Analyzing Organizational Practices in Local Health Departments

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The research was supported by a cooperative agreement between the Centers for Disease Control and Prevention's Public Health Practice Program Office and the Association of Schools of Public Health. Staff members of the Hillsborough County Public Health Unit provided the public health facility management and evaluation data used in the project.

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Synopsis

Few researchers have examined the problem of comparing the performances of local health departments. A contributing factor is the lack of a uniform method for describing the range of public health activities. The Centers for Disease Control and Prevention's Public Health Practice Program Office has identified 10 organizational practices that may be used to assure that the core functions of public health are being carried out at a local health department.

The researchers determined the percentage of time devoted to each of the 10 practices by individual employees at a local public health unit in Tampa, FL. They identified the manpower expenditures and hours allocated to each of the 10 practices within the major program divisions of the unit. They found that the largest portion of manpower resources was allocated to implementing programs. A much smaller fraction of agency resources was devoted to analysis of the health needs of the community and to the development of plans and policies. Together, primary care and communicable disease programs accounted for fully three-quarters of the resources, environmental health for 11 percent, and administrative support services for 13 percent. With continuing refinement and modification, the methodology could provide a highly effective basis for describing and analyzing the activities and performances of local health departments.

A NECESSARY STEP in the development of a valid performance appraisal system for local health departments (LHD) is a systematic method for describing the spectrum of LHD activities. This is a complex task because public health involves a range of activities characterizing the pervasive "governmental presence at the local level" *(1)*.

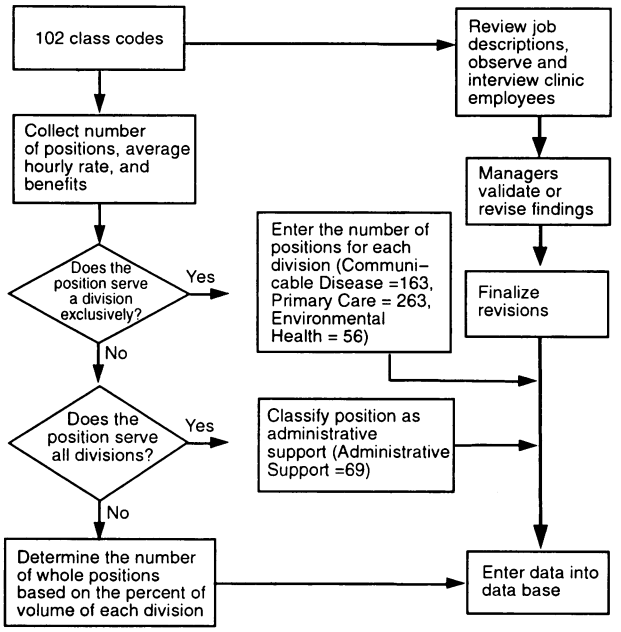
The appropriate role and emphasis for local public health agencies is a continuing subject of discussion among policy analysts *(2, 3)*. In 1988, the Institute of Medicine report, "The Future of Public Health," identified the core functions of public health agencies at all levels of government as assessment, policy development, and assurance *(3)*. In 1989, a working group of public health practice experts delineated 10 organizational practices that could be used to determine that the three core functions are being carried out at a LHD *(4)*.

The group consisted of representatives of the Centers for Disease Control and Prevention, principally its Public Health Practice Program Office (PHPPO); Association of State and Territorial Health Officials; National Association of County Health Officials; United States Conference of Local Health Officers; American Public Health Association; Association of Schools of Public Health; and the Health Resources and Services Administration. The three core functions and the 10 associated practices are as follows.

Assessment

Assess the health needs of the community.

Flow diagram of method used to allot 551 manpower positions by 10 organizational practices under 4 major program divisions, Hillsborough County Health Unit, Tampa, FL, 1991



SOURCE: Hillsborough County Public Health Unit, Tampa, FL, fiscal year ending 9/91.

Investigate the occurrence of health effects and health hazards in the community.
Analyze the determinants of identified health needs.

Policy development
Advocate for public health, build constituencies, and identify resources in the community.
Set priorities among health needs.
Develop plans and policies to address priority health needs.

Assurance
Manage resources and develop organizational structure.
Implement programs.
Evaluate programs and provide quality assurance.
Inform and educate the public.

Subsequently, a working group within PHPPO further refined the 10 practices, establishing a set of definitions for the key words and phrases used to describe them in "Organizational Practice Definitions: Working Draft" *(5)*. The group also defined how each practice may be applied within a health department. The definitions and application statements permitted characterization of the activities related to the 10 practices for the purposes of quantification or operationalizing.

Operational definitions are the link between concepts and observations *(6)*. Concepts such as the 3 core functions and the 10 organizational practices are useful to the extent that they represent generalized and observable phenomena. If poor congruence exists between the concept and the observable events to which the concept is intended to refer, the concept will have different meanings for different people *(7)*. Therefore, the test of the utility of the 10 organizational practices is whether they can be translated into the observable and measurable events that are the activities performed by LHDs. The primary study objective was to operationalize the concept of the 10 organizational practices in an attempt to characterize the activities performed within a LHD. The process was accomplished by identifying the percentage of time devoted by each employee to each of the 10 practices and determining the manpower expenditures and hours allocated to each of the 10 practices within the major program divisions of a LHD.

Methods

Study setting. The study site was the Hillsborough County Public Health Unit (HCPHU) in Florida. HCPHU serves a geographic area of 1,053 square miles, most of which is an urban, metropolitan area that includes the city of Tampa. The county has a population of about 855,000 (85 percent white, 15 percent nonwhite) and a density of 812 persons per square mile. HCPHU has an operating budget of about $18 million and provides services at nine clinics. HCPHU is 1 of the 66 LHDs in the State of Florida. Each LHD reports to an assigned district office, of which there were 11 at the time of the study. Those facilities are organized under the Florida Department of Health and Rehabilitative Services in Tallahassee.

Data and approach. All organizational charts and job descriptions existing within HCPHU for the county fiscal year ending September 1991 were analyzed. The analysis identified the number and types of positions, position requirements, job responsibilities, and average hourly wage rates for each position. There were 551 persons employed in 102 position class codes.

The 10 organizational practices were used as a framework for classifying the activities of the work force; 47 employees at 1 clinic site were observed and interviewed to determine how their time was allocated among various activities. The 10 organizational practices and the more detailed practice definitions and application statements developed by PHPPO were used to quantify the practices and in

Table 1. Expenditure of annualized manpower hours and salary and benefit dollars by 3 core functions and 10 organizational practices[1], Hillsborough County (FL) public health unit, 1991

Functions and practices	*Percent of manpower hours*	*Percent of benefits and salary*
Assessment	9.2	10.2
Assesses health needs of community	0.9	1.3
Investigates occurrence of health effects	7.9	8.0
Analyzes determinants of health needs	0.4	0.9
Policy development	2.1	4.2
Builds constituencies, advocates for public health	0.5	1.1
Sets priorities among health needs	0.4	0.8
Develops plans and policies	1.2	2.3
Assurance	88.7	85.6
Manages resources	5.1	6.9
Implements programs	67.6	60.6
Evaluates programs	4.5	6.0
Informs and educates the public	11.5	12.1

[1]Grouping of organizational practices by core functions is from reference *9*.
SOURCE: Hillsborough County Public Health Unit, Tampa, FL, fiscal year ending September 30, 1991.

determining the time allocated to the practices. A preliminary assignment of the time allocated to each of the 10 practices was determined for each class code, based on data from the analysis of all class codes, job descriptions, on-site observations, and interviews.

The preliminary allocation was reviewed by a group of selected HCPHU managers that included the Director, Assistant Director, Administrative Services Director, Nursing Director, Environmental Administrator, Pharmacy Manager, Facilities Services Director, Management Analyst, and the Accountant. Each manager reviewed findings for the manager's own position and those reporting to the manager. If a discrepancy existed between the preliminary allocation and the manager's perception, the manager's opinion was accepted.

Each position class code, defined by the percentage allocation of its time to the 10 organizational practices, was classified by the organizational division to which it was assigned, such as Communicable Disease, Primary Care, or Environmental Health. Class codes for which all positions exclusively served a single division were assigned to that division. Positions were assigned to their respective divisions when class codes for whole positions were found in different divisions (such as a clerk typist). Certain class codes provided support services for all three program divisions, and a fourth, the Division of Administration and Support, was created for them. Finally, activities for a few class codes were separated. For example, certain registered nurses provided both Primary Care and Communicable Disease services. Within those class codes, the percentage of positions assigned to each division was based on the relative volume of clinic services that the division provided. The figure illustrates the method of allocating the 102 class codes and 551 positions into the 10 organizational practices and 4 major program divisions.

A data base was created that included the numerical class codes for each position, the number of positions within each class code, the percentage of time allocated to each of the 10 practices for each class code and the average hourly rate and benefits paid for each position. An analysis was performed to determine the number of annualized work hours and the amount of salary and benefits allocated to each of the 10 practices, 3 core functions, and 4 health unit divisions.

Results

Table 1 summarizes the allocation of total manpower hours, salaries, and benefits to each of the 3 core functions and 10 organizational practices at the facility. The assignment of the 10 practices to each of the 3 core functions follows the PHPPO guidelines. The assurance function (which includes program implementation, management, evaluation activities, and educational services) accounted for 88.7 percent of the hours and 85.6 percent of the personnel expenditures. The three program-related operational practices (implementation, management, and evaluation) accounted for 77.2 percent of the hours and 73.5 percent of the expenditures.

Table 2. Expenditure of annualized salary and benefit dollars by 10 organizational practices, Hillsborough County (FL) public health unit, 1991

Organizational practice	Communicable disease		Primary care		Environmental health		Administrative services		Total
	Dollars	Percent	Dollars	Percent	Dollars	Percent	Dollars	Percent	
Analyzes determinants of health needs	$27,470	0.7	$43,072	0.7	$37,705	2.7	$6,028	0.4	$114,275
Assesses health needs of community	32,222	0.9	122,474	2.1	0	0.0	14,251	0.9	168,947
Builds constituencies, advocates for public health	17,831	0.5	19,106	0.3	6,067	0.4	100,961	6.1	143,964
Develops plans and policies	62,130	1.7	112,951	1.9	11,221	0.8	113,740	6.9	300,042
Evaluates programs	154,282	4.1	190,966	3.3	192,538	14.0	218,987	13.2	756,773
Implements programs	2,434,198	65.4	4,060,407	69.7	215,643	15.7	896,303	53.9	7,606,552
Informs and educates the public	607,916	16.4	891,921	15.3	0	0.0	23,160	1.4	1,522,997
Investigates occurrence of health effects	134,976	3.6	30,601	0.5	842,029	61.0	0	0.0	1,007,606
Manages resources	232,489	6.3	329,235	5.6	74,844	5.4	232,816	14.0	869,385
Sets priorities among health needs	14,171	0.4	37,382	0.6	0	0.0	53,642	3.2	105,195
Total	3,717,685	100.0	5,838,115	100.0	1,380,047	100.0	1,659,888	100.0	12,595,736
Percent of grand total	...	0.30	...	0.46	...	0.11	...	0.13	...

SOURCE: Hillsborough County Public Health Unit, Tampa, FL, fiscal year ending September 30, 1991.

Table 3. Expenditure of annualized manpower hours by 10 organizational practices, Hillsborough County (FL) public health unit, 1991

Organizational practice	Communicable disease		Primary care		Environmental health		Administrative services		Total
	Hours	Percent	Hours	Percent	Hours	Percent	Hours	Percent	
Analyzes determinants of health needs	800	0.2	1,500	0.3	2,400	2.1	300	0.2	5,000
Assesses health needs of community	1,000	0.3	8,700	1.7	0	0.0	500	0.4	10,200
Builds constituencies, advocates for public health	2,000	0.6	2,000	0.4	300	0.3	4,000	2.9	8,300
Develops plans and policies	3,600	1.1	5,700	1.1	600	0.5	4,500	3.3	14,400
Evaluates programs	10,300	3.2	12,000	2.3	15,200	13.6	12,100	8.8	49,600
Implements programs	227,800	70.0	393,000	74.6	20,900	18.7	99,200	71.8	740,900
Informs and educates the public	48,700	14.9	75,700	14.4	0	0.0	1,600	1.2	126,000
Investigates occurrence of health effects	14,400	4.4	3,200	0.6	68,800	61.4	0	0.0	86,400
Manages resources	16,600	5.1	22,400	4.3	3,800	3.4	13,700	9.9	56,500
Sets priorities among health needs	800	0.2	1,800	0.3	0	0.0	2,100	1.5	4,700
Total	326,000	100.0	526,000	100.0	112,000	100.0	138,000	100.0	1,102,000
Percent of grand total	...	0.30	...	0.47	...	0.10	...	0.13	...

SOURCE: Hillsborough County Public Health Unit, Tampa, FL, fiscal year ending September 30, 1991.

Education activity was the second highest percentage of the 10 practices, ranking only behind program implementation at 11.5 percent of hours and 12.1 percent of dollars. Education activities used more manpower hours than all six of the organizational practices represented by the two core functions of assessment and policy development. The practices related to strategic planning activity consumed a small fraction of agency resources. The assessment of the health needs of the community, the analysis of the determinants of those health needs, and the setting of priorities among health needs accounted for only 1.7 percent of the hours and 3.0 percent of salaries and benefits. Of the 10 practices, only program implementation reflected a higher percentage of hours than dollars. That observation suggests that the nonoperational activities represented by the assessment and policy development core functions

and program management and evaluation of programs tended to be the responsibility of more highly paid employees.

Tables 2 and 3 summarize salary and benefit expenditures and manpower hours for the 10 organizational practices and the 4 major functional divisions of Communicable Disease, Primary Care, Environmental Health, and Administrative and Support Services.

In terms of total resources available, Primary Care used 46 percent of salary and benefit expenditures and 47 percent of manpower hours. Communicable Disease used 30 percent of expenditures and 30 percent of hours. Environmental Health used 11 percent of expenditures and 10 percent of hours. Administrative and Support Services used 13 percent of both expenditures and hours.

The allocation of resources to the two divisions of Communicable Disease and Primary Care was very similar. The program implementation practice accounted for 65 to 70 percent of total salary expenditures and between 70 and 75 percent of total manpower hours. Each of those divisions invested substantial resources in the practice of informing and educating the public, 15 to 17 percent of salary expenditures, and 14 to 15 percent of total manpower hours. Few resources were allocated to planning, analysis, or priority setting activities within the divisions. They are the so-called production divisions of the LHD and emphasize delivering client services. Together, Communicable Disease and Primary Care accounted for 76 percent of total salary expenditures and 77 percent of manpower hours.

The Environmental Health division showed a different pattern of resource allocation among the 10 practices. The program implementation practice accounted for only 15.7 percent of the division's salary expenditures and 18.7 percent of manpower hours. The practices of investigating the occurrence of health effects (61.0 percent of salary and 61.4 percent of hours) and the evaluation of programs (14.0 percent of salary and 13.6 percent of hours) consumed significantly more of these resources than in the production divisions. That allocation of resources is consistent with the different nature of services provided within Environmental Health, compared with Primary Care or Communicable Disease. Environmental Health tended to be more investigative and analytical and more often involved work with institutional clients, such as restaurant inspections, migrant labor camp inspections, and water supply inspections, rather than with individual clients.

Resources were allocated within Administrative and Support Services in a manner that was different from other divisions. Administrative resources were disproportionately allocated to the practices of building constituencies and advocating for public health (6.1 percent of salary and 2.9 percent of hours), the development of plans and policies (6.9 percent of salary and 3.3 percent of hours), the management of resources (14.0 percent of salary and 9.9 percent of hours), and setting priorities among health needs (3.2 percent of salary and 1.5 percent of hours). Administrators apparently were active in day-to-day program operations in addition to their broader managerial responsibilities, with 53.9 percent of the salary expenditures and 71.9 percent of the manpower hours devoted to program implementation.

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Limitations and Implications

Following the pilot case study, questions remain concerning the validity as well as the reliability of the 10 organizational practices as a method for characterizing the full range of health department activity. Perhaps the fundamental problem is that a few of the practices are not discernibly different. Stated another way, the definitions and applications of some practices overlap. For example, setting priorities and developing plans are part of the same process and no meaningful observable differentiation may be needed between them. Another example is that certain Environmental Health activity is investigative in nature and therefore classified as *investigate* the occurrence of health effects and health hazards in the community, but it could also be characterized as implementation of program activity and subsequently classified as *implements programs*.

A second problem is that the practice *implements programs* captures all activities that fail to fit easily within one of the other nine practices. Since that practice accounts for more than two-thirds of the facility's resources, some differentiation within that practice (perhaps on the basis of clinical rather than administrative activity) seems advisable.

A third problem concerns the various ways that managers perceived and described the allocation of employee time to those practices. Managers tended to

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define as many practices as possible as being within their purview, thus interpreting the definitions more broadly. This perception resulted partially from limitations of intra-manager reliability during the validation process and will require adherence to the practice definition and practice application statements, as well as a formally structured consensus development process for deriving the final allocations.

Another limitation is that the LHD personnel may receive considerable consultation and technical assistance from other sources, such as the regional or State offices of the health department, or directly from various Federal agencies or other county-level agencies, or from private organizations. The reliance of small rural health departments on outside expertise has been documented *(8)*. Outside expertise is more likely to be used for supporting assessment and policy development than the assurance core function. The nature and extent of external assistance is not, of course, reflected directly in the collected data.

Assuming that the methodologic issues can be resolved, the 10 practices appear to have substantial usefulness for describing and analyzing the behavior of LHDs. The National Association of County Health Officials has used the three core functions in recent years to measure the proportion of LHDs that report involvement in those functions.

Even in our preliminary application, the lack of resources allocated to the assessment of the health needs of the community and the practices related to the core function of policy development became strikingly apparent. Nearly everyone involved in the project had anticipated that those important activities were resource poor, but very few anticipated that the level of human and financial resources invested in those activities would be as low as it was seen to be. The intradivisional differences in the allocation of resources provided new insight into the nature of the various services provided by LHDs. Finally, the opportunity to compare the allocation of resources among those practices for LHDs of different sizes and in different localities would provide an intriguing glimpse of both the diversity and commonality represented by the nearly 3,000 organizations nationwide. With continuing refinement and modification, the methodology could provide a highly effective basis for describing and analyzing the activities and performances of LHDs.

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