

Packaged Computer Programs for Local Health Departments

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THE AVAILABILITY of a computer to local health departments in city, county, or State data processing centers is partly responsible for the renewed interest in administrative statistics. Most divisions in local health departments prepare statistical reports. Many, however, do not compile the tabulations needed for program evaluation since the cost in personnel time to process the material is prohibitive. When the basic systems are organized for the desired tabulations, only minutes may be required for the computer to process the statistical reports.

Rapid processing of data by the computer is not the only reason for the current interest in administrative statistics. Today's emphasis on chronic diseases and environmental health instead of the acute communicable diseases and basic sanitation of yesterday requires data that will assist in appraising the quality in addition to the quantity of services. The case count of communicable diseases no longer can be used to evaluate the services of the health department. In addition to the change in program emphasis, performance and program budgeting has been started in many areas. There is a need to show achievements by results and costs. Achievements in a specific phase of environmental health or in an area of chronic disease control

are not measured by total visits, services, complaints, or narrative reports illustrating community interest.

The purposes of a special project of the University of California School of Public Health, supported by the Division of Community Health Services, Public Health Service, are to reconsider the objectives of health programs, to establish and test the criteria and standards for each program, and to install and examine the systems that are basic to obtaining service records.

A demonstration center has been established in the Long Beach (Calif.) Department of Public Health to illustrate systems that aid in achieving the end product: useful records and reports. The project was initiated in the department's division of environmental health at the request of Dr. I. D. Litwack, health officer of the department (1). Reports of each program in the division are processed monthly, quarterly, and annually by a computer. A report for a housing program has been outlined (see sample).

Criteria and standards of value to administrators and supervisors of programs are obtained by interviewing directors of health departments and division chiefs and by reviewing current literature. Each item is studied for its value in administering programs and is incorporated in the statistical reports after appraisal by advisers (2).

Planning is essential to the production of

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Sample report, public health program for housing establishments,

Housing establishments, public health problems	Total	Hotel, motel	Homes for aged	Room and board	Room- ing houses	Con- vales- cent homes	Day nurseries including private schools	Multidwellings		
								Apartment	Other	Single dwell- ings
Number of establishments...	458	263	71	9	41	23	51			
Routine and license applica- tion visits:										
Number of establish- ments visited.....	378	4	10	1		2	2	359		
Number of visits.....	464	4	11	1	1	2	2	443		
Work units allocated....	1,852	16	44	4	4	4	8	1,772		
Work units performed....	1,375	12	39	3	4	9	6	1,302		
Accomplishment index...	1.35	1.33	1.13	1.33	1.00	.44	1.33	1.36		
Number of violations, routine visits.....	45	3	3			2		37		
Insect infestation.....	1	1								
Rodent, other animal....	1							1		
Insanitary premise.....	3	1						2		
Overcrowding.....										
Screening.....	5		1					4		
Unvented appliance.....	3							3		
Defective appliance.....	2							2		
Defective plumbing.....	2							2		
Structural.....	23	1	1					21		
Temperature control....										
Food storage.....	1					1				
Utensils and equipment..										
Dishwashing facilities...	1		1							
Waste disposal.....	1							1		
Employee habits.....										
Posted signs.....										
Restrooms.....	1					1				
Other.....	1							1		
Number of other visits.....	196	2	5			5	2	117	20	45
Followup.....	82	1	2			2	1	41	11	24
Complaint.....	61		1			2		31	6	21
Request.....	53	1	2			1	1	45	3	
Work units allocated.....	392	4	10			10	4	234	40	90
Work units per- formed.....	589	5	19			14	8	334	69	140
Accomplishment index.....	.67	.80	.53			.71	.50	.70	.58	.64

meaningful reports. The fact that data are on tape, cards, source documents, or in the computer does not guarantee that a useful report can be produced. Tabulations designed by the persons who will use them and who select items pertinent to the evaluation of each program are the best guarantee that the processed data will be used (2, 3). This has been the approach in developing the report systems for the project. The users of the systems are identified in five levels of management. The following data are required for the performance of their functions:

Division supervisors. Information concern-

ing health problems encountered by the field staff, the volume of workload performed, and assurance that the responsibilities of the health department are being carried out.

Division director. The information cited for division supervisors plus data pertinent to the criteria for planning and evaluating each program and activity of the division.

Health officer. Data for identifying health problems in the community; appraising services of current programs; and assessing the cost of the services by program, geographic district, or other axis pertinent to evaluation.

Long Beach (Calif.) Department of Public Health

Housing establishments, public health problems	Total	Hotel, motel	Homes for aged	Room and board	Room- ing houses	Con- vales- cent homes	Day nurseries including private schools	Multidwellings		
								Apartment	Other	Single dwell- ings
Number of violations, other visits.....	38							22	1	15
Insect infestation.....	8							3	1	4
Rodent, other animal.....										
Insanitary premise.....	7							4		3
Overcrowding.....										
Screening.....	3							1		2
Unvented appliance.....										
Defective appliance.....										
Defective plumbing.....	14							10		4
Structural.....	4							3		1
Temperature control.....										
Food storage.....										
Utensils and equipment.....										
Dishwashing facilities.....										
Waste disposal.....										
Employee habits.....										
Posted signs.....										
Restrooms.....										
Other.....	2						1			1
Total all visits.....	660	6	16	1	1	7	4	560	20	45
Followup visits, rate.....	. 12	. 17	. 13			. 29	. 25	. 07	. 55	. 53
Total all violations.....	83	3	3			2		59	1	15
Total all corrections.....	41	1	1			2	4	16	2	15
Compliance, rate.....	. 49	. 33	. 33			1. 00		. 27	2. 00	1. 00
Total no problems, or un- justified complaint.....	380	1	10	1	1	4	4	349	2	8
Total violations reported previously.....	12		1					5	1	5
Total notices issued.....	64	1	1			1		48	3	10
Total plan checks.....										

City manager. Data for identifying health problems, evaluating programs, and making decisions; data that are useful in defining standards and determining when the norm has not been achieved; data that will provide a cross channel of meaningful information from one city department to another (4).

State health department representative. Data for identifying health problems and needs for services within and between regional areas of the State in depicting trends and determining costs of specific service programs.

The criteria for each program are studied by members of these administrative groups during conference sessions of the environmental health division. Since the reports are a part of a demonstration project, the usefulness of the

data to other health departments is a principal consideration.

Computer processing is then planned. The end product or final report of the program is planned first to insure that all pertinent items are included. Separate skeleton tabulations are planned for each program: housing, dairies, restaurants, general food establishments, swimming pools, water surveillance, sewage and waste disposal, and insect and vector control. The form adopted, using horizontal tabs for type of establishment or category within a program and vertical tabs for items pertinent to services given and the findings and results, is meeting the needs of participating departments. The horizontal tabs for general food establishments, for example, include the fol-

lowing categories: retail markets, wholesale establishments, food warehouses, processing establishments, retail and wholesale food vehicles, sample distributors, and coin-operated machines. The horizontal tabs for restaurant are beer bars, cocktail bars, general restaurants, school cafeterias, and other. The vertical tabs, the same for both restaurants and general food establishments, are listed below:

Vertical tabs for restaurants and general food establishments

Number of establishments

Routine and license application visits:

Number of establishments visited

Number of visits

Work units allocated

Work units performed

Accomplishment index

Number of other visits:

Followup

Complaint

Request

Work units allocated

Work units performed

Accomplishment index

Total visits

Rate, followup visits

Total violations:

Food quality

Food storage

Temperature control

Employee habits

Utensils

Equipment

Dishwashing

Doors and windows

Floors, walls, and ceiling

Ventilation

Vermin and animal

Clothing

Toilet facilities

Lavatory

Garbage and rubbish

Premises

Drugs or poisons storage

Permit display

Lighting

Other

Total all corrections

Compliance, rate

Total no problems, or unjustified complaint

Total violations reported previously

Total notices issued

Total plan checks

Total samples

Utensils

Ice

Headings for the horizontal and vertical axes of each tabulation are drafted, studied, discussed, and revised. Each item is defined and classified. With packaged programs and the installation of basic systems for records and reports, selected tabulations could be used by other health departments—the objective of the demonstration project.

When the format for each tabulation is approved by the division members, the source document or activity report (figure) is designed and the codes for data processing are assigned. Copies are duplicated, and field testing of the material is started in the health departments by completing an activity report for all visits to establishments. Each sanitarian has an opportunity to contribute to the testing. Omissions, duplications, and confusing or misinterpreted terms in the forms are called to the attention of the division supervisor and reported to the project staff. On many occasions, a revision of the activity report has necessitated a change in the skeleton tabulations.

As the use of the activity reports becomes routine for the sanitarians, editing of the reports is transferred from their division supervisors to the clerical staff. The supervisors collect, total, and send the reports to the data processing unit of the organization. Verification of key punching is done in accordance with procedures of the unit. Quality control is built into the computer program; for example, report totals, matching of the activity report to the basic information for each establishment listed on the master tape, and entry of data to correct the vertical column.

In addition to the activity report, a master listing, with identification of each establishment, is kept current by adding new establishments and deleting those going out of business. These data and the details for each visit are on the master tape.

A wealth of information can be obtained from the master listing and daily activity reports. The work units provide a guideline to the time spent and cost of each program or, if desired, the cost of routine inspection visits and visits made in response to citizen complaints. The reports provide basic data for performance and program budgeting. Many tabulations are

will use them and who select items pertinent to the evaluation of each program, are planned from source materials, and packaged programs for selected tabulations are being tested in local health departments. Programed instructions, flowcharts, and a user's manual are being developed.

Packaged programs also are being developed and tested to assist local health departments in obtaining administrative statistics pertinent to planning and evaluating programs. Criteria significant to each program are being selected, and the findings are being evaluated.

Methods used for basic systems and procedures are being appraised for their effect on services. With packaged programs and the installation of basic systems for records and reports, selected tabulations could be used by other health departments, which is the objective of the demonstration project.

REFERENCES

- (1) Estes, L. G.: Record evaluation and conversion to data computer processing in Long Beach City health department. Proceedings of the 10th annual meeting, California Statewide Conference of Directors of Sanitation, Asilomar, Calif., pp. 10-17.
- (2) Johnson, O. G.: Planning records and statistical reports, local health departments. Proceedings of the 10th annual meeting, California Statewide Conference of Directors of Sanitation, Asilomar, Calif., pp. 18-21.
- (3) Johnson, O. G.: Records and reports of local health departments: Criteria and methods for organization, maintenance, and use. PHS Publication No. 285 (Public Health Monograph No. 15). U.S. Government Printing Office, Washington, D.C., 1953.
- (4) Talley, W. O.: Placing the model health reporting system into management perspective. Proceedings of the 10th annual meeting, California Statewide Conference of Directors of Sanitation, Asilomar, Calif., pp. 22-27.

Evaluations of Drug Efficacy

The National Academy of Sciences-National Research Council is evaluating the effectiveness of 3,000 to 4,000 drugs now in general medical use introduced between 1938 and 1962. The study is being made at the request of the Food and Drug Administration (FDA).

The study is directed by an advisory committee responsible for (a) selecting approximately 150 specialists in the categories of drug usage established for the study as members of 30 review panels, (b) developing guidelines for the panels to follow in rendering judgments, and (c) coordinating panel recommendations for the FDA.

The review panels, in evaluating the validity of therapeutic claims on drug labels, will classify drugs into broad categories ranging from clearly effective to clearly ineffective. After initial classification, panels will seek additional data on drugs falling into the intermediate categories. Members will have access to all FDA data on the effectiveness of the drugs, as well as to efficacy evidence from the

pharmaceutical industry, scientific literature, and other sources.

The drugs under review have been grouped into the following categories: allergy, anesthetic, anti-infective, anti-neoplastic, anti-parasitic, cardiovascular, dentistry, dermatologic, diagnostic, endocrine disturbances, fluid and electrolyte balance, gastroenterologic, hematologic, metabolic, neurologic, ophthalmologic, poisoning, psychiatric, relief of pain, reproductive system, respiratory disturbances, rheumatic diseases, and sedation and insomnia.

The study will fulfill a requirement of the Kefauver-Harris Amendments of 1962 which calls for an evaluation of the efficacy of drugs marketed between 1938 and 1962, when only proof of safety was required as a basis for FDA approval. Results of this advisory study, which will be submitted to the FDA before December 31, 1967, will be used by FDA in making final determinations of the efficacy of these drugs.