent.

The regions reporting the highest and lowest percentages for a combination of private dentist and public clinic are New England with 8.7 percent and Pacific with 1.0 percent.

### School Nursing Services

There are several plans for providing nursing service to schools in the United States. The most common are: (1) through specialized school nursing service; (2) through generalized public health nursing service (found most frequently in cities where the local Board of Health either finances or administers the school health program); and (3) through a combination of these two plans.

The replies to one question provided data concerning the extent to which each of these plans are used in the school systems. The information is given in summary form in table 19 and by regions and city groups in table 31 on page 60.

Table 19.—Percent of school systems in which school nursing is provided, by type

City population group	Percent of school systems in which school nursing is provided through —				
	Specialized school nursing service	Generalized public health nursing service	Combination of cois. 2 and 3	Other plans	No provision
1	2	3	4	5	6
United States.....	54.1	30.6	7.9	1.7	5.7
Group I.....	64.3	25.0	8.3	2.4	0.0
Group II.....	68.7	19.9	7.1	2.4	1.9
Group III.....	60.3	19.5	7.3	.4	3.5
Group IV.....	45.3	36.9	8.3	2.1	7.5

*United States.*—For the country as a whole, specialized school nursing service is the most common plan with 54.1 percent of the school systems so reporting. Another 30.6 percent of the school systems state that they have the generalized public health nursing service. A combination of these two plans occurs in 7.9 percent of the cities. There are 1.7 percent who report other plans.

The remaining 5.7 percent of the cities report that they have no provision for school nursing service, although all of the school systems to which the second questionnaire was sent had previously reported that they had school health services. Of this latter group, 94.2 percent had indicated on the first questionnaire that they had nursing personnel, so the two studies check on this point.

On the basis of city size, the percentages of cities having a specialized school nursing service are approximately the same for Groups I, II, and III, ranging between 64.3 and 69.3 percent. In Group IV, however, only 45.3 of the cities report such a service.

*Group I.*—Of the 84 cities reporting in Group I, 54, or 64.3 percent, indicate that they have a specialized school nursing service; 21, or 25.0 percent, a generalized public health nursing service; 7, or 8.3 percent, a combination of the two services; and 2, or 2.4 percent, other plans. The range by regions for specialized school health service is from 100.0 percent for West North Central to 33.3 percent for South Atlantic. For the generalized public health nursing program the reverse ranking occurs.

*Group II.*—Of the 211 cities replying, 145, or 68.7 percent, report a specialized school nursing service; 42, or 19.9 percent, report a generalized public health nursing service; 15, or 7.1 percent, a combination of the two services; 5, or 2.4 percent, other plans; and 4, or 1.9 percent, no provisions for school nursing.

The range by regions for specialized school health nursing is from 93.3 percent in Middle Atlantic to 12.5 percent in East South Central. The region with the highest percentage of cities in Group II with a generalized public health nursing program is South Atlantic with 58.6 percent and the lowest is Middle Atlantic with 2.2 percent.

*Group III.*—Of the 563 cities in the third group that replied, 390, or 69.3 percent, reported a specialized school nursing service; 110, or 19.5 percent, a generalized public health nursing service; 41, or 7.3 percent, a combination; 2, or 0.4 percent, other plans; and 20, or 3.5 percent, no provisions.

Middle Atlantic and New England rank highest in specialized school nursing service with 89.4 percent, and South Atlantic lowest with 9.8 percent. South Atlantic has the highest percentage (73.2) with a generalized public health nursing program.

*Group IV.*—Of the 708 cities reporting, 321, or 45.3 percent, have the specialized school nursing service; 261, or 36.9 percent, the generalized public health nursing service; 58, or 8.2 percent, a combination; 15, or 2.1 percent, other plans; and 53, or 7.5 percent, no provisions.

The region with the highest percentage of cities in Group IV with a specialized public health nursing program is Middle Atlantic with 84.6 percent and the lowest is East South Central with 5.4 percent. Highest in percentage of cities reporting a generalized public health nursing service is East South Central with 75.0 percent.

Of the regions reporting "no provisions" for nursing service, those ranking highest are: East South Central (14.3); New England (13.9); West North Central (10.4); West South Central (9.1); and East North Central (9.0).

**Regions.**—The percentages of school systems by regions that reported special school nursing services range from 86.0 percent for Middle Atlantic to 11.2 percent for East South Central. There is an exact reversal in order of rank for the nine regions as regards the percentages of cities having a generalized public health nursing service, the figures ranging from 69.2 to 5.0 percent.

By regions, the ranking is as follows, with the first figure representing the percentage for specialized school nursing services and the second figure that for generalized public health nursing services: Middle Atlantic (86.0, 5.0); New England (76.6, 10.9); West North Central (62.4, 18.4); Pacific (53.6, 28.4); Mountain (50.5, 28.7); East North Central (48.0, 34.9); West South Central (35.9, 50.3); South Atlantic (16.5, 66.3); and East South Central (11.2, 69.2).

On the basis of both region and city size, those reporting over 80 percent for specialized school nursing are as follows:

<i>Region and group</i>	<i>Percent</i>
West North Central, Group I.....	100.0
Middle Atlantic, Group II.....	93.3
Middle Atlantic, Group III.....	89.4
New England, Group III.....	89.3
West South Central, Group I.....	87.5
West North Central, Group II.....	84.6
Middle Atlantic, Group IV.....	84.6

Corresponding percentages for generalized public health nursing for those reporting over 60.0 percent are as follows:

<i>Region and group</i>	<i>Percent</i>
East South Central, Group IV.....	75.0
South Atlantic, Group III.....	73.0
South Atlantic, Group I.....	66.7
South Atlantic, Group IV.....	65.9
East South Central, Group I.....	60.0
West South Central, Group IV.....	60.0

### **Administrative Relationships of the Health Services to Health Instruction and Physical Education**

There are three areas of the school program which are closely related administratively, namely, the school health service, health instruction, and physical education. In order to determine the type and extent of such relationships, the schools were requested to indicate the kind of administrative control which these three programs had in their school systems.

**TYPES OF ADMINISTRATIVE RELATIONSHIPS.**—Ten administrative relationships were reported. These are here grouped into three broad classifications.

1. *Separate administrative head.*—Of the 1,556 school systems reporting, 34.3 percent indicated that each of the three programs was under a separate head. This plan is most common in Group I with 50.0 percent of the cities so reporting.

2. *One administrative head.*—Over half (53.0 percent) of the schools reported that the three programs—health service, health instruction, and physical education—were under one administrative head. There are three variations of this plan, as follows:

(a.) Physical education has administrative control over both the health service and health instruction. This plan was the one most frequently reported of the three listed under "one administrative head."

(b.) The health service has administrative control over both health instruction and physical education. This plan ranked second in frequency.

(c.) Health instruction has administrative control over both health service and physical education. This plan ranked third in frequency. This ranking is perhaps, in part, explained by the fact that health instruction is less frequently a regular part of the school program than is the case with the health service and physical education.

3. *Other administrative plans.*—The remaining 12.7 percent of the school systems report the following plans:

(a.) The health service has its own administrative head and physical education is over health instruction. This plan ranked highest of the "other" plans. In cities where the Board of Health administers the school health service, there is a tendency for that service to be under its own administrative head.

(b.) Physical education has its own administrative head and health service is over health instruction. This plan ranked second.

(c.) Physical education has its own administrative head and health instruction is over the health service.

(d.) The health service has its own head and health instruction is over physical education.

(e.) Health instruction has its own head, or at least is not under the direction of the other two programs, and physical education is over the health service.

*City groups.*—The administrative relationships of the three programs by city groups are as follows:

*Group I.*—Of the 84 cities reporting, 50.0 percent have separate administrative heads for the three programs. Another 26.2 percent have one head. The remaining 23.8 percent of the cities are under "other" plans.

*Group II.*—Of the 211 cities reporting, 38.9 percent state that the three programs are each under a separate head; 42.7 percent are reported as being under one head; and 18.4 are under "other" plans.

*Group III.*—Of the 563 cities reporting, 38.7 percent have three separate heads; 52.9 percent of the cities report these programs under one head; and 8.4 percent have "other" plans.

*Group IV.*—Of the 708 cities reporting, 30.9 percent have three administrative heads; 55.5 percent have one administrative head for these three programs; and 13.6 percent report "other" plans.

### **Extent to Which Schools Call Upon Professional Groups for Advice and Counsel**

Local professional agencies and organizations in health, education, welfare, and related fields are frequently working with the schools in common undertakings. Such cooperation may be through committees, health councils, or in other ways.

In order to determine the extent to which such professional groups were called upon by the schools for advice and counsel in the development of the school health program, the schools were asked to supply certain pertinent information. The summary of the reports is given in Table 20.

*Table 20.—Percent of school systems which call upon local medical societies and other professional groups for advice and counsel*

City population group	Percent reporting calling on —				
	Local medical societies			Other professional groups	
	Regularly	At times	No	Yes	No
1	2	3	4	5	6
United States.....	23.1	51.3	25.6	51.1	48.9
Group I.....	34.5	57.1	8.4	86.9	13.1
Group II.....	28.0	55.4	16.6	74.9	25.1
Group III.....	22.9	49.7	27.4	56.5	43.5
Group IV.....	21.8	50.8	27.4	43.2	56.8

To the question, "Is your local medical society called upon for advice and counsel," 23.1 percent of the school systems answered "Yes, regularly," and 51.3 percent answered "Yes, at times." The remaining 25.6 percent indicated that they did not call upon the local medical society for such assistance. The range by city groups for "Yes, regularly," is from 34.5 percent for Group I to 21.8 percent for Group IV. For "Yes at times," the range is from 57.1 percent for Group I to 49.7 percent for Group III.

A number of other professional groups are consulted in 51.1 percent of the cities. The range is from 86.9 percent for Group I to 43.2 percent



for Group IV. The local dental society is listed most frequently as one of those professional groups. Other groups mentioned often are service clubs such as Rotary, Kiwanis and Lions, Board of Welfare, Tuberculosis Association, and the Parent-Teacher Association.

Other groups listed occasionally are Red Cross, local Nursing Association, Society for Crippled Children, Public Health Department, Vocational Guidance, local Health Center, Psychological Clinic, Mental Hygiene Clinic, Junior League, and the university.

Individuals mentioned occasionally as being called upon for counsel include dentists, oculists, optometrists, nurses, and teachers.

### **Summary**

1. A considerable increase has occurred since the last report in 1940 in the number of school systems having health services and in the scope of their school health programs. However, much still needs to be done if all of our 30,000,000 school children are to have adequate school health service programs.
2. School health services are reported in 91 percent of all school systems in cities with a population of 2,500 and above. Such a school health service includes at least a medical examination and a dental examination or inspection.
3. The administrative authority for the school health program, reported by 2,886 city school systems, is as follows: Board of Education, 60 percent; Board of Health, 11 percent; jointly by Boards of Education and Health, 23 percent; and by other authorities, 6 percent. The administration of the school health program is ordinarily done by the group which finances it.
4. The financing authority is as follows: Board of Education, 55 percent; Board of Health, 10 percent; joint financing, 23 percent; and other authority, 12 percent. There is a definite trend toward joint administration and financing of school health programs. However, the school health program is still predominantly administered and financed by Boards of Education.
5. Professional personnel is available in city school systems as follows: physicians, 63 percent; nurses, 85 percent; dentists, 40 percent; dental hygienists, 16 percent; other personnel, 12 percent; and no professional personnel, 9 percent.
6. At least one medical examination is required by 83 percent of all school systems of each pupil while in school and 17 percent require 8 to 14 examinations. At least one dental examination is required by 59 percent of the cities, and 25 percent require seven or more.

7. School nursing service is reported, by plan, as follows: specialized school nursing service, 54 percent; generalized public health nursing service, 30 percent; a combination of the two plans, 8 percent; other plans, 2 percent; and no provision for school nursing service, 6 percent.

### Detail Tables

**Table 31.—Extent of response to questionnaires on school health services**

City population group	Information on first questionnaire					Information on second questionnaire				
	Number of cities	Cities reporting		Cities having school health service		Total sampled	Total reporting	Total usable		Percent of total number of school systems
		Number	Percent	Number	Percent			Number	Percent	
1	2	3	4	5	6	7	8	9	10	11
Continental United States.....	2,439	2,125	92.9	2,005	90.6	1,973	1,574	1,566	79.4	45.7
Group I (100,000 and above).....	93	93	100.0	93	100.0	93	84	84	90.3	90.3
Group II (50,000 to 99,999).....	209	203	97.7	251	99.3	231	211	211	84.1	81.6
Group III (10,000 to 49,999).....	734	697	94.9	608	97.3	608	567	568	84.3	77.3
Group IV (2,500 to 9,999).....	2,684	2,128	91.5	1,974	87.0	961	712	708	73.7	30.1

Table 22.—Extent of school health services, by financing, in cities with population

Region and population group	Number of cities	Cities reporting		Health services available		Agency administering school health program			
		Number	Percent	Number	Percent	Board of Education		Board of Health	
						Number	Percent	Number	Percent
1	2	3	4	5	6	7	8	9	10
<b>Continental United States Total</b> .....	2,430	2,186	90.9	2,306	90.6	1,737	69.2	315	10.9
Group I.....	93	93	100.0	93	100.0	87	61.9	12	12.9
Group II.....	260	253	97.7	261	99.2	166	68.1	35	13.0
Group III.....	724	687	94.9	698	97.2	441	68.0	54	8.1
Group IV.....	2,354	2,133	91.5	1,874	87.0	1,073	57.3	214	11.4
<b>NEW ENGLAND Total</b> .....	221	219	94.6	219	100.0	148	67.6	29	10.5
Group I.....	12	12	100.0	12	100.0	4	33.3	5	41.7
Group II.....	40	39	97.5	39	100.0	19	48.7	13	32.3
Group III.....	91	87	95.6	87	100.0	67	77.0	4	4.0
Group IV.....	88	81	92.0	81	100.0	58	71.8	1	1.2
<b>MIDDLE ATLANTIC Total</b> .....	723	706	96.3	706	100.0	526	82.9	14	2.0
Group I.....	18	18	100.0	18	100.0	14	77.8	0	.0
Group II.....	51	49	96.1	49	100.0	48	98.0	1	2.0
Group III.....	174	170	97.7	170	100.0	122	82.4	1	.6
Group IV.....	490	469	95.7	469	100.0	373	79.5	12	2.6
<b>EAST NORTH CENTRAL Total</b> .....	700	673	96.1	616	91.5	398	64.9	71	11.5
Group I.....	18	18	100.0	18	100.0	8	44.4	3	11.1
Group II.....	66	65	98.5	64	98.5	43	67.2	10	16.6
Group III.....	144	139	96.5	126	97.8	81	69.6	16	11.8
Group IV.....	472	451	95.5	398	84.2	266	51.8	42	10.8
<b>WEST NORTH CENTRAL Total</b> .....	282	261	94.5	294	81.6	245	83.3	11	2.7
Group I.....	9	9	100.0	9	100.0	9	100.0	0	.0
Group II.....	16	15	93.7	15	100.0	10	66.7	0	.0
Group III.....	71	67	94.4	65	97.0	54	83.1	3	4.8
Group IV.....	286	270	94.4	295	75.0	172	64.0	8	2.9
<b>SOUTH ATLANTIC Total</b> .....	461	382	87.3	221	91.2	55	17.1	26	26.9
Group I.....	10	10	100.0	10	100.0	3	30.0	3	30.0
Group II.....	36	35	97.1	34	97.0	13	38.3	9	26.5
Group III.....	69	64	92.7	66	98.4	7	11.1	29	31.7
Group IV.....	286	243	85.0	214	68.1	22	15.0	54	25.9
<b>EAST SOUTH CENTRAL Total</b> .....	229	194	82.6	157	68.3	29	24.8	23	23.9
Group I.....	6	6	100.0	6	100.0	3	50.0	2	33.3
Group II.....	10	10	100.0	10	100.0	2	20.0	2	20.0
Group III.....	33	29	82.8	25	85.2	10	40.0	4	16.0
Group IV.....	160	139	82.3	116	63.6	24	20.8	17	15.8
<b>WEST SOUTH CENTRAL Total</b> .....	374	287	87.4	222	71.0	126	54.3	29	12.5
Group I.....	8	8	100.0	8	100.0	7	87.5	0	.0
Group II.....	15	15	100.0	15	100.0	11	73.3	0	.0
Group III.....	62	55	88.7	47	85.3	24	51.1	4	8.5
Group IV.....	289	249	86.2	162	65.1	84	51.9	25	15.4

<sup>1</sup> The cities in Group IV represent a 50 percent sampling. Therefore, in order to weight Group IV correctly when computing the percentages in totals for "United States," the number of cities in each column of Group IV has first been doubled. This procedure has also been followed with other tables related to the second questionnaire when determining the final percentages for geographical regions and for the United States.

agency responsible for administration and for  
of 1,500 or more, by regions: 1950

Agency administering school health program				Agency financing school health program							
Jointly		Other		Board of Education		Board of Health		Jointly		Other	
Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
11	12	13	14	15	16	17	18	19	20	21	22
645	22.0	169	5.9	1,504	54.9	393	10.5	673	23.3	236	11.3
21	22.6	3	3.3	56	60.3	15	10.1	18	19.4	4	4.3
47	18.7	3	1.3	139	63.3	34	13.3	40	19.0	9	3.0
165	22.3	25	3.7	405	61.1	83	7.8	149	22.3	59	8.8
449	24.0	133	7.3	961	51.3	303	10.8	457	24.4	254	13.6
46	21.0	2	.9	116	33.0	26	11.9	65	29.7	12	5.4
3	35.0	0	.0	3	25.0	0	50.0	3	25.0	0	.0
7	18.0	0	.0	16	38.8	12	30.8	11	28.2	1	2.5
15	17.3	1	1.1	55	63.3	6	6.9	23	26.4	3	3.5
21	26.0	1	1.2	43	53.1	2	2.5	23	24.6	3	3.8
57	8.1	59	7.1	496	70.6	17	2.4	74	10.5	117	16.5
3	16.7	1	5.0	12	66.7	1	5.0	2	11.1	3	16.0
1	2.0	1	2.0	40	81.0	1	2.0	4	8.0	4	8.0
10	5.9	7	4.1	137	74.7	1	.6	14	8.2	23	16.5
43	9.3	41	8.7	319	68.0	14	3.0	54	11.5	32	17.4
170	27.6	27	6.0	331	33.7	85	13.8	141	22.9	59	9.6
6	32.3	3	11.3	9	50.0	3	16.7	5	27.8	1	5.5
11	17.3	0	.0	45	70.3	11	17.3	7	10.9	1	1.6
25	25.7	4	2.9	90	66.3	16	11.8	27	19.9	3	2.1
113	29.6	31	7.8	157	47.0	55	13.6	102	25.6	54	13.6
22	7.8	15	5.3	241	32.0	7	2.4	24	8.2	22	7.4
0	0.0	0	.0	9	100.0	0	.0	0	.0	0	.0
3	20.0	2	12.3	13	36.7	0	.0	2	13.3	0	.0
7	10.8	1	1.5	50	76.9	2	3.1	7	10.8	0	0.0
12	6.3	12	5.9	109	32.4	5	2.4	15	7.3	16	7.9
161	29.2	19	6.0	48	15.0	90	28.0	199	43.3	44	13.7
4	40.0	0	.0	3	20.0	4	40.0	3	30.0	0	.0
11	32.4	1	2.9	14	41.2	5	14.7	14	41.2	1	2.9
23	50.9	4	6.3	10	15.9	14	22.2	31	46.3	3	12.7
114	53.3	14	6.5	21	9.8	67	31.3	91	42.5	35	16.4
63	46.1	2	1.3	23	29.4	43	29.6	60	38.2	17	10.8
1	16.7	0	.0	3	50.0	2	33.3	1	16.7	0	.0
6	60.0	0	.0	3	30.0	2	20.0	5	50.0	0	.0
11	44.0	0	.0	6	24.0	7	28.0	10	40.0	2	8.0
43	28.8	2	1.8	20	17.2	27	31.9	44	37.9	15	13.0
52	22.4	25	10.8	121	26.5	12	5.2	64	27.6	25	10.7
1	12.5	0	.0	7	27.5	0	.0	1	12.5	0	.0
4	26.7	0	.0	11	73.3	0	.0	4	26.7	0	.0
14	30.0	5	10.0	23	55.3	2	6.4	13	27.7	5	10.6
23	20.4	20	12.3	57	33.7	9	5.8	46	28.4	20	12.3

## HEALTH SERVICES IN CITY SCHOOLS

Table 22.—Extent of school health services, for financing, in cities with population of

Region and population group <sup>1</sup>	Number of cities	Cities reporting		Health services available		Agency administering school health program			
		Number	Per cent	Number	Per cent	Board of Education		Board of Health	
						Number	Per cent	Number	Per cent
1	2	3	4	5	6	7	8	9	10
<b>MOUNTAIN</b>									
Total.....	158	145	91.8	128	88.3	79	61.7	6	4.7
Group I.....	2	2	100.0	2	100.0	1	50.0	0	.0
Group II.....	7	7	100.0	7	100.0	5	71.4	0	.0
Group III.....	28	27	96.4	26	96.3	14	53.8	0	.0
Group IV.....	121	109	90.0	93	85.3	59	63.4	6	6.5
<b>PACIFIC</b>									
Total.....	231	219	94.8	213	97.3	122	57.3	22	10.3
Group I.....	10	10	100.0	10	100.0	8	80.0	0	.0
Group II.....	18	18	100.0	18	100.0	15	83.3	1	5.6
Group III.....	50	49	98.0	49	100.0	31	63.3	3	4.0
Group IV.....	153	142	92.8	136	95.8	68	50.0	19	14.0

<sup>1</sup> The cities in Group IV represent a 50 percent sampling. Therefore, in order to weight Group IV correctly when computing the percentages in totals for "United States," the number of cities in each column of Group IV has first been doubled. This procedure has also been followed with other tables related to the second questionnaire when determining the final percentages for geographical regions and for the United States.

by agency responsible for administration and 2,500 or more, by regions: 1950—Continued

Agency administering school health program				Agency financing school health program							
Jointly		Other		Board of Education		Board of Health		Jointly		Other	
Number	Per-cent	Number	Per-cent	Number	Per-cent	Number	Per-cent	Number	Per-cent	Number	Per-cent
11	12	13	14	15	16	17	18	19	20	21	22
34	26.6	9	7.0	65	50.8	5	4.0	42	32.8	16	12.4
1	50.0	0	.0	1	50.0	0	.0	1	50.0	0	.0
2	29.0	0	.0	5	71.4	0	.0	2	28.6	0	.0
9	34.6	3	11.5	12	46.2	1	3.8	11	42.3	3	7.7
22	32.7	6	6.4	47	50.5	4	4.3	28	30.1	14	15.1
59	27.7	10	4.7	122	57.3	13	6.1	64	30.0	14	6.6
2	20.0	0	.0	8	80.0	0	.0	2	20.0	0	.0
2	11.1	0	.0	15	83.3	1	5.6	2	11.1	0	.0
14	28.7	2	4.0	33	67.3	1	2.0	12	24.5	3	6.2
41	30.1	8	5.9	66	48.6	11	8.1	48	35.3	11	8.1

Table 23.—Number and percent of school systems reporting personnel available for school health services, and by region and city population group

Region and population group	Total number of cities reporting	Number and percent, by type of personnel													
		Physician		Nurse		Dentist		Dental hygienist		Others		No personnel			
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent		
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>		
<b>Continental United States</b>															
Total	3,186	2,004	62.9	2,729	85.4	1,206	46.4	806	15.9	272	11.7	13	0.4		
Group I	98	88	89.6	92	100.0	75	80.6	48	51.0	27	29.8	0	0		
Group II	253	207	81.8	247	97.6	151	59.7	80	31.6	46	18.2	2	0.8		
Group III	687	494	71.9	650	94.6	323	47.0	160	23.3	77	11.2	19	2.8		
Group IV	2,153	1,215	56.4	1,780	80.4	737	34.3	228	10.6	212	9.8	279	13.0		
<b>New England</b>															
Total	219	203	92.7	217	99.1	120	59.4	72	33.2	19	8.7	0	0.0		
Group I	12	12	100.0	12	100.0	11	91.7	8	66.7	6	50.0	0	0		
Group II	26	25	96.2	29	111.5	27	103.8	22	84.6	2	7.7	0	0		
Group III	81	84	103.7	87	107.4	55	63.0	31	35.8	4	4.8	0	0		
Group IV	81	80	98.8	79	97.5	37	45.7	11	13.6	6	7.4	0	0		
<b>Midwest Atlantic</b>															
Total	708	669	94.5	691	97.6	389	54.9	145	20.6	89	12.6	0	0		
Group I	18	18	100.0	18	100.0	16	88.9	12	66.7	9	50.0	0	0		
Group II	49	49	100.0	49	100.0	41	83.7	30	61.2	14	28.6	0	0		
Group III	170	168	98.8	169	99.4	120	70.5	70	41.2	16	9.4	0	0		
Group IV	469	454	96.8	455	97.0	212	60.7	133	28.4	25	5.3	0	0		
<b>East North Central</b>															
Total	673	328	48.7	572	85.0	325	48.3	224	33.3	51	7.6	57	8.5		
Group I	18	18	100.0	18	100.0	14	77.8	7	38.9	6	33.3	0	0.0		
Group II	65	42	64.6	61	93.8	27	41.5	10	15.4	10	15.4	1	1.5		
Group III	139	75	54.0	124	89.2	43	30.9	14	10.1	15	10.8	3	2.2		
Group IV	451	223	49.4	269	59.7	132	29.2	20	4.4	27	6.0	53	11.8		
<b>West North Central</b>															
Total	261	119	45.6	261	100.0	91	34.9	11	4.2	49	18.4	67	25.7		
Group I	9	6	66.7	9	100.0	6	66.7	5	55.6	2	22.2	0	0		
Group II	15	8	53.3	15	100.0	8	53.3	0	0	6	40.0	0	0		
Group III	67	29	43.3	64	95.5	22	32.8	2	3.0	8	11.9	2	3.0		
Group IV	270	76	28.1	173	64.1	54	20.0	4	1.5	34	12.6	65	24.1		

DETAIL TABLES

Region	Group	253	229	64.1	201	85.5	135	28.4	37	16.5	64	14.8	31	8.5
SOUTH ATLANTIC	Total	10	8	80.0	10	100.0	9	90.0	4	40.0	5	50.0	0	0
	Group I	26	29	82.9	54	87.1	19	64.3	8	22.9	7	20.0	1	2.9
	Group II	64	53	81.3	45	90.6	22	30.0	9	14.1	13	20.3	1	1.6
	Group III	243	140	57.5	199	81.9	73	30.9	16	6.6	41	16.9	29	11.9
	Group IV													
EAST SOUTH CENTRAL	Total	184	186	87.5	141	76.6	87	31.9	23	13.3	34	13.6	27	14.7
	Group I	6	6	100.0	6	100.0	4	66.7	3	23.3	3	50.0	0	0
	Group II	10	9	90.0	10	100.0	8	30.0	3	30.0	2	20.0	0	0
	Group III	29	20	69.0	23	75.9	11	27.9	7	24.1	4	12.8	4	12.8
	Group IV	139	71	51.1	108	74.1	29	28.1	16	11.5	15	10.8	23	16.5
WEST SOUTH CENTRAL	Total	227	113	24.6	204	62.4	63	19.9	9	2.8	29	6.9	95	29.1
	Group I	8	8	100.0	8	100.0	6	75.0	4	50.0	2	25.0	0	0
	Group II	15	10	66.7	14	93.3	7	43.7	0	0	1	6.7	0	0
	Group III	55	21	38.2	41	74.5	13	23.6	1	1.8	6	10.9	8	14.5
	Group IV	249	74	29.7	141	56.6	36	14.5	4	1.6	20	8.0	57	24.9
MOUNTAIN	Total	145	55	37.9	125	86.2	27	18.6	6	4.1	14	9.7	17	11.7
	Group I	2	2	100.0	2	100.0	2	100.0	1	50.0	0	0	0	0
	Group II	7	6	71.4	7	100.0	3	42.9	1	14.3	1	14.3	0	0
	Group III	27	13	48.1	26	96.3	5	18.5	3	7.4	4	14.8	1	3.7
	Group IV	109	25	23.1	90	82.6	17	15.6	2	1.8	9	8.3	16	14.7
PACIFIC	Total	219	152	69.3	208	94.9	89	26.9	47	21.5	24	11.6	6	2.7
	Group I	10	10	100.0	10	100.0	8	80.0	5	50.0	5	50.0	0	0
	Group II	18	17	94.4	18	100.0	6	23.3	3	23.3	3	16.7	0	0
	Group III	49	33	67.3	49	100.0	13	26.5	14	28.6	4	8.2	0	0
	Group IV	142	73	51.4	131	92.3	33	22.5	22	15.5	12	8.5	6	4.2

<sup>1</sup> The cities in Group IV represent a 50 percent sampling. Therefore, in order to weight Group IV correctly when computing the percentages in totals for "United States," the number of cities in each column of Group IV has first been doubled. This procedure has also been followed with other tables related to the second questionnaire when determining the final percentages for geographical regions and for the United States.



Table 24.—Number and percent of school systems of each pupil enrolled in school, including pro

Region and population group <sup>1</sup>	Number of cities reporting	Number of medical examinations for each pupil							
		No examination		One examination		Two examinations		3-4 examinations	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent
	2	3	4	5	6	7	8	9	10
<b>Continental United States Total</b> .....	1,566	250	17.0	260	18.0	122	7.9	348	21.6
Group I.....	84	15	17.8	5	6.0	2	2.4	32	38.1
Group II.....	211	27	12.8	21	10.0	14	6.6	64	30.3
Group III.....	563	73	13.0	86	15.3	48	8.5	109	19.4
Group IV.....	708	135	19.0	148	20.9	68	8.2	143	20.2
<b>NEW ENGLAND Total</b> .....	148	9	8.2	1	0.5	2	1.6	35	21.6
Group I.....	10	0	.0	0	.0	0	.0	3	30.0
Group II.....	27	0	.0	0	.0	0	.0	9	33.3
Group III.....	75	3	4.0	1	1.3	1	1.3	18	24.0
Group IV.....	36	6	16.7	0	.0	1	2.8	5	13.9
<b>MIDDLE ATLANTIC Total</b> .....	355	0	0.0	0	0.0	2	0.6	17	4.6
Group I.....	16	0	.0	0	.0	0	.0	5	31.3
Group II.....	46	0	.0	0	.0	0	.0	0	.0
Group III.....	151	0	.0	0	.0	1	.7	6	4.0
Group IV.....	143	0	.0	0	.0	1	.7	6	4.2
<b>EAST NORTH CENTRAL Total</b> .....	340	59	17.6	57	18.0	48	12.1	196	40.7
Group I.....	15	4	26.7	0	.0	0	.0	8	53.3
Group II.....	63	9	17.0	4	7.5	8	15.1	28	40.1
Group III.....	116	18	15.5	21	18.1	22	19.0	38	31.0
Group IV.....	156	28	17.9	32	20.5	15	9.6	66	42.4
<b>WEST NORTH CENTRAL Total</b> .....	157	43	27.3	44	29.5	8	5.1	26	15.0
Group I.....	9	4	44.4	0	.0	0	.0	3	33.3
Group II.....	13	4	30.8	1	7.7	0	.0	6	46.2
Group III.....	58	14	24.1	18	31.0	4	6.9	8	13.8
Group IV.....	77	21	27.3	25	32.4	4	5.2	9	11.7
<b>SOUTH ATLANTIC Total</b> .....	161	28	20.6	58	35.8	22	12.8	31	17.7
Group I.....	9	1	11.1	1	11.1	2	22.2	2	22.2
Group II.....	29	2	6.9	11	37.9	2	6.9	10	34.6
Group III.....	41	3	7.3	17	41.5	9	22.0	7	17.1
Group IV.....	82	22	26.8	29	35.4	9	11.0	12	14.6
<b>EAST SOUTH CENTRAL Total</b> .....	87	5	3.5	24	29.8	14	18.2	28	42.6
Group I.....	5	0	.0	1	20.0	0	.0	4	80.0
Group II.....	8	2	25.0	0	.0	1	12.5	2	25.0
Group III.....	18	3	16.6	3	16.7	1	5.6	9	50.0
Group IV.....	56	0	.0	20	35.7	12	21.4	23	41.1
<b>WEST SOUTH CENTRAL Total</b> .....	112	40	35.3	32	28.7	8	9.0	18	14.4
Group I.....	8	2	25.0	1	12.5	0	.0	3	37.5
Group II.....	15	6	40.0	3	20.0	0	.0	3	20.0
Group III.....	34	13	38.3	12	35.3	1	2.9	6	17.7
Group IV.....	55	19	34.5	16	29.1	7	12.7	6	10.9

<sup>1</sup> The cities in Group IV represent a 50 percent sampling. Therefore, in order to weight Group IV correctly when computing the percentages in totals for "United States," the number of cities in each column of Group IV has first been doubled. This procedure has also been followed with other tables related to the second questionnaires when determining the final percentages for geographical regions and for the United States.

reporting number of medical examinations required school, by region and city population group

Number of medical examinations for each pupil									
5-8 examinations		7-8 examinations		9-10 examinations		11-12 examinations		13-14 examinations	
Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
11	12	13	14	15	16	17	18	19	20
272	16.4	35	5.0	23	1.6	63	4.0	143	8.5
17	20.3	2	2.4	0	.0	6	7.1	5	5.9
40	19.0	14	6.6	4	1.9	5	2.4	22	10.4
113	20.0	41	7.3	5	.9	23	4.1	65	11.5
103	14.4	28	4.0	14	2.0	29	4.1	51	7.2
35	22.8	20	14.7	1	0.5	21	16.3	24	13.6
3	30.0	0	.0	0	.0	2	20.0	2	20.0
5	18.6	3	11.1	0	.0	3	11.1	7	25.9
20	26.7	10	13.3	1	1.4	7	9.3	14	18.7
7	19.4	7	19.4	0	.0	9	25.0	1	2.8
161	46.0	37	9.4	11	3.3	14	3.4	113	32.2
5	31.2	1	6.3	0	.0	3	18.7	2	12.5
20	44.5	6	13.3	3	6.7	1	2.2	15	33.3
68	45.0	20	13.2	0	.0	7	4.6	49	32.5
68	47.5	10	7.0	8	5.6	3	2.1	47	32.9
21	5.2	11	3.0	2	0.6	8	2.6	1	0.3
2	13.3	0	.0	0	.0	1	6.7	0	.0
2	3.8	4	7.5	0	.0	0	.0	0	.0
12	19.3	3	2.6	1	.9	2	1.7	1	.9
5	3.2	4	2.6	1	.6	5	3.2	0	.0
11	6.8	7	4.3	5	3.0	9	6.0	4	3.0
2	22.2	0	.0	0	.0	0	.0	0	.0
2	15.3	0	.0	0	.0	0	.0	0	.0
2	3.4	4	6.9	3	5.2	4	6.9	1	1.8
5	6.5	3	3.9	2	2.6	5	6.5	3	3.9
10	5.3	6	3.7	0	0.0	6	4.1	0	0.0
2	22.2	1	11.1	0	.0	0	.0	0	.0
2	6.9	1	3.4	0	.0	1	3.4	0	.0
3	7.3	1	2.4	0	.0	1	2.4	0	.0
3	3.7	3	3.7	0	.0	4	4.8	0	.0
3	2.1	1	1.4	1	0.7	1	0.7	0	0.0
0	.0	0	.0	0	.0	0	.0	0	.0
2	25.0	0	.0	1	12.5	0	.0	0	.0
1	5.6	0	.0	0	.0	1	5.6	0	.0
0	.0	1	1.8	0	.0	0	.0	0	.0
11	9.6	1	0.6	0	0.0	2	2.4	0	0.0
2	25.0	0	.0	0	.0	0	.0	0	.0
3	20.0	0	.0	0	.0	0	.0	0	.0
1	2.9	1	2.9	0	.0	0	.0	0	.0
5	9.1	0	.0	0	.0	2	3.7	0	.0

Table 24.—Number and percent of school systems per each pupil enrolled in school, including pre scho

Region and population group <sup>1</sup>	Number of cities reporting	Number of medical examinations for each pupil								
		No examination		One examination		Two examinations		3-4 examinations		
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	
1	2	3	4	5	6	7	8	9	10	
<b>MOUNTAIN</b>										
Total.....	74	28	40.0	13	19.1	7	8.7	18	21.8	
Group I.....	2	1	50.0	1	50.0	0	.0	0	.0	
Group II.....	6	2	33.3	0	.0	2	33.3	2	33.4	
Group III.....	25	7	28.0	3	12.0	3	8.0	9	36.0	
Group IV.....	41	18	43.9	9	21.9	3	7.3	7	17.2	
<b>PACIFIC</b>										
Total.....	122	31	25.2	26	29.9	16	2.4	29	19.6	
Group I.....	10	3	30.0	1	10.0	0	.0	4	40.0	
Group II.....	15	2	13.3	2	13.3	1	6.7	6	40.0	
Group III.....	45	12	26.7	11	24.4	7	5.6	10	22.2	
Group IV.....	62	14	22.6	22	35.5	8	2.9	9	14.5	

<sup>1</sup> The cities in Group IV represent a 50 percent sampling. Therefore, in order to weight Group IV correctly when computing the percentages in totals for "United States," the number of cities in each column of Group IV has first been doubled. This procedure has also been followed with other tables related to the second questionnaire when determining the final percentages for geographical regions and for the United States.

Table 25.—Extent to which elementary school parents at the medical examinations,

Region and population group <sup>1</sup>	Number of cities reporting	At the initial or entrance examination										
		No provision		Under 5 Percent		5 Percent—14 Percent		15 Percent—49 Percent		50 Percent—100 Percent		
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	
1	2	3	4	5	6	7	8	9	10	11	12	
<b>CONTINENTAL UNITED STATES</b>												
Total.....	1,566	212	14.2	306	19.5	104	6.6	107	6.8	227	52.9	
Group I.....	84	6	7.1	15	17.9	11	13.1	9	10.7	43	51.2	
Group II.....	211	24	11.4	39	18.5	13	6.1	15	7.1	120	56.9	
Group III.....	563	72	12.8	114	20.3	34	6.0	35	6.2	306	54.7	
Group IV.....	706	110	15.5	128	19.5	46	6.5	48	6.8	266	51.7	
<b>NEW ENGLAND</b>												
Total.....	148	11	8.7	39	41.3	10	6.9	5	2.7	63	41.9	
Group I.....	10	0	.0	3	30.0	2	20.0	1	10.0	4	40.0	
Group II.....	27	1	3.7	13	44.4	2	7.4	0	.0	12	44.5	
Group III.....	75	5	6.7	37	36.0	5	6.7	4	5.3	24	45.3	
Group IV.....	36	5	13.9	17	47.2	1	2.8	0	.0	13	36.1	
<b>MIDDLE ATLANTIC</b>												
Total.....	385	4	1.3	122	34.9	45	12.7	27	6.8	157	44.4	
Group I.....	16	0	.0	5	31.3	5	31.3	0	.0	6	37.5	
Group II.....	45	0	.0	14	31.1	5	11.1	4	8.9	22	48.9	
Group III.....	151	2	1.3	51	33.8	17	11.3	18	10.6	65	43.0	
Group IV.....	143	2	1.4	52	36.4	18	12.6	7	4.9	64	44.7	

<sup>1</sup> The cities in Group IV represent a 50 percent sampling. Therefore, in order to weight Group IV correctly when computing the percentages in totals for "United States," the number of cities in each column of Group IV has first been doubled. This procedure has also been followed with other tables related to the second questionnaire when determining the final percentages for geographical regions and for the United States.

porting number of medical examinations required by  
ol, by region and population group—Continued

Number of medical examinations for each pupil									
5-6 examinations		7-8 examinations		9-10 examinations		11-12 examinations		13-14 examinations	
Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
11	12	13	14	15	16	17	18	19	20
6	7.3	1	0.9	0	0.0	1	1.7	0	0.0
0	.0	0	.0	0	.0	0	.0	0	.0
0	.0	0	.0	0	.0	0	.0	0	.0
3	12.0	1	4.0	0	.0	0	.0	0	.0
2	7.3	0	.0	0	.0	1	2.4	0	.0
14	10.3	1	0.5	3	3.1	1	0.5	1	0.5
1	10.0	0	.0	0	.0	0	.0	1	1.0
4	26.7	0	.0	0	.0	0	.0	0	.0
3	6.7	1	2.2	0	.0	1	2.2	0	.0
6	9.6	0	.0	3	4.9	0	.0	0	.0

of children are accompanied by one or more  
by region and city population group

At subsequent examinations									
No provision		Under 5 Percent		5 Percent—14 Percent		15 Percent—49 Percent		50 Percent—100 Percent	
Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
13	14	15	16	17	18	19	20	21	22
212	14.2	866	34.1	216	12.8	121	7.6	151	9.3
6	7.1	28	33.3	29	34.6	12	14.3	9	10.7
24	11.4	105	50.3	39	18.5	20	9.5	22	10.4
72	12.8	322	57.2	72	12.8	37	6.6	60	10.6
110	15.5	410	57.9	76	10.7	52	7.4	60	8.5
11	8.7	112	75.0	12	8.7	6	4.2	6	3.3
0	.0	6	60.0	3	30.0	0	.0	1	10.0
1	2.7	20	74.1	4	14.8	1	3.7	1	3.7
5	6.7	60	80.0	3	4.0	3	4.0	4	5.3
5	12.9	26	72.2	3	8.2	2	5.6	0	.0
4	1.2	212	61.2	81	21.5	30	8.2	28	7.9
0	.0	6	37.5	9	56.2	0	.0	1	6.2
0	.0	28	62.2	12	26.7	4	8.9	1	2.2
2	1.2	85	56.2	34	22.6	15	9.9	15	9.9
2	1.4	88	65.0	26	18.2	11	7.7	11	7.7

Table 25.—Extent to which elementary school parents at the medical examinations, by region

Region and population group <sup>1</sup>	Number of cities reporting	At the initial or entrance examination									
		No provision		Under 5 percent		5 percent—14 percent		15 percent—49 percent		50 percent—100 percent	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
1	2	3	4	5	6	7	8	9	10	11	12
<b>EAST NORTH CENTRAL Total</b> .....	340	62	18.1	34	9.7	10	3.4	17	6.1	217	62.7
Group I.....	15	3	20.0	2	13.3	0	.0	1	6.7	9	60.0
Group II.....	53	8	15.1	4	7.5	0	.0	2	3.8	39	73.6
Group III.....	116	23	19.8	14	12.1	3	2.6	1	.9	75	64.6
Group IV.....	156	28	17.9	14	9.0	7	4.5	13	8.3	94	60.3
<b>WEST NORTH CENTRAL Total</b> .....	157	36	22.6	30	19.3	11	7.7	7	4.3	53	32.1
Group I.....	9	2	22.2	0	.0	1	11.1	2	22.2	4	44.5
Group II.....	13	4	30.8	3	23.0	1	7.7	1	7.7	4	30.8
Group III.....	58	13	22.4	6	10.4	2	3.4	1	1.7	36	62.1
Group IV.....	77	17	22.1	11	14.3	7	9.1	3	3.9	39	50.6
<b>SOUTH ATLANTIC Total</b> .....	161	17	12.3	12	8.2	9	6.3	15	8.2	108	65.1
Group I.....	9	1	11.1	1	11.1	0	.0	2	22.2	5	55.6
Group II.....	29	2	7.0	3	10.3	1	3.4	2	10.3	20	69.0
Group III.....	41	1	2.4	0	.0	2	4.9	5	12.2	33	80.5
Group IV.....	82	13	15.9	8	9.8	6	7.3	5	6.0	50	61.0
<b>EAST SOUTH CENTRAL Total</b> .....	87	10	11.3	13	13.3	3	2.1	7	8.4	55	65.6
Group I.....	5	0	.0	1	20.0	0	.0	0	.0	4	80.0
Group II.....	8	2	25.0	0	.0	1	12.5	1	12.5	4	50.0
Group III.....	18	2	11.1	4	22.2	2	11.1	1	5.6	9	50.0
Group IV.....	56	6	10.7	7	12.5	0	.0	5	8.9	33	67.9
<b>WEST SOUTH CENTRAL Total</b> .....	113	26	24.0	14	14.4	8	8.3	11	9.0	53	44.3
Group I.....	8	0	.0	1	12.5	1	12.5	2	25.0	4	50.0
Group II.....	15	3	20.0	0	.0	1	6.7	2	13.3	9	60.0
Group III.....	34	9	26.5	3	8.8	0	.0	3	8.8	19	55.9
Group IV.....	56	14	25.5	10	18.2	6	10.9	4	7.3	21	38.1
<b>MOUNTAIN Total</b> .....	74	18	26.1	13	16.5	4	3.5	6	9.6	34	44.3
Group I.....	3	0	.0	0	.0	0	.0	0	.0	2	100.0
Group II.....	6	1	16.7	2	33.3	2	33.3	0	.0	1	16.7
Group III.....	25	5	20.0	3	12.0	2	8.0	1	4.0	14	56.0
Group IV.....	41	12	29.3	7	17.1	0	.0	5	12.2	17	41.4
<b>PACIFIC Total</b> .....	132	28	21.1	21	17.0	4	2.6	12	9.3	67	50.6
Group I.....	10	0	.0	2	20.0	2	20.0	1	10.0	5	50.0
Group II.....	15	3	20.0	1	6.7	0	.0	2	13.3	9	60.0
Group III.....	45	12	26.7	6	13.3	1	2.2	3	6.7	23	51.1
Group IV.....	62	13	21.0	12	19.4	1	1.6	6	9.7	30	48.3

<sup>1</sup> The cities in Group IV represent a 50 percent sampling. Therefore, in order to weight Group IV correctly when computing the percentages in totals for "United States," the number of cities in each column of Group IV has first been doubled. This procedure has also been followed with other tables related to the second questionnaire when determining the final percentage for geographical regions and for the United States.

*of children are accompanied by one or more  
ion and city population group—Continued*

At subsequent examinations									
No provision		Under 5 percent		5 percent—14 percent		15 percent—49 percent		50 percent—100 percent	
Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
13	14	15	16	17	18	19	20	21	22
62	14.1	169	49.6	29	8.3	24	10.7	46	13.3
3	20.0	4	26.7	3	20.0	4	26.7	1	6.6
8	15.1	25	47.1	8	15.1	3	5.7	9	17.0
23	19.5	63	54.3	6	5.3	8	6.9	16	13.8
28	17.9	77	49.4	13	7.7	19	12.2	20	12.8
26	22.6	91	60.7	17	9.4	3	1.3	10	6.0
2	22.2	1	11.1	3	33.4	1	11.1	2	22.2
4	30.8	4	30.8	4	30.7	0	.0	1	7.7
13	22.4	25	60.4	5	8.6	2	3.4	3	5.2
17	22.1	51	68.2	5	6.5	0	.0	4	5.2
17	12.3	93	68.8	22	12.4	11	4.9	13	6.6
1	11.1	2	22.2	3	33.3	3	33.3	0	.0
2	7.0	14	48.2	6	20.7	4	13.8	3	10.3
1	2.4	25	61.0	5	12.2	3	7.3	7	17.1
13	15.9	57	69.5	8	9.8	1	1.2	3	3.6
10	11.2	42	49.0	13	13.3	11	12.5	11	14.0
0	.0	2	40.0	2	40.0	1	20.0	0	.0
2	25.0	2	25.0	1	12.5	1	12.5	2	25.0
2	11.1	10	55.6	4	22.2	2	11.1	0	.0
6	10.7	23	50.0	6	10.7	7	12.5	9	16.1
26	24.0	47	42.5	19	15.5	10	9.0	10	9.0
0	.0	4	50.0	2	25.0	1	12.5	1	12.5
3	20.0	5	39.2	2	13.3	4	36.7	1	6.7
9	26.5	14	41.2	8	23.5	0	.0	3	8.8
14	25.5	24	43.6	7	12.7	5	9.1	5	9.1
18	26.1	37	49.6	6	7.8	1	1.7	12	14.8
0	.0	0	.0	0	.0	0	.0	2	100.0
1	16.7	4	66.6	0	.0	0	.0	1	16.7
5	20.0	13	52.0	3	12.0	0	.0	4	16.0
12	29.3	20	48.8	3	7.3	1	2.4	5	12.2
23	21.1	53	47.4	16	11.3	15	10.9	15	9.3
0	.0	3	30.0	4	40.0	2	20.0	1	10.0
3	20.0	4	26.7	2	13.3	3	20.0	3	20.0
12	26.7	17	37.8	4	8.9	4	8.9	8	17.7
13	21.0	34	54.8	6	9.7	6	9.7	3	4.8

## HEALTH SERVICES IN CITY SCHOOLS

Table 26.—Extent of established methods whereby teachers may refer children with suspected defects or health problems, by region and city population group

Region and population group <sup>1</sup>	Number of cities reporting	Type of referral method					
		To school health service		Through family to family physician		To others	
		Number	Percent	Number	Percent	Number	Percent
1	2	3	4	5	6	7	8
<b>Continental United States</b> Total.....	1,566	1,369	87.5	679	49.1	82	5.2
Group I.....	84	80	95.2	39	46.4	0	7.1
Group II.....	211	192	91.0	100	47.4	16	7.6
Group III.....	563	509	90.4	287	42.1	22	4.1
Group IV.....	708	579	81.8	294	41.5	37	5.2
<b>NEW ENGLAND</b> Total.....	148	126	85.2	69	46.6	3	1.7
Group I.....	10	10	100.0	3	30.0	0	.0
Group II.....	37	25	67.6	14	37.9	0	.0
Group III.....	75	70	93.3	32	42.7	0	.0
Group IV.....	26	21	80.8	10	37.7	0	.0
<b>MIDDLE ATLANTIC</b> Total.....	335	295	88.1	129	43.9	9	2.7
Group I.....	16	15	93.8	11	68.8	0	.0
Group II.....	45	42	93.3	17	37.8	3	6.7
Group III.....	151	141	93.4	69	45.7	0	.0
Group IV.....	143	127	88.8	52	37.1	0	.0
<b>EAST NORTH CENTRAL</b> Total.....	349	294	84.3	125	41.5	22	6.3
Group I.....	15	15	100.0	5	33.3	2	13.3
Group II.....	53	49	92.5	24	45.3	3	5.7
Group III.....	115	110	95.7	41	35.7	2	1.7
Group IV.....	156	120	76.9	55	35.3	9	5.8
<b>WEST NORTH CENTRAL</b> Total.....	187	127	68.4	64	34.2	12	6.4
Group I.....	9	8	88.9	3	33.3	2	22.2
Group II.....	12	11	91.7	5	41.7	1	8.3
Group III.....	58	52	90.0	18	31.0	4	6.9
Group IV.....	77	56	72.7	28	36.4	5	6.5
<b>SOUTH ATLANTIC</b> Total.....	161	124	77.0	56	34.8	11	6.8
Group I.....	9	8	88.9	3	33.3	1	11.1
Group II.....	29	25	86.2	10	34.5	2	6.9
Group III.....	41	35	85.4	20	48.8	0	.0
Group IV.....	82	66	80.5	23	28.0	7	8.5
<b>EAST SOUTH CENTRAL</b> Total.....	87	69	79.3	46	52.9	5	5.8
Group I.....	5	5	100.0	4	80.0	1	20.0
Group II.....	8	6	75.0	5	62.5	0	.0
Group III.....	19	14	73.7	10	52.6	1	5.3
Group IV.....	55	44	79.8	27	49.1	3	5.5
<b>WEST SOUTH CENTRAL</b> Total.....	112	87	77.7	51	45.5	7	6.2
Group I.....	8	7	87.5	4	50.0	0	.0
Group II.....	15	12	80.0	9	60.0	0	.0
Group III.....	24	20	83.3	17	70.8	2	8.3
Group IV.....	55	42	76.4	21	38.2	4	7.3

**Table 26.—Extent of established methods whereby teachers may refer children with suspected defects or health problems, by region and city population group—Continued**

Region population group <sup>1</sup>	Number of cities reporting	Type of referral method					
		To school health service		Through family to family physician		To others	
		Number	Percent	Number	Percent	Number	Percent
1	2	3	4	5	6	7	8
<b>PACIFIC</b>							
Total.....	132	121	92.3	54	38.7	23	16.0
Group I.....	10	10	100.0	5	50.0	0	.0
Group II.....	15	14	93.3	8	53.3	4	26.7
Group III.....	45	39	86.7	20	44.4	11	24.4
Group IV.....	62	58	93.5	21	33.9	8	12.9
<b>MOUNTAIN</b>							
Total.....	74	67	91.8	24	31.8	2	2.6
Group I.....	3	3	100.0	1	50.0	0	.0
Group II.....	6	5	83.3	2	33.3	0	.0
Group III.....	25	23	92.0	9	36.0	1	4.0
Group IV.....	41	38	92.7	13	30.8	1	2.4

<sup>1</sup> The cities in Group IV represent a 50 percent sampling. Therefore, in order to weight Group IV correctly when computing the percentages in totals for "United States," the number of cities in each column of Group IV has first been doubled. This procedure has also been followed with other tables related to the second questionnaire when determining the final percentages for geographical regions and for the United States.



## HEALTH SERVICES IN CITY SCHOOLS

Table 27.—Number and percent of school systems report pupil enrolled in school, including preschool by

Regions and population group <sup>1</sup>	Number of cities reporting	Number of dental examinations for each pupil							
		No examination		One examination		Two examinations		3-4 examinations	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent
1	2	3	4	5	6	7	8	9	10
<b>Continental U.S. Total</b> .....	1,566	616	41.1	112	8.1	44	2.9	163	10.3
Group I.....	84	23	27.4	2	2.4	0	.0	12	14.3
Group II.....	211	69	32.7	8	3.8	7	3.3	20	14.2
Group III.....	568	205	36.4	30	5.3	16	2.8	50	8.9
Group IV.....	708	319	45.1	72	10.2	31	3.0	71	10.0
<b>NEW ENGLAND Total</b> .....	148	49	33.4	7	4.9	3	2.3	16	9.8
Group I.....	10	1	10.0	1	10.0	0	.0	1	10.0
Group II.....	27	6	22.2	1	3.7	0	.0	1	10.0
Group III.....	75	24	32.0	3	4.0	2	2.7	9	12.0
Group IV.....	36	18	50.0	2	5.6	1	2.8	2	5.6
<b>MIDDLE ATLANTIC Total</b> .....	355	23	9.4	12	3.8	1	0.4	7	2.3
Group I.....	16	2	12.5	0	.0	0	.0	0	.0
Group II.....	45	2	4.4	2	4.4	0	.0	3	6.7
Group III.....	151	15	9.9	3	2.0	0	.0	0	.0
Group IV.....	143	14	9.8	7	4.9	1	.7	4	2.8
<b>EAST NORTH CENTRAL Total</b> .....	340	142	42.1	20	6.9	20	5.6	73	22.6
Group I.....	15	5	33.3	0	.0	0	.0	4	26.7
Group II.....	53	19	35.8	2	3.8	6	11.3	11	20.8
Group III.....	116	51	44.0	4	3.4	6	5.2	19	16.4
Group IV.....	156	67	42.9	14	9.0	8	5.1	30	25.0
<b>WEST NORTH CENTRAL Total</b> .....	157	75	58.0	13	9.4	1	0.4	6	3.0
Group I.....	9	5	55.6	0	.0	0	.0	0	.0
Group II.....	13	5	38.4	0	.0	0	.0	1	7.7
Group III.....	58	23	39.7	4	6.9	1	1.7	4	6.9
Group IV.....	77	42	54.5	9	11.7	0	.0	1	1.3
<b>SOUTH ATLANTIC Total</b> .....	161	87	55.6	18	13.2	8	4.5	12	6.3
Group I.....	9	2	22.2	0	.0	0	.0	2	22.2
Group II.....	29	14	48.3	1	3.4	1	3.4	4	13.8
Group III.....	41	22	56.1	3	7.3	4	9.8	3	7.3
Group IV.....	82	48	58.5	14	17.1	3	3.7	3	3.6
<b>EAST SOUTH CENTRAL Total</b> .....	87	49	55.2	7	9.8	3	4.3	15	18.3
Group I.....	5	4	80.0	0	.0	0	.0	0	.0
Group II.....	8	5	62.5	0	.0	0	.0	1	12.5
Group III.....	18	10	55.6	0	.0	0	.0	3	16.7
Group IV.....	56	30	53.6	7	12.5	3	5.4	11	19.6
<b>WEST SOUTH CENTRAL Total</b> .....	112	64	56.3	13	12.5	4	4.6	13	10.3
Group I.....	8	2	25.0	0	.0	0	.0	3	37.5
Group II.....	15	8	53.3	0	.0	0	.0	4	26.7
Group III.....	34	24	70.6	5	14.7	0	.0	2	5.9
Group IV.....	55	30	54.5	8	14.5	4	7.3	4	7.3

<sup>1</sup> The cities in Group IV represent a 50 percent sampling. Therefore, in order to weight Group IV correctly when computing the percentages in totals for "United States," the number of cities in each column of Group IV has first been doubled. This procedure has also been followed with other tables related to the second questionnaire when determining the final percentage for geographical regions and for the United States.

*ing number of dental examinations required of each region and city population group*

Number of dental examinations for each pupil									
5-6 examinations		7-8 examinations		9-10 examinations		11-12 examinations		13-14 examinations	
Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
11	12	13	14	15	16	17	18	19	20
231	14.1	110	6.3	46	2.6	217	13.2	27	1.5
14	16.7	11	12.1	4	4.8	15	17.8	3	3.5
33	15.7	15	7.1	13	6.2	20	13.7	7	3.3
94	16.7	52	9.2	16	20.0	30	15.8	11	2.0
90	12.7	32	4.5	13	1.8	34	11.9	6	.8
20	14.1	18	12.0	6	2.2	25	15.2	4	2.2
1	10.0	1	10.0	1	10.0	4	40.0	0	.0
5	12.5	3	11.1	2	7.4	5	18.5	1	3.7
8	10.7	10	12.3	3	4.0	13	17.3	3	4.0
6	16.6	4	11.1	0	.0	3	8.3	0	.0
149	42.4	30	6.8	12	2.6	91	22.1	20	5.3
5	31.2	3	12.8	0	.0	4	25.0	2	12.5
16	35.6	4	8.9	3	6.7	10	22.2	5	11.1
61	40.0	19	12.6	3	2.0	43	28.5	7	4.6
67	46.8	4	2.8	6	4.2	34	22.8	6	4.2
16	4.2	24	6.3	12	3.2	22	9.1	0	0.0
1	6.7	4	26.7	0	.0	1	6.6	0	.0
0	.0	2	3.5	5	9.4	8	15.1	0	.0
10	8.6	11	9.5	5	4.3	10	8.6	0	.0
5	3.2	7	4.5	3	1.9	13	8.4	0	.0
10	4.7	11	7.2	9	5.1	31	19.7	1	0.4
0	.0	1	11.1	2	22.2	1	11.1	0	.0
3	22.1	1	7.7	2	15.4	1	7.7	0	.0
6	10.3	3	5.2	2	3.4	14	24.2	1	1.7
1	1.3	6	7.8	3	2.9	15	19.5	0	.0
11	4.9	8	4.9	0	0.0	17	16.7	0	0.0
2	22.2	1	11.1	0	.0	2	22.2	0	.0
4	13.3	1	3.5	0	.0	4	13.3	0	.0
4	9.8	2	4.9	0	.0	2	4.8	0	.0
1	1.2	4	4.9	0	.0	9	11.0	0	.0
6	5.6	2	2.1	0	0.0	5	4.9	0	0.0
1	20.0	0	.0	0	.0	0	.0	0	.0
0	.0	1	12.5	0	.0	1	12.5	0	.0
2	16.7	0	.0	0	.0	2	11.0	0	.0
2	3.6	1	1.8	0	.0	2	3.6	0	.0
6	4.8	2	1.8	1	0.6	9	9.0	0	0.0
1	12.5	0	.0	0	.0	2	25.0	0	.0
2	13.3	1	6.7	0	.0	0	.0	0	.0
1	2.9	0	.0	1	2.9	1	3.0	0	.0
2	3.6	1	1.8	0	.0	6	11.0	0	.0

## HEALTH SERVICES IN CITY SCHOOLS

Table 27. Number and percent of school systems report pupil enrolled in school, including preschool by

Regions and population group <sup>1</sup>	Number of cities reporting	Number of dental examinations for each pupil								
		No examination		One examination		Two examinations		3-4 examinations		
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	
1	2	3	4	5	6	7	8	9	10	
<b>MOUNTAIN</b>										
Total.....	74	46	62.2	5	7.0	3	3.5	9	11.3	
Group I.....	2	0	0.0	1	50.0	0	.0	0	.0	
Group II.....	6	5	83.3	0	.0	0	.0	0	.0	
Group III.....	25	12	48.0	1	4.0	2	8.0	5	20.0	
Group IV.....	41	29	70.8	3	7.3	1	2.4	4	9.8	
<b>PACIFIC</b>										
Total.....	133	72	57.7	17	12.9	1	0.5	12	7.7	
Group I.....	10	2	20.0	0	.0	0	.0	2	20.0	
Group II.....	15	5	33.3	2	13.3	0	.0	2	13.3	
Group III.....	45	25	51.1	7	15.6	1	2.2	5	11.1	
Group IV.....	63	41	66.1	8	12.9	0	0.0	3	4.8	

<sup>1</sup> The cities in Group IV represent a 50 percent sampling. Therefore, in order to weight Group IV correctly when computing the percentages in totals for "United States," the number of cities in each column of Group IV has first been doubled. This procedure has also been followed with other tables related to the second questionnaire when determining the final percentages for geographical regions and for the United States.

ing number of dental examinations required of each region and city population group—Continued

Number of dental examinations for each pupil									
5-6 examinations		7-8 examinations		9-10 examinations		11-12 examinations		13-14 examinations	
Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
11	12	13	14	15	16	17	18	19	20
2	2.6	2	2.6	3	2.6	4	5.2	0	0.0
0	.0	0	.0	0	.0	1	50.0	0	.0
0	.0	0	.0	1	16.7	0	.0	0	.0
1	4.0	1	4.0	2	8.0	1	4.0	0	.0
1	2.4	1	2.4	0	.0	2	4.9	0	.0
11	8.2	13	8.8	2	1.6	3	1.6	2	1.0
2	20.0	1	10.0	1	10.0	0	.0	1	10.0
2	20.0	2	13.4	0	.0	0	.0	1	6.7
0	.0	6	12.3	0	.0	3	6.7	0	.0
5	8.1	4	6.5	1	1.6	0	.0	0	.0

Table 28. — Number and percent of school systems reporting personnel who make school dental examinations, by region and city population group

Region and population group <sup>1</sup>	Number of cities reporting dental examinations	The extent to which the school dental examinations are made by					
		Dentist		Dental Hygienist		Others	
		Number	Percent	Number	Percent	Number	Percent
I	2	3	4	5	6	7	8
<b>Continental United States</b>							
Total.....	908	839	89.2	266	28.7	622	68.9
Group I.....	61	53	86.9	23	37.7	37	44.3
Group II.....	142	118	79.6	63	44.6	61	57.0
Group III.....	358	298	83.2	101	28.2	218	60.8
Group IV.....	389	365	93.8	84	21.6	301	77.4
<b>NEW ENGLAND</b>							
Total.....	99	59	59.6	24	24.2	57	56.6
Group I.....	9	8	88.9	1	11.1	2	22.2
Group II.....	21	7	33.3	10	47.6	10	47.6
Group III.....	51	33	64.7	17	33.3	37	72.6
Group IV.....	18	11	61.1	6	33.3	18	100.0
<b>MIDDLE ATLANTIC</b>							
Total.....	322	238	72.7	109	31.9	61	19.5
Group I.....	14	11	78.6	6	42.9	1	7.1
Group II.....	43	35	81.4	20	46.5	8	18.6
Group III.....	136	102	75.0	48	35.3	25	18.4
Group IV.....	129	90	69.8	35	27.1	37	28.7
<b>EAST NORTH CENTRAL</b>							
Total.....	198	189	95.4	31	15.6	144	72.7
Group I.....	10	9	90.0	3	30.0	5	50.0
Group II.....	34	31	91.2	9	26.5	22	64.7
Group III.....	65	65	100.0	14	21.5	57	87.7
Group IV.....	89	94	100.0	3	3.4	60	67.4
<b>WEST NORTH CENTRAL</b>							
Total.....	82	82	100.0	5	6.1	63	76.8
Group I.....	4	4	100.0	2	50.0	3	75.0
Group II.....	8	8	100.0	0	0	8	100.0
Group III.....	35	35	100.0	3	8.6	17	48.6
Group IV.....	35	35	100.0	0	0	35	100.0
<b>SOUTH ATLANTIC</b>							
Total.....	74	73	98.7	18	24.5	79	106.8
Group I.....	7	7	100.0	2	28.6	4	57.1
Group II.....	15	14	93.3	6	40.0	14	93.3
Group III.....	18	18	100.0	4	22.2	18	100.0
Group IV.....	34	34	100.0	6	17.6	34	100.0
<b>EAST SOUTH CENTRAL</b>							
Total.....	38	38	100.0	26	67.3	29	75.0
Group I.....	1	1	100.0	1	100.0	1	100.0
Group II.....	3	3	100.0	3	100.0	3	100.0
Group III.....	8	8	100.0	5	62.5	8	100.0
Group IV.....	26	26	100.0	17	65.4	18	69.2
<b>WEST SOUTH CENTRAL</b>							
Total.....	48	48	100.0	6	12.5	44	91.7
Group I.....	6	6	100.0	1	16.6	4	66.7
Group II.....	7	7	100.0	1	14.3	5	71.4
Group III.....	10	10	100.0	1	10.0	10	100.0
Group IV.....	25	25	100.0	3	12.0	25	100.0

<sup>1</sup> The cities in Group IV represent a 50 percent sampling. Therefore, in order to weight Group IV correctly when computing the percentages in totals for "United States," the number of cities in each column of Group IV has first been doubled. This procedure has also been followed with other tables related to the second questionnaire when determining the final percentages for geographical regions and for the United States.

**Table 28. —Number and percent of school systems reporting personnel who make school dental examinations, by region and city population group—Continued**

Region and population group <sup>1</sup>	Number of cities reporting dental examinations	The extent to which the school dental examinations are made by					
		Dentist		Dental Hygienist		Others	
		Number	Percent	Number	Percent	Number	Percent
1	2	3	4	5	6	7	8
<b>MOUNTAIN</b>							
Total.....	28	28	100.0	6	21.5	27	97.5
Group I.....	2	2	100.0	1	50.0	1	50.0
Group II.....	1	1	100.0	0	.0	1	100.0
Group III.....	13	13	100.0	2	15.4	13	100.0
Group IV.....	12	12	100.0	3	25.0	12	100.0
<b>PACIFIC</b>							
Total.....	61	43	70.3	25	41.0	54	88.5
Group I.....	6	5	83.3	3	50.0	5	83.3
Group II.....	10	6	60.0	3	30.0	6	60.0
Group III.....	22	12	54.5	8	36.4	22	100.0
Group IV.....	21	20	95.2	11	52.4	21	100.0

<sup>1</sup>The cities in Group IV represent a 50 percent sampling. Therefore, in order to weight Group IV correctly when computing the percentages in totals for "United States," the number of cities in each column of Group IV has first been doubled. This procedure has also been followed with other tables related to the second questionnaire when determining the final percentages for geographical regions and for the United States.

**Table 29. —Extent of follow-through by the school to see that children obtain dental supervision and care, by region and city population group**

Region and population group <sup>1</sup>	Number of cities reporting	Extent of follow-through by the school to see that the children visit a dentist at least once annually for dental supervision and care						Extent to which reports are made to the school by the dentist of such visits referred by the school			
		Regularly		Occasionally		No provision		Regularly		Occasionally	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
1	2	3	4	5	6	7	8	9	10	11	12
<b>CONTINENTAL UNITED STATES</b>											
Total.....	1,566	796	47.5	337	21.5	443	28.7	620	39.9	316	23.4
Group I.....	84	67	79.8	11	13.1	6	7.1	54	64.3	17	21.5
Group II.....	211	138	65.4	28	13.0	35	16.6	111	52.6	40	19.0
Group III.....	563	306	54.4	110	19.5	147	26.1	225	40.0	128	22.7
Group IV.....	708	285	40.3	168	23.7	255	36.0	230	32.5	131	18.6
<b>NEW ENGLAND</b>											
Total.....	148	82	55.4	21	14.2	45	30.3	62	42.0	24	16.2
Group I.....	10	8	80.0	1	10.0	1	10.0	4	40.0	2	20.0
Group II.....	27	19	70.4	4	14.8	4	14.8	15	55.6	6	22.2
Group III.....	75	43	57.3	8	10.7	24	32.0	32	42.7	11	14.7
Group IV.....	36	13	36.1	8	22.2	16	44.4	11	30.6	5	13.9

<sup>1</sup>The cities in Group IV represent a 50 percent sampling. Therefore, in order to weight Group IV correctly when computing the percentages in totals for "United States," the number of cities in each column of Group IV has first been doubled. This procedure has also been followed with other tables related to the second questionnaire when determining the final percentages for geographical regions and for the United States.

## HEALTH SERVICES IN CITY SCHOOLS

Table 29.—Extent of follow-through by the school to see that children obtain dental supervision and care, by region and city population group—Continued

Region and population group	Number of cities reporting	Extent of follow-through by the school to see that the children visit a dentist at least once annually for dental supervision and care						Extent to which reports are made to the school by the dentist of such visits referred by the school			
		Regularly		Occasionally		No provision		Regularly		Occasionally	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
<b>I</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>
<b>MIDDLE ATLANTIC Total</b> .....	<b>355</b>	<b>237</b>	<b>70.7</b>	<b>62</b>	<b>17.9</b>	<b>36</b>	<b>11.4</b>	<b>188</b>	<b>57.8</b>	<b>84</b>	<b>24.9</b>
Group I.....	16	15	93.8	1	6.3	0	.0	18	81.3	2	12.5
Group II.....	45	38	84.5	5	11.1	2	4.4	31	72.1	11	25.6
Group III.....	151	109	72.3	29	19.3	13	8.6	77	55.8	45	32.6
Group IV.....	143	95	66.4	27	18.9	21	14.7	67	54.9	26	21.3
<b>EAST NORTH CENTRAL Total</b> .....	<b>340</b>	<b>163</b>	<b>48.0</b>	<b>66</b>	<b>19.4</b>	<b>111</b>	<b>32.6</b>	<b>114</b>	<b>48.9</b>	<b>71</b>	<b>32.6</b>
Group I.....	15	11	73.4	3	13.3	2	13.3	8	61.5	4	30.8
Group II.....	53	33	62.3	13	24.5	7	13.2	25	54.4	9	19.6
Group III.....	116	63	54.3	17	14.7	36	31.0	39	48.8	25	31.3
Group IV.....	156	56	35.9	34	21.8	66	42.3	42	46.7	33	36.7
<b>WEST NORTH CENTRAL Total</b> .....	<b>157</b>	<b>96</b>	<b>59.4</b>	<b>23</b>	<b>15.0</b>	<b>38</b>	<b>25.6</b>	<b>93</b>	<b>76.4</b>	<b>16</b>	<b>12.3</b>
Group I.....	9	9	100.0	0	.0	0	.0	9	100.0	0	.0
Group II.....	13	10	76.9	1	7.7	2	15.4	11	100.0	0	.0
Group III.....	58	34	58.6	10	17.3	14	24.1	33	75.0	9	30.5
Group IV.....	77	43	55.8	12	15.6	22	28.6	40	72.7	7	12.7
<b>SOUTH ATLANTIC Total</b> .....	<b>161</b>	<b>52</b>	<b>32.3</b>	<b>46</b>	<b>29.3</b>	<b>63</b>	<b>42.0</b>	<b>47</b>	<b>44.7</b>	<b>37</b>	<b>38.3</b>
Group I.....	9	5	55.6	3	33.3	2	22.2	6	85.7	2	78.6
Group II.....	29	18	62.0	6	20.7	5	17.3	16	68.7	6	25.0
Group III.....	41	11	26.8	13	31.7	17	41.5	9	37.5	12	50.0
Group IV.....	82	18	22.0	25	30.5	39	47.5	16	37.3	17	39.5
<b>EAST SOUTH CENTRAL Total</b> .....	<b>87</b>	<b>31</b>	<b>34.3</b>	<b>24</b>	<b>28.7</b>	<b>32</b>	<b>37.0</b>	<b>33</b>	<b>60.0</b>	<b>16</b>	<b>31.1</b>
Group I.....	5	3	60.0	1	20.0	1	20.0	1	25.0	2	50.0
Group II.....	8	4	50.0	3	37.5	1	12.5	3	38.6	2	25.0
Group III.....	18	6	33.3	3	16.7	9	50.0	9	100.0	0	.0
Group IV.....	56	18	32.1	17	30.4	21	37.5	21	60.0	13	34.3
<b>WEST SOUTH CENTRAL Total</b> .....	<b>112</b>	<b>26</b>	<b>23.1</b>	<b>37</b>	<b>33.5</b>	<b>39</b>	<b>36.6</b>	<b>39</b>	<b>34.9</b>	<b>28</b>	<b>49.6</b>
Group I.....	8	6	75.0	2	25.0	0	.0	4	50.0	2	37.5
Group II.....	15	7	46.6	4	26.7	4	26.7	4	26.4	5	33.3
Group III.....	34	12	35.3	0	0.0	13	38.2	11	32.4	5	14.7
Group IV.....	55	11	20.0	22	40.0	22	40.0	9	27.3	15	27.3
<b>MOUNTAIN Total</b> .....	<b>74</b>	<b>29</b>	<b>25.2</b>	<b>19</b>	<b>25.3</b>	<b>25</b>	<b>49.6</b>	<b>19</b>	<b>44.8</b>	<b>12</b>	<b>31.0</b>
Group I.....	2	1	50.0	1	50.0	0	.0	3	100.0	0	.0
Group II.....	6	1	16.7	0	.0	5	83.3	1	100.0	0	.0
Group III.....	25	9	36.0	8	32.0	8	32.0	7	41.3	6	28.6
Group IV.....	41	9	22.0	10	24.4	22	53.6	7	42.1	6	27.3
<b>PACIFIC Total</b> .....	<b>133</b>	<b>59</b>	<b>42.3</b>	<b>39</b>	<b>31.6</b>	<b>44</b>	<b>36.1</b>	<b>37</b>	<b>42.7</b>	<b>28</b>	<b>39.6</b>
Group I.....	10	9	90.0	1	10.0	0	.0	7	70.0	2	20.0
Group II.....	15	8	53.3	2	13.3	5	33.3	6	60.0	1	10.0
Group III.....	45	19	42.2	13	28.9	12	26.7	8	35.0	5	11.1
Group IV.....	63	23	37.1	13	21.0	26	41.3	16	44.4	10	27.3

**Table 30.—Extent to which sodium fluoride treatment of teeth is available to school children, by region and city population group**

Region and population group <sup>1</sup>	Number of cities reporting	As provided through —										
		Private dentist		Public clinic in or out of school		Combination of private dentist and public clinic		Other means		No provision		
		Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	
1	2	3	4	5	6	7	8	9	10	11	12	
<b>Continental U.S.</b>												
<b>Total.....</b>	1,566	737	46.2	188	10.7	78	4.3	40	2.3	640	42.7	
Group I.....	84	55	65.5	24	28.6	12	14.3	7	8.3	12	15.5	
Group II.....	211	115	54.5	34	16.1	15	7.1	5	2.4	13	30.3	
Group III.....	553	254	45.1	74	13.1	33	5.9	15	2.7	232	41.2	
Group IV.....	708	313	44.3	58	7.9	18	2.5	13	1.8	331	46.8	
<b>NEW ENGLAND</b>												
<b>Total.....</b>	140	75	53.3	46	30.4	14	8.7	4	2.3	39	26.1	
Group I.....	10	6	60.0	4	40.0	1	10.0	1	10.0	2	20.0	
Group II.....	27	10	39.5	6	22.2	2	7.4	1	3.7	5	18.5	
Group III.....	75	30	40.0	28	34.7	9	12.0	2	2.7	23	30.7	
Group IV.....	36	23	63.9	10	27.8	2	5.6	0	.0	9	25.0	
<b>MIDDLE ATLANTIC</b>												
<b>Total.....</b>	255	146	49.4	40	10.2	20	4.8	3	0.6	171	59.2	
Group I.....	16	7	43.8	7	43.8	4	25.0	1	6.3	5	31.3	
Group II.....	45	18	40.0	6	13.3	3	6.7	0	.0	20	44.4	
Group III.....	151	68	43.7	16	10.6	9	6.0	2	1.3	67	44.4	
Group IV.....	143	55	38.5	17	7.7	4	2.8	0	.0	79	55.2	
<b>EAST NORTH CENTRAL</b>												
<b>Total.....</b>	340	160	46.9	32	9.3	17	3.8	9	2.6	127	41.7	
Group I.....	15	10	66.7	5	33.3	2	13.3	0	.0	2	13.3	
Group II.....	53	28	52.8	6	11.3	5	9.4	1	1.9	19	35.8	
Group III.....	116	54	46.6	7	6.0	8	6.9	4	3.4	46	39.7	
Group IV.....	156	68	43.6	14	9.0	2	1.3	4	2.6	70	44.9	
<b>WEST NORTH CENTRAL</b>												
<b>Total.....</b>	157	96	59.1	11	5.1	4	1.7	5	2.8	57	39.7	
Group I.....	9	8	88.9	3	33.3	0	.0	2	22.2	1	11.1	
Group II.....	13	11	84.6	1	7.7	0	.0	0	.0	2	15.4	
Group III.....	58	37	63.8	6	10.3	4	6.9	2	3.4	18	31.0	
Group IV.....	77	40	51.9	1	1.3	0	0	1	1.3	36	46.8	
<b>SOUTH ATLANTIC</b>												
<b>Total.....</b>	161	72	45.7	26	12.8	12	6.6	1	0.4	64	42.4	
Group I.....	9	3	33.3	3	33.3	3	33.3	0	.0	1	11.1	
Group II.....	29	16	55.2	12	41.4	4	13.8	0	.0	6	20.7	
Group III.....	41	14	34.2	6	14.6	1	2.4	1	2.4	18	43.9	
Group IV.....	82	39	47.6	5	6.1	4	4.9	0	.0	39	47.6	
<b>EAST SOUTH CENTRAL</b>												
<b>Total.....</b>	87	27	39.4	12	12.6	6	7.7	1	1.4	44	51.7	
Group I.....	5	4	80.0	0	.0	0	.0	0	.0	1	20.0	
Group II.....	8	3	37.5	2	25.0	1	12.5	0	.0	4	50.0	
Group III.....	18	5	27.8	4	22.2	0	.0	0	.0	9	50.0	
Group IV.....	56	15	26.8	6	10.7	5	8.9	1	1.8	30	53.6	

<sup>1</sup> The cities in Group IV represent a 50 percent sampling. Therefore, in order to weight Group IV correctly when computing the percentages in totals for "United States," the number of cities in each column of Group IV has first been doubled. This procedure has also been followed with other tables related to the second questionnaire when determining the final percentages for geographical regions and for the United States.



## HEALTH SERVICES IN CITY SCHOOLS

Table 30.—Extent to which sodium fluoride treatment of teeth is available to school children, by region and city population group—Continued

Region and population group <sup>1</sup>	Number of cities reporting	As provided through—									
		Private dentist		Public clinic in or out of school		Combination of private dentist and public clinic		Other means		No provision	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
1	2	3	4	5	6	7	8	9	10	11	12
<b>WEST SOUTH CENTRAL Total</b> .....	112	85	46.1	8	6.6	2	1.2	1	0.6	40	37.1
Group I.....	8	8	100.0	1	12.5	1	12.5	0	0	0	.0
Group II.....	15	21	73.3	0	.0	0	.0	1	6.7	3	20.0
Group III.....	34	18	47.1	4	11.8	1	2.9	0	.0	15	44.1
Group IV.....	55	21	38.2	3	5.5	0	.0	0	.0	23	40.0
<b>MOUNTAIN Total</b> .....	74	32	42.6	3	4.3	1	1.7	9	9.6	36	59.4
Group I.....	2	2	100.0	0	.0	0	.0	1	50.0	0	.0
Group II.....	6	2	33.3	0	.0	0	.0	2	33.3	1	60.0
Group III.....	25	11	44.0	1	4.0	0	.0	4	16.0	13	52.0
Group IV.....	41	17	41.5	2	4.9	1	2.4	2	4.9	22	53.7
<b>PACIFIC Total</b> .....	122	73	55.7	10	7.3	2	1.6	7	6.2	52	39.2
Group I.....	10	7	70.0	1	10.0	1	10.0	2	20.0	1	10.0
Group II.....	15	10	66.7	1	6.7	0	.0	0	.0	4	26.7
Group III.....	45	21	46.7	4	8.9	1	2.2	0	.0	23	51.1
Group IV.....	62	35	56.5	4	6.5	0	.0	5	8.1	24	38.7

<sup>1</sup> The cities in Group IV represent a 50 percent sampling. Therefore, in order to weight Group IV correctly when computing the percentages in totals for "United States", the number of cities in each column of Group IV has first been doubled. This procedure has also been followed with other tables related to the second questionnaire when determining the final percentage for geographical regions and for the United States.

Table 31.—Extent to which school nursing is provided, by type of service, and by region and city population group

Region and population group <sup>1</sup>	Number of cities reporting	The school nursing service is provided through—									
		Generalized public health nursing service		Specialized school nursing service		Combination of the two services		Other plans		No provisions	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
1	2	3	4	5	6	7	8	9	10	11	12
<b>CONTINENTAL UNITED STATES Total</b> .....	1,565	424	39.6	910	54.1	121	7.9	24	1.7	77	5.7
Group I.....	84	21	25.0	54	64.3	7	8.3	3	2.4	0	.0
Group II.....	211	42	19.9	145	68.7	15	7.1	5	2.4	4	1.9
Group III.....	563	110	19.5	360	69.3	41	7.3	3	.4	20	3.5
Group IV.....	708	261	36.9	321	45.3	58	8.2	15	2.1	58	7.5

<sup>1</sup> The cities in Group IV represent a 50 percent sampling. Therefore, in order to weight Group IV correctly when computing the percentages in totals for "United States", the number of cities in each column of Group IV has first been doubled. This procedure has also been followed with other tables related to the second questionnaire when determining the final percentage for geographical regions and for the United States.

Table 31.—Extent to which school nursing is provided, by type of service, and by region and city population group—Continued

Region and population group	Number of cities reporting	The school nursing service is provided through—									
		Generalized public health nursing service		Specialized school nursing service		Combination of the two services		Other plans		No provisions	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
1	2	4	5	6	7	8	9	10	11	12	
<b>NEW ENGLAND</b>											
Total.....	148	15	10.9	118	76.6	5	3.3	3	2.7	7	6.5
Group I.....	10	3	30.0	6	60.0	1	10.0	0	.0	0	.0
Group II.....	27	2	7.4	22	81.5	2	7.4	1	3.7	0	.0
Group III.....	75	5	6.7	67	89.3	1	1.3	0	.0	2	2.7
Group IV.....	36	5	13.9	23	63.9	1	2.8	2	5.5	5	13.9
<b>MIDDLE ATLANTIC</b>											
Total.....	355	15	5.0	307	86.0	23	6.2	5	1.4	5	1.4
Group I.....	16	2	12.5	9	56.3	3	18.7	2	12.5	0	.0
Group II.....	45	1	2.2	42	93.3	1	2.2	1	2.3	0	.0
Group III.....	151	2	1.3	135	89.4	11	7.3	0	.0	3	2.0
Group IV.....	143	10	7.0	121	84.6	8	5.6	2	1.4	2	1.4
<b>EAST NORTH CENTRAL</b>											
Total.....	340	106	34.9	182	48.0	28	8.9	6	1.8	18	6.4
Group I.....	15	4	26.7	10	66.7	1	6.6	0	.0	0	.0
Group II.....	53	12	22.8	35	66.0	5	9.5	1	1.9	0	.0
Group III.....	116	23	19.8	81	69.8	6	5.2	2	1.7	4	3.5
Group IV.....	156	67	42.9	56	35.9	16	10.3	3	1.9	14	9.0
<b>WEST NORTH CENTRAL</b>											
Total.....	157	23	18.4	105	62.4	11	8.5	4	3.4	9	7.3
Group I.....	9	0	.0	9	100.0	0	.0	0	.0	0	.0
Group II.....	13	2	15.4	11	84.6	0	.0	0	.0	0	.0
Group III.....	58	11	19.0	44	75.9	2	3.4	0	.0	1	1.7
Group IV.....	77	15	19.5	41	53.2	9	1.7	4	5.2	8	10.4
<b>SOUTH ATLANTIC</b>											
Total.....	161	107	66.3	23	16.5	16	9.8	4	2.9	6	4.5
Group I.....	9	6	66.7	3	33.3	0	.0	0	.0	0	.0
Group II.....	29	17	58.6	9	31.0	2	6.9	1	3.5	0	.0
Group III.....	41	30	73.2	4	9.8	6	14.6	0	.0	1	2.4
Group IV.....	82	54	65.9	12	14.6	8	9.7	3	3.7	5	6.1
<b>EAST SOUTH CENTRAL</b>											
Total.....	87	57	69.2	13	11.2	4	4.2	2	2.1	11	13.3
Group I.....	5	3	60.0	2	40.0	0	.0	0	.0	0	.0
Group II.....	8	4	50.0	1	12.5	1	12.5	1	12.5	1	12.5
Group III.....	18	8	44.4	7	38.9	1	5.6	0	.0	2	11.1
Group IV.....	56	42	75.0	3	5.4	2	3.5	1	1.8	8	14.3
<b>WEST SOUTH CENTRAL</b>											
Total.....	112	51	59.3	45	35.9	9	6.6	0	0.0	7	7.3
Group I.....	8	1	12.5	7	87.5	0	.0	0	.0	0	.7
Group II.....	15	2	13.3	10	66.7	2	3.3	0	.0	1	6.0
Group III.....	34	15	44.1	13	38.2	5	14.7	0	.0	1	3.0
Group IV.....	55	33	60.0	15	27.3	2	3.6	0	.0	5	9.1

## HEALTH SERVICES IN CITY SCHOOLS

Region and population group <sup>1</sup>	Number of cities reporting	The school nursing service is provided through—										
		Generalised public health nursing service		Specialised school nursing service		Combination of the two services		Other plans		No provisions		
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	
1	2	3	4	5	6	7	8	9	10	11	12	
<b>MOUNTAIN</b>												
<b>Total</b> .....	74	22	29.7	37	50.5	9	13.0	0	0.0	6	7.8	
Group I.....	2	1	50.0	1	50.0	0	.0	0	.0	0	.0	
Group II.....	6	1	16.7	4	66.6	0	.0	0	.0	1	16.7	
Group III.....	25	9	36.0	11	44.0	3	12.0	0	.0	2	8.0	
Group IV.....	41	11	26.8	21	51.2	6	14.7	0	.0	3	7.3	
<b>PACIFIC</b>												
<b>Total</b> .....	132	23	28.4	75	58.6	16	11.3	0	0.0	9	6.7	
Group I.....	10	1	10.0	7	70.0	2	20.0	0	.0	0	.0	
Group II.....	15	1	6.7	11	73.3	2	13.3	0	.0	1	6.7	
Group III.....	45	7	15.6	28	62.2	6	13.3	0	.0	4	8.9	
Group IV.....	62	23	37.1	29	46.8	6	9.7	0	.0	4	6.4	

<sup>1</sup>The cities in Group IV represent a 50 percent sampling. Therefore, in order to weight Group IV correctly when computing the percentages in totals for "United States," the number of cities in each column of Group IV has first been doubled. This procedure has also been followed with other tables related to the second questionnaire when determining the final percentage for geographical regions and for the United States.

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# Appendix First Questionnaire

City \_\_\_\_\_ State \_\_\_\_\_

## SURVEY OF SCHOOL HEALTH SERVICES\*

(This survey is being conducted in cooperation with the American Medical Association)

- If health services\* are **NOT** available in the schools of your system, check here  sign at bottom, and return the form, disregarding the questions below.
- If health services\* are **ARE** available in the schools of your system, check here , and answer the questions which follow.

CHECK (X) authority financing the school health program:

Board of Education;  Board of Health or Health Department;  Jointly;  Other (specify) \_\_\_\_\_

CHECK (X) authority administering the school health program:

Board of Education;  Board of Health or Health Department;  Jointly;  Other (specify) \_\_\_\_\_

If administered by Board of Health, give name and address of Health Officer: \_\_\_\_\_

CHECK (X) one or more, indicating personnel available for school health services:

Physician;  Nurse;  Dentist;  Dental Hygienist;  Other (specify) \_\_\_\_\_

Information supplied by: \_\_\_\_\_ (Name) \_\_\_\_\_ (Title) \_\_\_\_\_ (Date)

\*For the purposes of this questionnaire, the **ONLY** phases of the school health service program to be considered are (a) the medical examination, and (b) the dental examination or inspection.

FEDERAL SECURITY AGENCY Office of Education Form IHS-3

Budget Bureau 491-4907 Approval expires: 12/31/49

**Second Questionnaire**

FEDERAL SECURITY AGENCY

Office of Education  
Washington 25, D. C.

FORM RSX -(1950)

Budget Bureau No. 51-50 12

Approval expires: June 30, 1951

## SURVEY OF SCHOOL HEALTH SERVICES\*

(This study has been planned in cooperation with the Public Health Service and the American Medical Association, which has sent a supplementary inquiry to its local medical societies)

DO NOT WRITE IN THIS SPACE

Information supplied by

(Name)

(Title)

(Date)

\*The term school health services embraces the following school health activities:  
(1) First aid in emergencies; (2) prevention and control of communicable diseases;  
(3) health appraisal (including medical examination and follow-through with the family to secure correction of defects and adjustment of the school program of children to meet individual health needs); and (4) individual health counseling.

Total pupil enrollment in schools under your supervision

(If additional space for explanation or comment is needed, use back of this questionnaire or attach additional sheets.)

1. How many periodic, general, medical examinations — including preschool examination, if any — are required of each pupil while he is enrolled in school? (Circle the number indicating the present practice in your school system.)  
None, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10  
(List any special examinations, such as for athletic teams, under No. 15)
2. Circle the usual grade(s) in which the periodic, general, medical examinations indicated above are required.  
Preschool, K, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
3. Approximately what percentage of children are accompanied by one or both parents — (Check)  
(a) At the initial entrance examination in the elementary schools?  
Under 5%; 5%-14%; 15%-49%; 50%-100%  
(b) At subsequent examinations in the elementary school?  
Under 5%; 5%-14%; 15%-49%; 50%-100%
4. Is a conference held with the parent (by teacher, principal, or a representative of the school health service, either at the time of the examination or shortly afterward) to plan for the follow-through to secure medical or other care?  
Yes, regularly; Only for special cases; Seldom; No provision for it.

5. Is there an established method whereby teachers may refer children with suspected defects or health problems—
  - (a) To the school health service? Yes....., No.....
  - (b) Through the family to the family physician? Yes....., No.....
  - (c) To others? (Please specify).....
6. To what extent is clothing removed during a general medical examination? (Check where applicable.)

	Boys		Girls	
	Elementary School	Secondary School	Elementary School	Secondary School
1. No set school policy . . . . .	-----	-----	-----	-----
2. No clothing removed . . . . .	-----	-----	-----	-----
3. Outer clothing removed only . . . . .	-----	-----	-----	-----
4. Shoes and stockings removed only . . . . .	-----	-----	-----	-----
5. Stripped to waist only . . . . .	-----	-----	-----	-----
6. Nos. 4 and 5 combined . . . . .	-----	-----	-----	-----
7. Entirely stripped . . . . .	-----	-----	-----	-----

7. How many dental examinations are required of each pupil while he is enrolled in school? (Please circle the number indicating the present typical practice in your school system.)
  - (a) None, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
  - (b) If "None," are provisions made by the school for the dental inspection of those children not examined by a private dentist? Yes....., No.....
  - (c) If "Yes," how many? 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
8. Which of the following make school dental examinations? (Check one or more.)  
 Dentist....., Dental hygienist....., Other (Specify).....
9. (a) Is there a follow-through by the school to see that the children visit a dentist at least once annually for dental supervision and care?  
 Yes, regularly....., Occasionally....., No provision for follow-through.....  
 (b) Is there a report made to the school by the dentist of such visits?  
 Yes, regularly....., Occasionally....., No provisions for such reporting.....
10. Does the community have any method(s) of providing needed dental care for children whose families cannot afford to pay for such services? Yes....., No.....  
 If the answer is "Yes," -  
 (a) Are such services provided from public (tax) funds? Yes....., No.....  
 (b) Are such services provided by methods other than (a), such as private and semiprivate clinics, donated services, PTA, service clubs, etc.? Yes....., No.....  
 Please describe briefly any such methods:.....  
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 (c) By a combination of (a) and (b)? Yes....., No.....



HEALTH SERVICES IN CITY SCHOOLS

- 11. Is the sodium fluoride treatment of teeth by direct (local, topical) application available to the children of your school system—
  - (a) Through private dentist? Yes....., No.....
  - (b) Through public clinics in or out of school? Yes....., No.....
  - (c) Through combination of (a) and (b)? Yes....., No.....
  - (d) Other! (Specify).....
  
- 12. Is your school nursing service provided as a part of —
  - (a) A generalized public health nursing service? Yes....., No.....
  - (b) A specialized school nursing service? Yes....., No.....
  - (c) A combination of (a) and (b)? Yes....., No.....
  - (d) Some other plan? (Specify).....
  
- 13. What is the administrative relationship in your school system of the health services, physical education, and health instruction? (Check all statements which apply.)
  - (a) The three programs are under a separate head.....
  - (b) The three programs are under one administrative head.....
  - (c) The health service has administrative control over: Physical education..... Health instruction.....
  - (d) The physical education has administrative control over: Health service..... Health instruction.....
  - (e) The health instruction has administrative control over: Health service..... Physical education.....
  
- 14. In the development of your school health program —
  - (a) Is your local medical society called upon for advice and counsel?  
Yes, it is consulted regularly.....  
Yes, it is consulted at times.....  
No.....
  - (b) Are other local professional groups called upon for advice and counsel?  
Yes..... No.....  
If "Yes," please list:.....
  
- 15. Describe any procedure(s) not listed in the questionnaire but carried on in your school health program and considered particularly important to you.  
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- 16. If you wish to make any other comments concerning your school health service, please give them here.  
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