Preliminary report of a national survey

The Medical Care Activities of Local Health Units

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Medicare's Effects on Medical Care

IN THE past 30 years medical care problems have become, of necessity, an active concern of many local health departments. Medical advances, changes in the prevalence of diseases, and a growing awareness of gaps in the availability and financing of medical services have led to a reshaping of the role of the local health unit in medical care activities. These changes in thinking are reflected in the 1950 and 1963 policy statements of the American Public Health Association (*1*, *2*).

Despite the fact that numerous new programs and activities have been described and discussed in the literature, no comprehensive survey has been made of local health units' activities in medical care since the late forties, when Terris and Kramer reported on the national survey they performed for the Subcommittee on Medical Care of the American Public Health Association (*3*). In 1964, the Public Health Service undertook a nationwide survey to gather new data to use for current planning purposes, as well as to establish a baseline for future studies. The preliminary findings of this survey are reported here. Subsequent reports will deal with the findings in depth.

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Methods

A nine-page questionnaire was developed and pretested to elicit information about the following: (*a*) the characteristics of the health unit and its jurisdiction, (*b*) its responsibilities with respect to health facilities in its jurisdiction, (*c*) the health services it provides, (*d*) the assistance it gives to other providers of services, (*e*) its activities in assuring or improving the quality of services in its jurisdiction, and (*f*) its relationships with health agencies, associations, and institutions. The study was endorsed and assisted by the Association of State and Territorial Health Officers.

In January 1966 the questionnaires were mailed to 1,703 local health units (*4*). In addition to routine followup of nonrespondents, special efforts were directed at units in the States which had response rates of less than 50 percent.

Completed questionnaires were received from 1,340 units, a response rate of 78.1 percent. For a variety of reasons, 17 returned questionnaires had to be discarded.

Results

The results of this study probably do not reflect the true picture, because the units with more medical care activities likely had a higher response rate. Further, the study was not intended to be a complete inventory of all medical care activities of local health units, but rather a general overview of major activities. The response rate by State ranged from 25 to 100 percent and by region from 64 to 92 percent.

Table 1 shows the respondents by type of of health unit, population of jurisdiction, and employment status of the health officer.

Table 1. Responses of health units to selected items, 1966 questionnaire survey

Item	Number questionnaires sent	Respondents	
		Number	Percent
Total	1,703	1,323	77.7
Type of health unit: [1]			
County	852	687	80.6
City	344	247	71.8
City-county	90	74	82.2
State health district	182	123	67.6
Local health district	235	192	81.7
Population of jurisdiction: [2]			
Under 15,000	215	170	79.1
15,000–24,999	238	202	84.9
25,000–44,999	352	266	75.6
45,000–74,999	309	244	79.0
75,000–199,999	277	255	81.2
200,000 and over	187	164	87.7
Unknown	125	52	41.6
Employment status of health officer: [3]			
Full time	950	763	80.3
Part time	580	442	76.2
No health officer	140	94	67.1
Unknown	33	24	72.7

[1] Type is generally that listed in the "Directory of Local Health Units, 1964," compiled by the Public Health Service. This information was updated by the office which compiled the directory.

[2] Figures for respondents are those reported on questionnaires. Figures for nonrespondents are from 1960 census data. Unknowns include localities not reported by the census; for example, those in Puerto Rico.

[3] Figures for respondents are those reported on questionnaires. Figures for nonrespondents are from the proofs of the "Directory of Local Health Units, 1966."

Tables 2–4 give an overview of some of the characteristics of the responding local health units, including regional location, type of unit, status and degrees of the health officer, and expenditures.

Slightly more than half of the units were classified as county health departments, but the proportion of different types of units by region was quite variable (table 2). Thus, city health departments predominate in the populous New England States, while in the southern and western Mountain States two-thirds or more of the units are county health departments or local health districts.

Eighty percent of the local health units were directed by a physician health officer, and almost a third of these physicians had a public health degree (table 3). However, only 58 percent of the responding units reported having a full-time health officer.

Of 1,010 health units for which it was possible to calculate per capita public health expenditures, approximately 60 percent reported that these expenditures were less than $2 (table 4). While there is great variability regionally and by type of health unit, units serving very small jurisdictions and units serving very large jurisdictions tend to have above average per capita public health expenditures.

Tables 5–7 show general findings about the kinds of health facilities and programs available in the units' jurisdictions and the kinds of responsibilities the local health unit assumes in relation to each.

The responsibilities which the health units most frequently assumed for available health facilities were inspection, licensure, and operation (table 5). The facilities most frequently operated by local health units were mental health clinics and clinical laboratories; however, inspection and licensing of these facilities by local health units were infrequent. Inspection without licensing was the most frequent responsibility assumed with respect to general and special hospitals and skilled nursing homes in their jurisdictions, although almost 30 percent of the health units licensed skilled nursing homes.

Of the 10 selected health services listed in tables 6 and 7, the two most prevalent were school health (95 percent) and crippled children's (94.1 percent). The health unit was the

Table 2. Type of health unit, by Public Health Service Region

Region [1]	Total respondents	County		City		City-county		State health district		Local health district	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Total	1,323	687	51.9	247	18.7	74	5.6	123	9.3	192	14.5
I	90	1	1.1	77	85.6	0	0	10	11.1	2	2.2
II	98	24	24.5	56	57.1	0	0	16	16.3	2	2.0
III	310	189	61.0	12	3.9	17	5.5	58	18.7	34	11.0
IV	223	131	58.7	4	1.8	2	.9	0	0	86	38.6
V	207	95	45.9	68	32.9	3	1.4	6	2.9	35	16.9
VI	95	45	47.4	16	16.8	15	15.8	14	14.7	5	5.3
VII	170	124	72.9	4	24.0	23	13.5	10	5.9	9	5.3
VIII	22	7	31.8	1	4.5	6	27.3	0	0	8	36.4
IX	108	71	65.7	9	8.3	8	7.4	9	8.3	11	10.2

[1] States in each region are: I, Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont; II, Delaware, New Jersey, New York, and Pennsylvania; III, District of Columbia, Kentucky, Maryland, North Carolina, Puerto Rico, Virginia, Virgin Islands, and West Virginia; IV, Alabama, Florida, Georgia, Mississippi, South Carolina, and Tennessee; V, Illinois, Indiana, Michigan, Ohio, and Wisconsin; VI, Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, and South Dakota; VII, Arkansas, Louisiana, New Mexico, Oklahoma, and Texas; VIII, Colorado, Idaho, Montana, Utah, and Wyoming; IX, Alaska, Arizona, California, Hawaii, Nevada, Oregon, and Washington.

Table 3. Employment status and academic degrees of health officers in 1,323 local health units

Health officers	Full time		Part time		No health officer		Unknown	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
M.D.'s with public health degree	333	43.7	79	17.8	0	0	3	12.0
M.D.'s without public health degree	297	39.0	337	76.4	0	0	11	44.0
Non-M.D.'s with public health degree	25	3.3	1	.2	0	0	0	0
Non-M.D.'s without public health degree	91	11.9	15	3.5	0	0	1	4.0
None	0	0	0	0	95	100.0	0	0
Unknown	16	2.1	9	2.0	0	0	10	40.0
Total	762	100.0	441	100.0	95	100.0	25	100.0

Table 4. Per capita public health expenditures of 1,323 local health units, by population of jurisdiction

Population of jurisdiction	Total health units	Under $1		$1-$1.49		$1.50-$1.99		$2-$2.99		$3-$3.99		$4 and over		Unknown	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Total	1,323	162	12.2	230	17.4	211	15.9	232	17.5	86	6.5	89	6.7	313	23.7
Under 15,000	170	17	10.0	21	12.4	29	17.1	29	17.1	13	7.6	18	10.6	43	25.3
15,000-24,999	202	31	15.3	52	25.7	28	13.9	26	12.9	9	4.5	19	9.4	37	18.3
25,000-44,999	266	39	14.7	56	21.1	43	16.2	51	19.2	11	4.1	12	4.5	54	20.3
45,000-74,999	244	33	13.5	48	19.7	43	17.6	36	14.8	18	7.4	14	5.7	52	21.3
75,000-199,999	225	23	10.2	33	14.7	46	20.4	48	21.3	20	8.9	11	4.9	44	19.6
200,000 and over	164	19	11.6	20	12.2	22	13.4	42	25.6	15	9.1	15	9.1	31	18.9
Unknown	52	0	0	0	0	0	0	0	0	0	0	0	0	52	100.0

sole operator of the school health program in more than half of the responding jurisdictions. In 51.2 percent of the jurisdictions where it was available, the crippled children's program was operated by both the health unit and another agency.

The responses in relation to homemaker services and vocational rehabilitation are particularly interesting, because in more than 80 percent of the jurisdictions where these programs were available they were operated by both the health unit and another agency.

Table 5. Responsibilities assumed by 1,323 local health units for each type of health facility available in their jurisdictions

Type of health facility	Jurisdictions with facility		Responsibilty of local health unit											
			No responsibility		Operation		License only		Inspect only		License and inspect		Other [1]	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
General hospital	1,054	79.7	493	46.8	54	5.1	149	14.1	326	30.9	18	1.7	79	7.5
Special hospital	353	26.7	175	49.6	16	4.5	29	8.2	101	28.6	4	1.1	47	13.3
Skilled nursing home	913	69.0	229	25.1	68	7.4	272	29.8	331	36.3	36	3.9	91	10.0
Rehabilitation center	298	22.5	202	67.8	12	4.0	15	5.0	36	12.1	1	.3	40	13.4
Mental health clinic	630	47.6	375	59.5	144	22.9	14	2.2	13	2.1	0	0	98	15.6
Clinical laboratory	568	42.9	387	68.1	118	20.8	22	3.9	21	3.7	1	.2	37	6.5

[1] Other responsibilities most frequently included consultation and advice, referrals, and followup with public health nursing.

Table 6. Programs available in jurisdictions of 1,323 local health units, by agency operating program

Program	Jurisdictions with organized programs		Agency operating program							
			Health unit only		Other agency only		Health unit and other agency		Unknown	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Information and referral service	996	75.3	353	35.4	463	46.5	144	14.5	36	3.6
Home nusing service	486	36.7	192	39.5	51	10.5	217	44.7	26	5.3
Homemaker service	310	23.4	25	8.1	7	2.3	250	80.6	28	9.0
Home health service	628	47.5	349	55.6	96	15.3	141	22.5	42	6.7
Medical care for recipients of public assistance	1,082	81.8	123	11.4	122	11.3	780	72.1	57	5.3
Crippled children	1,245	94.1	304	24.4	248	19.9	637	51.2	56	4.5
School health	1,257	95.0	671	53.4	317	25.2	204	16.2	65	5.2
Vocational rehabilitation	1,087	82.2	21	1.9	48	4.4	957	88.0	61	5.6
Migrant health	299	22.6	147	49.2	60	20.1	76	25.4	16	5.4
Community mental health	768	58.0	108	14.1	77	10.0	516	67.2	67	8.7

Table 7. Type of assistance given to agencies operating medical care programs in jurisdictions of 1,323 local health units

Program	Number of jurisdictions with organized programs	Jurisdictions where other agency operates service [1]		Assistance health unit provides to other agency							
				Consultation and advice		Services or personnel or both		Other [2]		No assistance	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Information and referral service	996	607	60.9	520	85.7	320	52.7	23	3.8	53	8.7
Home nursing service	486	268	55.1	169	63.1	74	27.6	30	11.2	58	21.6
Homemaker service	310	257	82.9	125	48.6	34	13.2	17	6.6	107	41.6
Home health service	628	237	37.7	147	62.0	90	38.0	23	9.7	59	24.9
Medical care for recipients of public assistance	1,082	902	83.4	530	58.8	313	34.7	36	4.0	274	30.4
Crippled children	1,245	885	71.1	529	59.8	493	55.7	65	7.3	164	18.5
School health	1,257	521	41.4	428	82.1	343	65.8	18	3.5	53	10.2
Vocational rehabilitation	1,087	1,005	92.5	608	60.5	251	25.0	83	8.3	300	29.9
Migrant health	299	136	45.5	91	66.9	71	52.2	3	2.2	31	22.8
Community mental health	768	593	77.2	335	56.5	213	35.9	63	10.6	163	27.5

[1] Either alone or in addition to service operated by health unit.

[2] Other most frequently included referrals, followup, coordination of services, and financial assistance.

Table 8. Method of providing service in medical care programs of health units

Program and services provided in program	Units with specified program or service	Method of providing service									
		Through own staff or facility only		Purchased from other source only		Through own staff and purchased		Other [1]		Unknown	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Child health program	1,105										
Well child-supervision	1,060	873	82.4	35	3.3	110	10.4	5	0.5	37	3.5
In-hospital care	235	58	24.7	147	62.6	9	3.8	7	3.0	14	6.0
Physicians' services	388	196	50.5	106	27.3	48	12.4	11	2.8	27	7.0
Drugs	370	182	49.2	98	26.5	51	13.8	13	3.5	26	7.0
Clinical laboratory	399	199	49.9	98	24.6	44	11.0	26	6.5	32	8.0
Adult health program	694										
Health maintenance	604	433	71.7	37	6.1	69	11.4	3	.5	62	10.3
In-hospital care	187	55	29.4	95	50.8	10	5.3	8	4.3	19	10.2
Physicians' services	293	162	55.3	61	20.8	36	12.3	6	2.0	28	9.6
Drugs	324	166	51.2	71	21.9	47	14.5	12	3.7	28	8.6
Clinical laboratory	348	182	52.3	77	22.1	38	10.9	19	5.5	32	9.2
Venereal disease program	1,124										
Screening or diagnosis or both	1,030	827	80.3	65	6.3	85	8.3	11	1.1	42	4.1
Physicians' services	883	665	75.3	115	13.0	67	7.6	12	1.4	24	2.7
Drugs	997	748	75.0	109	10.9	65	6.5	40	4.0	35	3.5
Clinical laboratory	887	560	63.1	180	20.3	60	6.8	56	6.3	31	3.5
Tuberculosis program	1,278										
Screening or diagnosis or both	1,245	812	65.2	78	6.3	170	13.7	28	2.2	157	12.6
In-hospital care	689	150	21.8	385	55.9	30	4.4	78	11.3	46	6.7
Physicians' services	816	426	52.2	205	25.1	94	11.5	41	5.0	50	6.1
Drugs	1,036	575	55.5	225	21.7	99	9.6	59	5.7	78	7.5
Clinical laboratory	910	455	50.0	259	28.5	72	7.9	71	7.8	53	5.8
Maternal health program	856										
Prenatal care	822	657	79.9	42	5.1	61	7.4	11	1.3	51	6.2
Drugs	447	284	63.5	68	15.2	46	10.3	15	3.4	34	7.6
Clinical laboratory	581	352	60.6	96	16.5	69	11.9	22	3.8	42	7.2
Delivery in home	90	40	44.4	31	34.4	5	5.6	2	2.2	12	13.3
Delivery in hospital	265	62	23.4	152	57.4	7	2.6	13	4.9	30	11.3
Crippled children's program	950										
Screening or diagnosis or both	910	460	50.5	162	17.8	178	19.6	51	5.6	59	6.5
In-hospital care	611	95	15.5	400	65.5	28	4.6	75	12.3	13	2.1
Physicians' services	659	160	24.3	349	53.0	66	10.0	70	10.6	14	2.1
Drugs	558	139	24.9	296	53.0	51	9.1	58	10.4	14	2.5
Clinical laboratory	580	151	26.0	302	52.1	56	9.7	56	9.7	15	2.6
Dental health program	869										
Inspection and referral	788	592	75.1	86	10.9	61	7.7	17	2.2	32	4.1
Prophylactic services	627	438	69.9	125	19.9	35	5.6	11	1.8	18	2.9
Other treatment	567	347	61.2	154	27.2	35	6.2	10	1.8	21	3.7
Heart disease control program	759										
Screening or diagnosis or both	581	308	53.0	89	15.3	101	17.4	23	4.0	60	10.3
In-hospital care	306	76	24.8	184	60.1	13	4.2	21	6.9	12	3.9
Physicians' services	393	158	40.2	154	39.2	41	10.4	18	4.6	20	5.1
Drugs	606	304	50.2	153	25.2	65	10.7	52	8.6	32	5.3
Clinical laboratory	378	156	41.3	151	39.9	33	8.7	25	6.6	13	3.4
Cancer control program	561										
Screening or diagnosis or both	497	268	53.9	95	19.1	70	14.1	23	4.6	41	8.2
In-hospital diagnosis	262	41	15.6	166	63.4	9	3.4	24	9.2	22	8.4
In-hospital care	241	35	14.5	157	65.1	7	2.9	33	13.7	9	3.7
Physicians' services	244	70	28.7	119	48.8	20	8.2	26	10.7	9	3.7
Drugs	223	43	19.3	127	57.0	17	7.6	24	10.8	12	5.4
Clinical laboratory	270	66	24.4	149	55.2	21	7.8	24	8.9	10	3.7
Mental health program	730										
Diagnosis	544	262	48.2	152	27.9	77	14.2	20	3.7	33	6.1
Ambulatory care	337	151	44.8	112	33.2	36	10.7	14	4.2	24	7.1
In-hospital care	203	28	13.8	137	67.5	12	5.9	16	7.9	10	4.9
Drugs	295	117	39.7	112	38.0	33	11.2	16	5.4	17	5.8
Followup care	590	438	74.2	52	8.8	47	8.0	13	2.2	40	6.8

[1] Other includes donations, State programs, and combinations of these with staff provided and purchased.

In jurisdictions where programs were available but operated by another agency, either alone or in addition to the health unit's program, the most common form of assistance provided by the health unit was consultation and advice. In more than 85 percent of the jurisdictions where the information and referral service was operated by another agency, the local health unit provided consultation and advice. Assistance in the form of services and personnel was provided by the local health unit in more than 50 percent of the jurisdictions

Table 9. Index of involvement of 1,323 local health units in organizing medical care, by number of programs and services offered

Number of programs and services offered	Total health units	Index											
		I		II		III		IV		V		VI	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Total	1,323	76	5.7	149	11.3	248	18.7	329	24.9	320	24.2	201	15.2
No program	20											20	100.0
1 program:													
1 service	19											19	100.0
2-3 services	3											3	100.0
More than 3 services	4											4	100.0
2 programs:													
2 services	11									0	0	11	100.0
3-7 services	23									0	0	23	100.0
More than 7 services	1									1	100.0	0	0
3 programs:													
3 services	20									0	0	20	100.0
4-10 services	49									19	38.8	30	61.2
More than 10 services	8									8	100.0	0	0
4 programs:													
4 services	6							0	0	0	0	6	100.0
5-10 services	59							0	0	28	47.5	31	52.5
11-15 services	21							0	0	21	100.0	0	0
More than 15 services	8							8	100.0	0	0	0	0
5 programs:													
5 services	5							0	0	0	0	5	100.0
6-12 services	60							0	0	45	75.0	15	25.0
13-20 services	63							32	50.8	31	49.2	0	0
More than 21 services	4							4	100.0	0	0	0	0
6 programs:													
6 services	9					0	0	0	0	0	0	9	100.0
7-15 services	66					0	0	0	0	62	93.9	4	6.1
16-24 services	61					5	8.2	56	91.8	0	0	0	0
More than 24 services	5					5	100.0	0	0	0	0	0	0
7 programs:													
7 services	1			0	0	0	0	0	0	0	0	1	100.0
8-18 services	86			0	0	0	0	33	38.4	53	61.6	0	0
19-28 services	102			0	0	51	50.0	51	50.0	0	0	0	0
More than 28 services	12			4	33.3	8	66.7	0	0	0	0	0	0
8 programs:													
8 services	1			0	0	0	0	0	0	1	100.0	0	0
9-20 services	76			0	0	0	0	53	69.7	23	30.3	0	0
21-30 services	108			0	0	67	62.0	41	38.0	0	0	0	0
More than 30 services	38			29	76.3	9	23.7	0	0	0	0	0	0
9 programs:													
9 services	1	0	0	0	0	0	0	0	0	1	100.0	0	0
10-25 services	67	0	0	0	0	15	22.4	38	56.7	14	20.9	0	0
26-35 services	102	0	0	45	44.1	57	55.9	0	0	0	0	0	0
More than 35 services	44	14	31.8	30	68.2	0	0	0	0	0	0	0	0
10 programs:													
10 services	2	0	0	0	0	0	0	0	0	2	100.0	0	0
11-30 services	53	0	0	0	0	29	54.7	13	24.5	11	20.8	0	0
31-40 services	46	3	6.5	41	89.1	2	4.3	0	0	0	0	0	0
More than 40 services	59	59	100.0	0	0	0	0	0	0	0	0	0	0

NOTE: Each local health unit received 1 point for each of the services listed in table 8 that it provided. The total raw score for each unit was then converted to an index value according to the following formula: I=score of 40-48 (high degree of involvement), II=32-39 (relatively high degree of involvement), III=24-31 (above average involvement), IV=16-23 (below average involvement), V=8-15 (low involvement), VI=7 or less (rare or minimum involvement).

where another agency operated an information and referral service, a crippled children's program, a school health program, or a migrant health program.

Ten types of medical care programs thought to be commonly operated by local health units were identified, and the local health units surveyed were asked if they had any of these programs, what services were offered, how these services were provided, and what population groups were eligible. Tabulations of responses to these questions are shown in table 8. The most commonly available programs were tuberculosis control, 97 percent; venereal disease control, 85 percent; and child health programs, 84 percent. Cancer control programs were operated in only 42 percent of the units.

Most frequently, services were provided through the staff or facility of the local health unit, with the exception of in-hospital care and the services provided in crippled children's and cancer control programs.

The health units were asked what population groups were served under these programs. While many unusable responses were obtained, a general pattern emerged. Services such as screening, diagnosis, and health maintenance were usually provided to the general population or to specific age groups, while treatment services such as in-hospital care, physicians' services, and drugs were usually provided only to the indigent. The notable exceptions to this pattern were the dental health programs, which served mainly indigent children, and the venereal disease control programs, in which treatment services were available to all persons with a positive diagnosis.

Indexes of Involvement

In order to obtain a general view of the involvement of each health unit in medical care, two indexes were developed which combined responses to questions concerning involvement in organizing medical care programs and in-

Table 10. Index of involvement in organizing medical care programs, by population of jurisdiction, type of health unit, employment status of health officer, and academic degrees of health officer

Item	Total health units	Index											
		I		II		III		IV		V		VI	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Total	1,323	76	5.7	149	11.3	248	18.7	329	24.9	320	24.2	201	15.2
Population of jurisdiction:													
Under 15,000	170	13	7.6	11	6.5	18	10.6	36	21.2	54	31.8	38	22.4
15,000–24,999	202	13	6.4	22	10.9	29	14.4	44	21.8	58	28.7	36	17.8
25,000–44,999	266	15	5.6	33	12.4	58	21.8	57	21.4	56	21.1	47	17.7
45,000–74,999	244	13	5.3	25	10.2	61	25.0	52	21.3	53	21.7	40	16.4
75,000–199,999	225	13	5.8	34	15.1	39	17.3	66	29.3	49	21.8	24	10.7
200,000 and over	164	9	5.5	17	10.4	35	21.3	55	33.5	38	23.2	10	6.1
Unknown	52	0	0	7	13.5	8	15.4	19	36.5	12	23.1	6	11.5
Type of health unit:													
County units	687	31	4.5	76	11.1	143	20.8	204	29.7	164	23.9	69	10.0
City units	247	9	3.6	20	8.1	23	9.3	30	12.1	84	34.0	81	32.8
City-county units	74	3	4.1	2	2.7	9	12.2	27	36.5	22	29.7	11	14.9
State districts	123	19	15.4	24	19.5	23	18.7	27	22.0	15	12.2	15	12.2
Local districts	192	14	7.3	27	14.1	50	26.0	41	21.4	35	18.2	25	13.0
Employment status of health officer:													
Full-time officers	762	53	7.0	108	14.2	144	18.9	198	26.0	171	22.4	88	11.5
Part-time officers	441	16	3.6	33	7.5	78	17.7	100	22.7	125	28.3	89	20.2
No health officer	95	7	7.4	5	5.3	22	23.2	27	28.4	17	17.9	17	17.9
Unknown status	25	0	0	3	12.0	4	16.0	4	16.0	7	28.0	7	28.0
Academic degrees of health officer:													
M.D.'s with public health degree	415	30	7.2	61	14.7	88	21.2	114	27.5	94	22.7	28	6.7
M.D.'s without public health degree	645	35	5.4	74	11.5	123	19.1	168	26.0	147	22.8	98	15.2
Non-M.D.'s with public health degree	26	0	0	4	15.4	0	0	5	19.2	4	15.4	13	50.0
Non-M.D.'s without public health degree	107	3	2.8	4	3.7	8	7.5	11	10.3	41	38.3	40	37.4
No health officer	95	7	7.3	5	5.3	22	23.2	28	29.5	17	17.9	16	16.8
Unknown degrees	35	1	2.9	1	2.9	7	20.0	3	8.6	17	48.6	6	17.1

volvement in community health. The remainder of this paper focuses on these indexes.

Organizing medical care programs. The index of involvement in organizing medical care programs was designed to classify each health unit according to its involvement in directly providing 10 selected programs in terms of the range and depth of services offered in each (table 9). The index does not fully reflect the depth of the programs since it does not take into account the size of the population served.

A 6-point scale ranging from I, for units with a high degree of involvement, to VI, for units with a minimal degree of involvement, was used. Less than 6 percent of all health units attained an index value of I, while 15 percent rated an index value of VI. Almost 65 percent of the units provided less than 24 of a possible 48 services used to score the index. Only 20 units reported they offered none of the 10 programs in their jurisdictions.

The components of this index are analyzed in table 9 by the number of programs and the number of services offered. Seventeen percent of the units fell in the two highest indexes, and these were units which offered not only a broad range of programs but also a considerable depth of services. All of these units offered at least seven programs out of a possible 10 and at least 28 services out of a possible 48. The majority had nine programs and offered at least 35 services. Of the 201 units which received the lowest index value, only one offered as many as seven programs, and this unit offered only one service in each of those seven programs. The majority of units with low indexes offered a very narrow range of services within a few programs.

Approximately 70 percent of the units fell in the midrange from index III to index V. Units obtaining an index score of III offered between 6 and 10 programs and had a fair depth of services within these programs, whereas those units with indexes of IV and V offered from 3 to 10 programs but tended to lack depth in the number of services offered in these programs.

As might be expected, units with higher per capita public health expenditures, serving larger populations, and having larger budgets more frequently tend to obtain the higher index values (table 10, fig. 1).

Figure 1. Percentage distribution of index of involvement of local health units in organizing medical care programs, by per capita public health expenditures

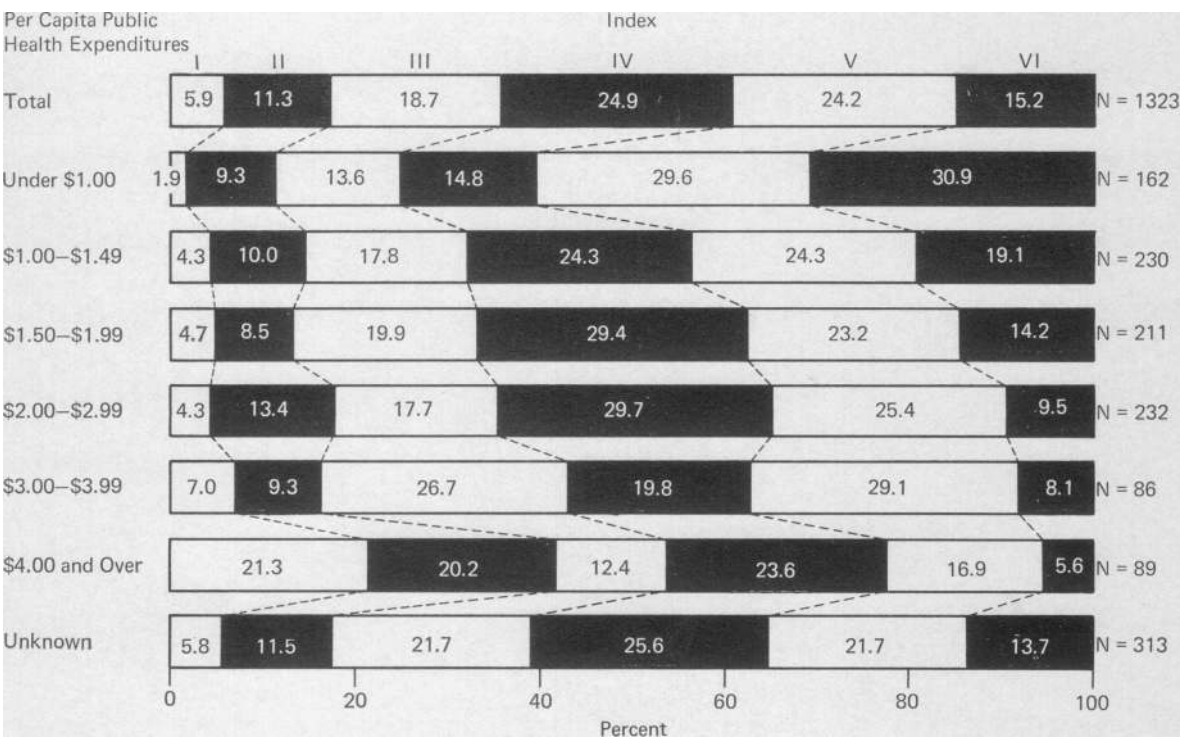


Table 11. Raw scores received by 1,323 local health units on components of index of involvement in community health

Component	Range of scores	Units scoring in range	
		Number	Percent
A. Health facilities	12 to 18	0	0
	6 to 11	38	2.9
	0 to 5	823	62.2
	−6 to −1	462	34.9
B. Health services	6 to 8	22	1.7
	2 to 5	725	54.8
	−4 to 1	576	43.5
C. Health programs	8 to 12	69	5.2
	4 to 11	611	46.2
	−6 to 3	643	42.6
D. Quality of care	6	181	13.7
	4	269	20.3
	2	321	24.3
	0	522	39.5
E. Health planning	7 to 9	49	3.7
	3 to 6	960	72.6
	−6 to 2	314	23.7
F. Other areas	10 to 15	60	4.5
	5 to 9	232	17.5
	0 to 4	408	30.8
	−12 to −1	623	47.1

The employment status and qualifications of the health officer have a direct relationship to the involvement of the unit in organizing medical care programs (table 10). While 40 percent of the units with a full-time health officer and 36 percent of those with no health officer had index values of I to III, only 29 percent of the units which had part-time health officers had index values in this range. Units in which the health officer was a physician with a public health degree had a greater degree of involvement than the units in which the health officer was a physician without a public health degree. Moreover, units with health officers who were not physicians, with or without a public health degree, were considerably less involved in organizing medical care programs than the units with physician health officers or the units without health officers.

Community health. The index of involvement in community health, in contrast to the previous index, was designed to measure the scope of each local health unit's relationships with other community health agencies and programs and its general involvement in community health affairs. The index score for each health unit was obtained by summing the raw scores on six component subparts and converting this raw score into an index value.

In subpart A, the health units were assigned 1 point for each of the following responsibilities assumed for each of the six types of health facilities listed in table 5: operates facility, licenses or inspects facility or both, and has other responsibility. In addition, 1 point was subtracted where facilities of a particular type were available in the jurisdiction, but the health unit reported no responsibilities. As shown in table 11, only 3 percent of the health units had a score greater than 6 and 35 percent had negative scores, indicating that few health units have a wide range of responsibilities with respect to health facilities in their jurisdictions.

Subpart B of the index reflects the assistance that health units give to information and referral, home nursing, homemaker, and home health services. A unit was assigned 1 point for each service that it provided directly and 1 point for each service which it assisted another agency in operating. However, if the unit provided no assistance to another agency operating such a service, a minus 1 was added to its score. More than 40 percent of the health units had scores of 1 or less on this subpart, suggesting a considerable lack of interagency relationships.

Subpart C relates to the health unit's activities with respect to medical assistance, crippled children's, school health, vocational rehabilitation, migrant health, and mental health programs. The index was scored in the same manner as subpart B. Only 5 percent of the health units had scores ranging from 8 to 12, indicat-

Table 12. Scoring of 1,323 local health units on index of involvement in community health

Index	Range of total raw scores	Units scoring in range	
		Number	Percent
Total	−34 to 68	1,323	100.0
None	54 to 68	0	0
I	39 to 53	9	.7
II	24 to 38	136	10.3
III	9 to 23	586	44.3
IV	−6 to 8	532	40.2
V	−34 to −7	60	4.5

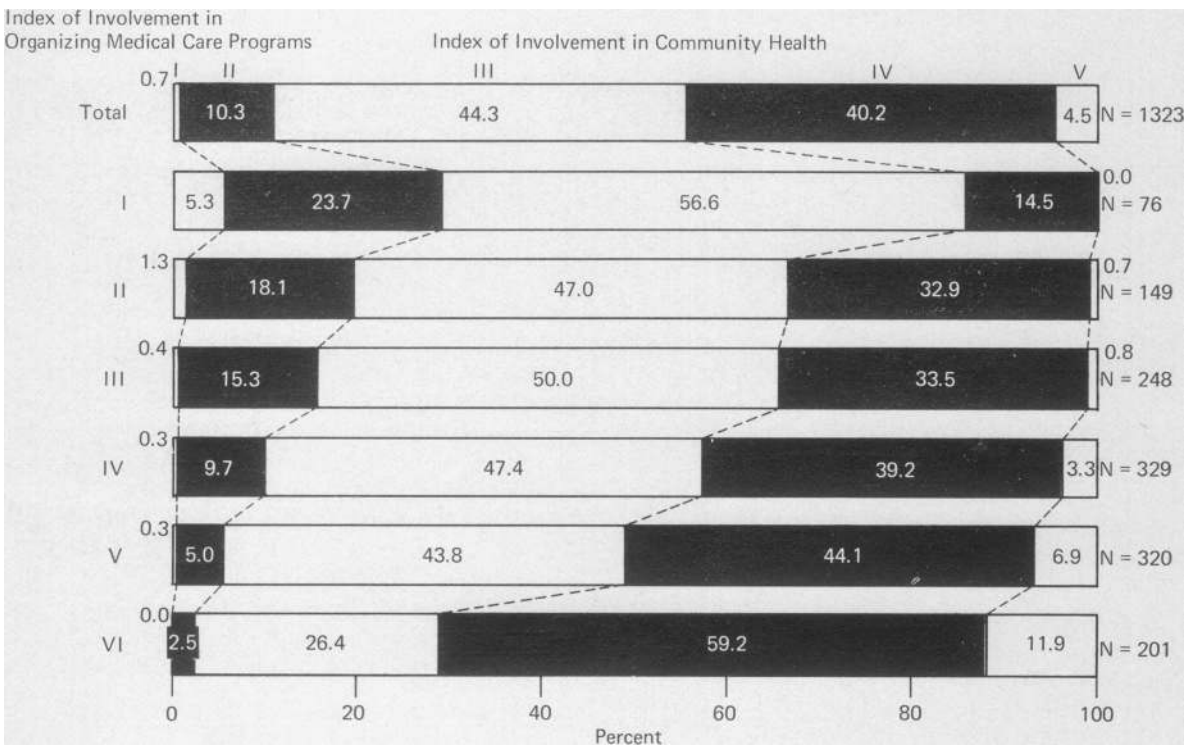
ing a high level of cooperation with or operation of such programs. On the other hand, more than 40 percent of the health units had a score of 3 or less, indicating little activity with respect to these programs.

Subpart D scores were given for activities undertaken by the local health unit in the past 5 years to improve professional skills, quality of services, or administrative procedures of other public or private health agencies. Two points were awarded for each of these three categories in which the unit reported at least one activity. Almost 40 percent of the health units reported undertaking no such activities in the past 5 years. Fourteen percent of the health units reported at least one activity in all three categories.

Subpart E of the index reflects the participation of the local health unit in the activities of the local health and welfare council, the hospital planning agency, and the regional or State health council. The local health unit's relationship with each of these health planning agencies was scored as follows: 3 points if the health officer or his representative assumed a leadership role, 2 points if he participated regularly, 1 point if he occasionally participated, minus 2 points if he did not participate, and 1 point if no agency was active in the health unit's jurisdiction. Almost 25 percent of the health units had a raw score of 2 or less on this subpart, indicating minimal or no participation in such health planning activities. Only 4 percent of the health units could be termed "very active participants" in community health planning. The vast majority of the health units fell between these two extremes and could be considered to be participating more or less regularly in such activities.

The last component of this index, subpart F, summarizes the relationships between the local health unit and the local medical and dental societies, local hospitals, and medical and public health schools in the area. Also included were scores for encouraging other agencies to undertake major activities related to personal health services and for general coordination of medical care activities. Health units were assigned negative points if they failed to take advantage of opportunities to establish such rela-

Figure 2. Percentage distribution of index of involvement of local health units in community health, by index of involvement in organizing medical care programs



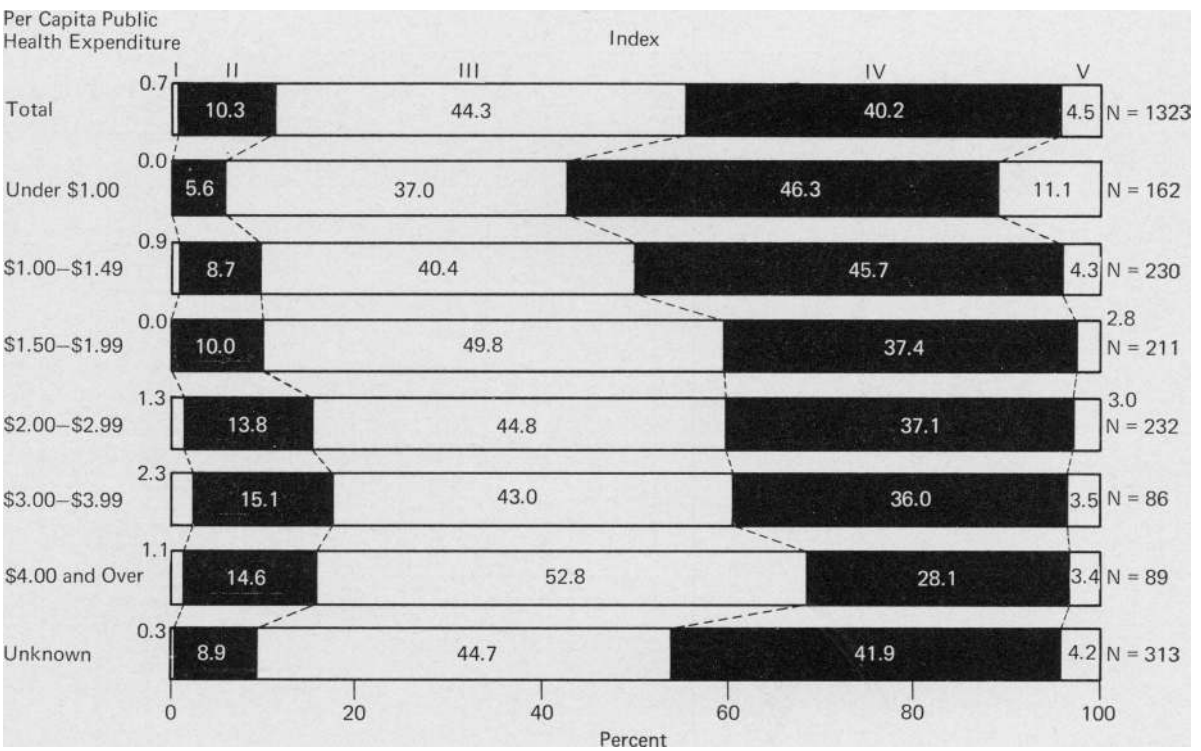
tionships and activities. Almost half of the health units had negative scores on this subpart, while less than 5 percent of the health units had scores indicating a high degree of involvement.

When the raw scores on each of the subparts were totaled for each health unit and converted into an index score, none of the health units scored in the highest index (table 12). Thus, a 5-point scale was used instead of the 6-point scale. Even with this adjustment only 11 percent of the health units attained index scores of I and II, which reflect a relatively high degree of

Table 13. Index of involvement in community health, by employment status and academic degrees of health officer

Item	Total	Index									
		I		II		III		IV		V	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Total	1,323	9	0.7	136	10.3	586	44.3	532	40.2	60	4.5
Employment status of health officer:											
Full-time health officers	762	8	1.0	111	14.6	353	46.3	258	33.9	32	4.2
Part-time health officers	441	1	.2	22	5.0	188	42.6	212	48.1	18	4.1
No health officer	95	0	0	2	2.1	36	37.9	49	51.6	8	8.4
Unknown status	25	0	0	1	4.0	9	36.0	13	52.0	2	8.0
Academic degrees of health officer:											
M.D.'s with public health degree	415	6	1.4	72	17.3	193	46.5	135	32.5	9	2.2
M.D.'s without public health degree	645	3	.5	55	8.5	295	45.7	265	41.1	27	4.2
Non-M.D.'s with public health degree	26	0	0	3	11.5	13	50.0	9	34.6	1	3.8
Non-M.D.'s without public health degree	107	0	0	4	3.7	36	33.6	54	50.5	13	12.1
No health officer	95	0	0	2	2.1	36	37.9	49	51.6	8	8.4
Degrees unknown	35	0	0	0	0	13	37.1	20	57.1	2	5.7

Figure 3. Percentage distribution of index of involvement of local health units in community health, by per capita public health expenditures



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involvement in community health affairs. On the other hand, 45 percent of the health units received low index values of IV and V.

The index is not intended to describe the quality of a unit's relationships in the community. A unit, for example, might have one or two important planning and coordination activities, but score low in the index because it did not undertake other activities. On the other hand, a unit might score high on the index by conducting many interagency activities, but the index does not reflect how effective such relationships actually are. Recognizing these limitations, we believe the index, with its subparts, has value in describing the scope of involvement of local health units in areas of community health presumed to be important in a public health and medical care program.

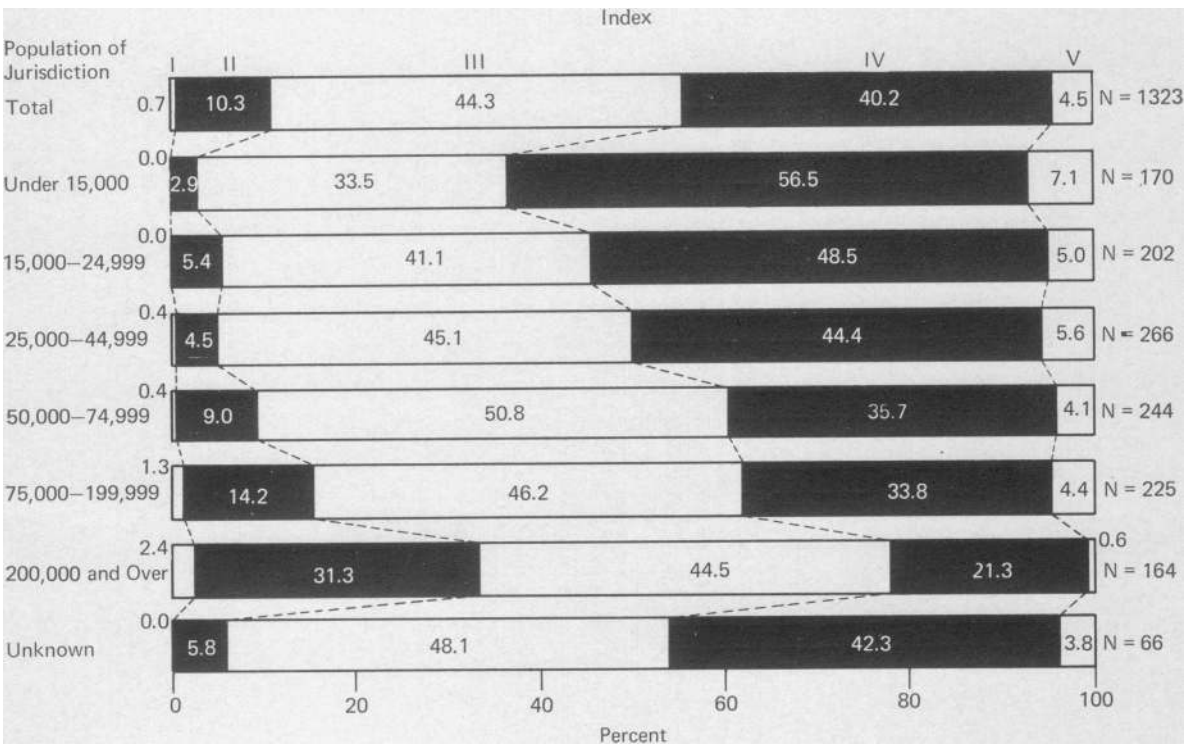
The degree of association between the index of involvement in community health and the index of involvement in organizing medical care programs is indicated in figure 2. As shown, a substantial proportion of the units with high indexes of involvement in organizing medical care programs also scored well on the index of involvement in community health, whereas the units with low involvement in organizing medical care programs also tended to have low involvement in community health. The coefficient of correlation between these two indexes is 0.33.

Table 14. Percent of local health units providing specified programs in 1947 and 1966

Program	Percent of health units	
	1947 [1]	1966 [2]
Venereal disease	88	85
Tuberculosis	86	97
Crippled children	62	72
Child health	78	84
Dental health	46	66
Maternal health:		
Prenatal clinics	48	62
Delivery [3]	11	20
Cancer	28	42
Mental hygiene	20	55
Cardiac	21	57

[1] Based on 690 reporting full-time local health units (3).
[2] Based on 1,323 reporting local health units.
[3] In-hospital delivery only in 1966.

Figure 4. Percentage distribution of index of involvement of local health units in community health, by population of jurisdiction



Thus, local health units which are deeply involved in providing medical care services to the populations they serve also tend to have numerous relationships with other agencies and organizations in their jurisdictions.

As might be expected, therefore, the same factors exerting a positive influence on the index of involvement in organizing medical care programs have a similar relation to the index of involvement in community health. This is demonstrated in table 13 and figures 3 and 4. However, comparison of figures 1 and 2 suggests that per capita public health expenditures have less influence on the community health involvement. On the other hand, the size of the population of the jurisdiction served by the health unit has a considerably greater effect on involvement in community health (fig. 4).

Discussion

This study will provide a wealth of data previously unavailable. A full report on the data gathered, with more complete analyses than presented here, is forthcoming.

While the Terris-Kramer study of full-time local health units in the late 1940's (*3*) is not strictly comparable with this study, due to differences in definitions, sampling, and the questions asked, the comparisons which can be made point to an increase in involvement in providing medical care services by local health units since that time. A comparison of all local health units reporting in 1966 with the 690 full-time health units responding in 1947 (table 14) reveals that of the 10 programs for which comparisons can be made, nine were provided more frequently in 1966. The only program less available in 1966 was venereal disease control, which was provided by 3 percent fewer health units.

Since much of this presentation was directed to the two indexes developed for this study, comment is due on the implications of our findings. The need for the direct provision of personal health services by a local health unit depends on the needs and special problems of the population it serves, which cannot be evaluated in a survey of this type. However, as the 1963 policy statement of the American Public Health Association suggested (*2*):

> The local health department should play a leadership role in community-wide organization and planning of health resources. It should also promote the full use by physicians, hospitals, and others of all community resources which provide educative, preventive, diagnostic, therapeutic and rehabilitative services. It should develop effective techniques that are easily applied to large numbers of people. When it has done this, it should mobilize community resources to apply them.

The findings reported here suggest that many health units have not yet achieved this goal. Certainly it is a goal toward which they should be aiming, and one may assume that when the full impact of Medicare, Medicaid, and comprehensive health services under P.L. 89–749 is felt, this picture will change. It will be incumbent upon the Public Health Service to reassess the medical care activities of local health departments again in the future.

REFERENCES

(*1*) The local health department—services and responsibilities: An official statement of the American Public Health Association. (Adopted Nov. 1, 1950.) Amer J Public Health 41: 302–307, March 1951.

(*2*) The local health department—services and responsibilities: An official statement of the American Public Health Association, (Adopted Nov. 10, 1963.) Amer J Public Health 54: 1, January 1964.

(*3*) Terris, M., and Kramer, N. A.: Medical care activities of full-time health departments. Amer J Public Health 39: 1129–1135, September 1949.

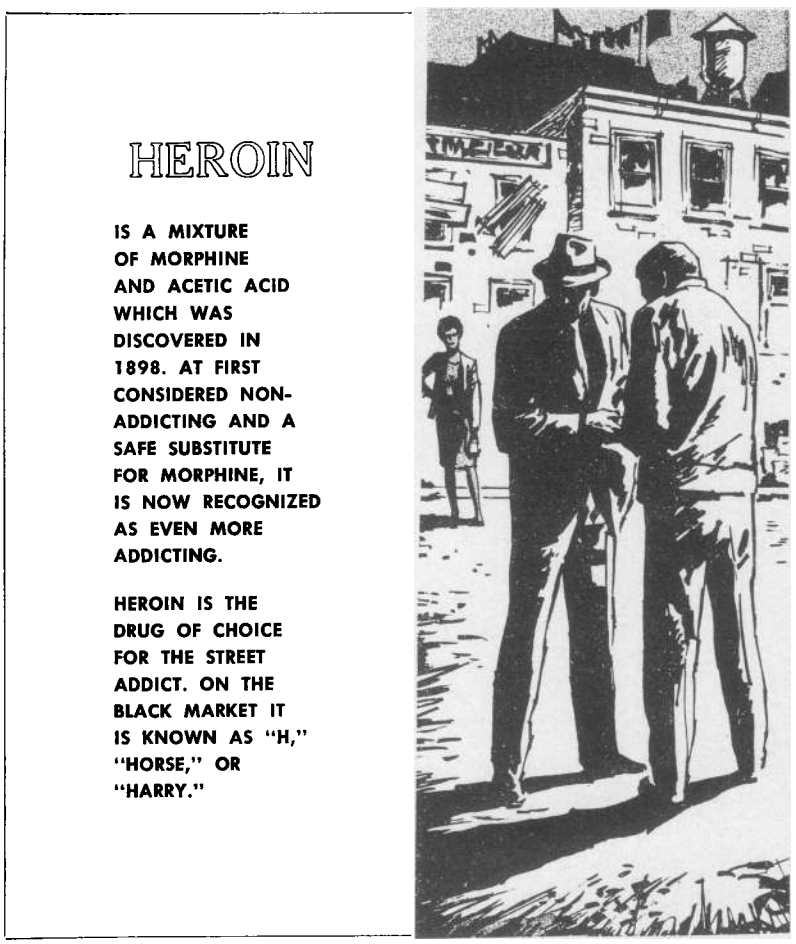
(*4*) U.S. Public Health Service: Directory of local health units, 1966. PHS Publication No. 118, U.S. Government Printing Office, Washington, D.C., 1966.

Program Notes

Cartoon Booklet on Drugs

The Pennsylvania Health Council has published a booklet with cartoon type illustrations entitled "Drugs and People—about unhealthy dependence." Originally prepared and published in Canada by the Alcoholism and Drug Addiction Research Foundation in Toronto, the booklet is available to health departments and other agencies at 15 cents a copy from the Pennsylvania Health Council, Inc., 105 North Front Street, Harrisburg, Pa. 17101.

"Drugs and People" briefly touches on and illustrates the use of and addiction to alcohol, barbiturates, tranquilizers, opium, morphine, heroin, amphetamine, cocaine, marihuana, LSD, and nicotine. The page on heroin is reproduced in the illustration.



Disposing of Old Crankcase Oil

Representatives of the New York State Petroleum Council, a trade association representing major gasoline brands, surveyed about 10,000 gas stations in New York State during the summer of 1968 to compile a report on disposal of old crankcase oil. Dr. Hollis S. Ingraham termed the survey important. "If oil is dumped into the sewers," he pointed out, "it causes water pollution; if it is burned, it causes air pollution; and if it is poured on the ground, it can pollute subsurface ground waters."

Gas station operators who in the past sold used oil to reprocessors now have to pay to get it taken away. According to industry sources, the change results from the lifting of a Federal excise tax on new oil and a Federal ruling that reprocessed oil must be labeled as such.

Attack on Hay Fever

The New York State Department of Health provides a daily ragweed pollen count from July 29 through September 27. Volunteers working throughout the State make it possible to issue reports of the counts, based on 24-hour tests, by noon each day during this period. Readings of 7 or above indicate a "hay fever day." Readings of 25 or higher signify high contamination.

Forty-six communities participated in the hay fever control program in 1967, and the department expected at least as many to participate in 1968.

More than 1 million New York State residents suffer from hay fever, according to Dr. Hollis S. Ingraham, the State health commissioner. Ragweed blossoms and begins to bother these people in late July. It should therefore be sprayed, cut, or destroyed before that time, Ingraham pointed out.

Toll-Free Cancer Consultations

Roswell Park Memorial Institute, the cancer research facility operated by the New York State Department of Health, provides a toll-free 24-hour telephone consultation service to licensed physicians and dentists practicing in New York State.

Items for this page: Health departments, health agencies, and others are invited to share their program successes with others by contributing items for brief mention on this page. Flag them for "Program Notes" and address as indicated in masthead.