

## *The Program Management Officer*

The role of the program management officer, or PMO, is being stressed in some public health activities. The PMO is a management-oriented generalist who works with many professionals and specialists to give guidance and support to specific health programs in the Bureau of State Services, Public Health Service. Elsewhere in the Service there is a growing demand for the kind of help the PMO is able to provide. Positions of this kind could be useful to other Federal agencies and to State and local governments as well.

At a workshop held in October 1964, the PMO's and their associates critically examined the job activities that have evolved over a 10-year period. They sought to clarify the role of the PMO and to identify his qualifications, personal qualities, and the various elements of his position. They discussed the PMO's responsibility and relationship to all phases of the program, the program chief, other management officers, and staff services. They outlined directions for future growth, with emphasis on continuing the use of new sources of knowledge and skills to enhance PMO efficiency. The monograph resulting from their findings was designed to aid in the professional development of future PMO's and to stimulate associates to make full use of their potential.

As modern governments move against increasingly complex health conditions, demands on key health executives have multiplied. Sophisticated technical and social tools, coupled with intricate managerial processes, often are needed to apply health research findings and achieve program goals. Some processes are so involved, owing to legal and regulatory bases or to precise technical considerations, that narrow fields of specialization have developed. This has made it virtually impossible for health administrators to deal personally and effectively with all substantive managerial facets of a program.

Because of limitations in the time and human capacity of a key executive, the PMO has become the accepted managerial aide to his program chief. He has proved himself able to devise and to set into motion those managerial actions best suited to move a program toward its objectives.

Because every health specialty has its own language, practices, and degree of flexibility, a PMO must be versatile. As the health administrator's principal adviser on all aspects of manpower management and utilization, the PMO recommends personnel actions to recruit, classify, reassign, promote, or remove members of the program staff. He is a major factor in getting and applying the resources needed to carry out program planning. He is concerned with budgeting and other fiscal activities. He collaborates closely with all the professional staff. He helps to draft recommended legislation and reg-

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### **Public Health Monograph No. 75**

**The Program Management Officer: A Developing Management Concept.** *By Planning Committee, Bureau of State Services (Community Health).* Public Health Monograph No. 75 (PHS Publication No. 1380), 14 pages. U.S. Government Printing Office, Washington, D.C., 1966, price 20 cents.

The accompanying article summarizes the contents of Public Health Monograph No. 75. Readers wishing to read the data in full may purchase copies from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C., 20402.

Official agencies and others directly concerned may obtain single copies from the Public Inquiries Branch, Office of Information and Publications, Public Health Service, Washington, D.C., 20201. Copies also will be found in libraries of professional schools and major universities and in selected libraries.

ulations. As the organization and methods man at the program level, he prepares functional program statements, procedures, and policy documentation.

To be effective the PMO must know how to work with and get along with others. He will find himself immersed completely in the total program. Thus he increases his ability to communicate the needs of the program to supporting service units. He will be able to explain to professional staffs the rationale of established

management policies and methods. He is a reporter as well as a translator and interpreter. In short he is a valuable right arm to the program chief in keeping day-to-day operations under observation. Because he is in the mainstream of program activities, he is in a favorable position to contribute to a continuing review of program effectiveness. He can foresee changes in resource requirements and the need to modify plans. In all perspectives, he is a man of action.

## Control of Pollution From Sewers

Two grants totaling \$229,700 have been awarded to the Metropolitan Sanitary District of Greater Chicago and the American Society of Civil Engineers to study methods to control pollution from sewers carrying combined stormwaters and sanitary wastes. It has been estimated that about 59 million people in the United States live in urban areas served by combined sewers.

Under a \$140,000 grant the city of Chicago will conduct the first phase of a two-part feasibility study of a proposal to store the combined sanitary wastes and stormwaters until they can be pumped to a sewage treatment plant.

Stored waters would be held in a 30-by-60-foot tunnel from 10 to 20 miles long and about 600 feet underground. The plan would be applied initially to a 20-square-mile section of Chicago's Lake Calumet area. Waters flowing through this system would be used to generate an estimated 200,000 kilowatts of electricity, the sale of which could be used to reduce the

pollution and flood control costs.

The first phase of the feasibility study will determine the groundwater pollution problems that might result from the project, geologic data, underground quarrying costs, and various aspects of sediment collection and disposal.

The American Society of Civil Engineers was awarded a \$89,700 grant for a feasibility study of using a device in each building to pulverize sewage, then collecting the sewage through building drains and pumping it under low pressure through small-diameter pipes, inserted within existing storm sewers, to sewage treatment plants. This plan does not require digging up streets or the earth-moving operations required in most other methods suggested for dealing with combined storm and waste sewers.

Preliminary study shows that it could cost \$20-\$30 billion to replace the nation's combined sewer systems with separate sewers for sanitary wastes and stormwater.

**FERRI, ESTHER S. (Public Health Service), and BARATTA, EDMOND J.: Polonium 210 in tobacco, cigarette smoke, and selected human organs. *Public Health Reports, Vol. 81, February 1966, pp. 121-127.***

The polonium 210 in tobacco may be implicated in the origin of lung cancer. Speculation on this possibility prompted a study at the Northeastern Radiological Health Laboratory, Public Health Service, to determine the levels of polonium 210 in several brands of cigarettes. The levels of lead 210 and radium 226 were also measured to determine whether the polonium 210 was in equilibrium with these precursors or was present independently. Samples of human organs were also analyzed for polonium 210 content to determine whether a difference could be detected in the concentration of this radionuclide between smokers and nonsmokers.

Polonium 210 and associated radionuclides lead 210 and bismuth 210 were found to be present in tobacco. Considerably smaller quantities of radium 226 were also found. Our tests indicated that lead 210 is deposited in the tobacco independently of radium 226 and its daughter bismuth 210. For the various brands tested, the activities of polonium 210 in the total cigarette were of about the same level, with one exception: the cellulose plus charcoal brand was 30

percent higher than the average of all brands.

Because polonium 210 is volatile at the temperature of burning tobacco and subsequently is inhaled in the smoke, a smoking machine was devised for determining amounts inhaled from various brands. Values for polonium 210 in inhaled smoke ranged from 11 percent to 35.7 percent of that in the total cigarette. Average dosages to the lungs of a person smoking two packages of cigarettes per day were calculated to be far below the maximum permissible concentration for polonium 210 in air per person in the general population. The intake from a cellulose-filtered cigarette is 58.5 percent and from a filtered treated-tobacco cigarette, 45.1 percent of that from a non-filtered cigarette.

To determine the feasibility of studying the distribution of polonium 210 in selected tissues and organs of the human body, random specimens of lung, liver, kidney, heart, and psoas muscle were obtained from smokers and nonsmokers. Our tests indicated higher levels of polonium 210 in the organs of smokers.

**HULKA, BARBARA S. (University of Pittsburgh, Magee-Womens Hospital): Detection of cervical cancer among the medically indigent. A community approach. *Public Health Reports, Vol. 81, February 1966, pp. 143-151.***

Since November 1962, medically indigent women in Allegheny County, Pa., have been screened for cervical cancer at clinics located throughout the county. By the end of June 1965, 14,010 women had an initial examination, 4,607 a second-year examination, and 1,154 a third-year examination.

The rate of abnormal cytological findings on first screening was 2.6 per 100; of those initially negative, the abnormal rate on second examination was 1.7 per 100, and on third examination it was 0.6 per 100. Of 26 patients with invasive cancers, 25 were found to have these cancers on initial examination; a rate of 1.8 invasive cancers per 1,000 women. Of 22 patients with in situ carcinomas, 19 were detected on initial screening; a rate of 1.4 in situ cancers per 1,000 women. Dysplasia was histologically diagnosed in 78 patients. The cervical cancers diag-

nosed in four patients on the second routine screening were probably present, but overlooked, on the first examination. On the third-year routine examination, none of the patients were found to have cancer or class III or IV smears.

The age and race distribution of the patients with abnormal cytological findings was not consistent with the distribution found in other surveys. The highest age-specific rate of abnormal smears per 1,000 women screened for the first time was found among nonwhite women aged 60 years and over. This rate was 16.4 per 1,000 in contrast to 0 for the white women in the same age group. In the younger age groups, the rates were higher for whites than for Negroes. The overall rates were greater for the whites, 6.3 per 1,000, than for the Negroes, 4.5 per 1,000.

**AZAR, GORDON J. (Public Health Service), and LAWTON, ALFRED H.:** *St. Louis encephalitis sequelae and accidents. Public Health Reports, Vol. 81, February 1966, pp. 133-137.*

During a followup study of the sequelae of St. Louis encephalitis (SLE) virus infections, accidents in general as well as the possible contribution of SLE toward accident causation were investigated.

The 96 SLE survivors studied reported having frequent accidents during the acute and immediate convalescent stages of the disease. They attributed these accidents to sensorial changes and equilibrium difficulties. Psychological disturbances, however, were found to be the long-term sequelae most closely associated with reported accidents.

As measured by participants' responses to the Cornell medical index health questionnaire, complaining and emotional instability were more prevalent among 41 participants reporting accidents than

among 41 reporting none when age, sex, and SLE infection were the controlled variables. No significant differences were found between the accident and the nonaccident groups in performance of seven sensorimotor tests.

Because of possible bias in present methods of collecting accident data and in testing procedures, new experimental design and methodology will need to be considered in future investigations of accident causation and prevention. Particular attention should be given to studies of psychosocial forces as etiological agents and of the possible preventive measures that could be used to stay detrimental psychosocial forces before they can contribute to an accident.

**PARTRIDGE, ROBERT A. (Institute of the Pennsylvania Hospital), STEBBINGS, JAMES H., Jr., ELSEA, WILLIAM R., AND WINKELSTEIN, WARREN, Jr.:** *Outbreak of acute eye irritation associated with air pollution. Epidemiologic aspects. Public Health Reports, Vol. 81, February 1966, pp. 153-158.*

An outbreak of acute, severe eye irritation in Buffalo, N.Y., occurred on September 18, 1963. In a random sample of the residential population of the industrial neighborhood where the initial complaints arose, the attack rate was 15 percent. The rate was 48 percent for persons exposed outdoors 10 minutes or more and only 2 percent for those remaining outdoors less than 10 minutes.

A stagnating anticyclone associated with five consecutive nocturnal inversions

dominated meteorologic conditions in Buffalo for 6 days before the episode. Twenty-nine equally strong inversions and 15 instances of 5 or more consecutive nocturnal inversions had occurred, however, during the previous 2 years without evidence of illness associated with air pollution. It was hypothesized that on the morning of the episode a Hewson fumigation brought a concentrated level of irritating pollutants abruptly to ground level, causing the eye irritation.

**FULLER, CHARLES E. (U.S. Air Force):** *A common source outbreak of cutaneous larva migrans. Public Health Reports, Vol. 81, February 1966, pp. 186-190.*

During the construction of a new hospital at Patrick Air Force Base, Fla., seven of nine employees working in the crawl space below the building developed severe dermatitis. The skin eruptions were attributed to exposure to larva of *Ancylostoma braziliense*. The men lay on their backs or sides on the ground in the 3-foot-high crawl space to install and paint pipes suspended from the floor above.

The workers reported that they frequently saw tracks of dogs and cats in the area when they began work in the mornings. In Florida the incidence of *A. braziliense* in these animals is high, and the moist sandy loam in the shady crawl space particularly favored the development of ova. Feline feces buried at

night in the soil served as a vehicle of infection when the fecal material touched the workers' arms, legs, and backs as they worked.

Ethyl chloride spray was prescribed for the dermatitis. Control measures recommended for the crawl space were the screening of entrances to prevent entry of animals, spraying the larvicide sodium borate at concentrations of 10 pounds per 100 square feet of soil, covering the earth with heavy plastic sheeting for the workmen to lie on whenever possible, and encouraging the men to wear long-sleeved shirts, secure trouser legs at the ankles, and shower immediately after work. A 6-month followup indicated that none of the men were reinfected after the larviciding of the crawl space soil.

**KAUFMAN, LEO** (Communicable Disease Center, Public Health Service): *Serology of systemic fungus diseases. Public Health Reports, Vol. 81, February 1966, pp. 177-185.*

A wide variety of serologic tests are currently performed as indicators of infection caused by *Histoplasma capsulatum*, *Coccidioides immitis*, *Blastomyces dermatitidis*, and *Cryptococcus neoformans*. Their diagnostic usefulness varies. The need for more sensitive and specific fungal antigens for such tests has stimulated research, but work to date

directed toward this goal has been disappointing.

Adoption of uniform tests procedures with standardized antigens and reference serums would permit the best use of serodiagnostic tests in mycology and the attainment of comparable and meaningful results by various laboratories.

**BERAN, GEORGE W.** (Silliman University Medical Center, Philippines), and **DE MIRA, ONESIMO**: *Communitywide campaign on rabies in Dumaguete City, Philippines. Public Health Reports, Vol. 81, February 1966, pp. 169-173.*

A community-sponsored dog vaccination campaign conducted in 1964 in Dumaguete City, south central Philippines, broke the endemic pattern of rabies. Essential to the success of this campaign, in which the community was the operating unit, was the voluntary cooperation of the city health office, other governmental agencies, Silliman University Medical Center, service clubs of the city, and local radio stations and movie theaters. Representatives of these organizations publicized the rabies control program and succeeded in vaccinating 80 percent of the dogs in the commercial-

residential area of Dumaguete City—the proportion considered necessary if the spread of rabies in a community is to be controlled. It is hoped that this program may be used as a pilot project for more extensive efforts.

Rabies in the Philippines appears to depend essentially on a single host—the dog. The natural division of the republic into islands favors a program of step-by-step canine control and quarantine to eradicate this disease which in the Philippines each year kills more than 250 persons and an estimated 100 times as many animals.

**MARKUSH, ROBERT E.** (Public Health Service): *Relation of form length to response in mailed epidemiologic inquiries. Public Health Reports, Vol. 81, February 1966, pp. 191-195.*

A long version (90 questions) or a short version (44 questions) of an epidemiologic form requesting information on health-related habits of decedents was mailed to informants (usually the nearest relative) listed on the death certificates of 169 British and 127 Norwegian migrants to the United States and to 162 informants for persons born in the United States.

When all three decedent nativity groups were combined, response rates for the two form lengths did not differ appreciably. When the two form-length groups were combined, the differences among the nativity groups were also not significant (0.05 level).

When the three decedent groups were examined separately for effect of form length, significant differences were noted. For both British and Norwegian decedents, response to the long form was poorer than to the short, but for U.S.

native decedents, response to the long form was slightly better than to the short.

In mailings required to obtain response, results for the two form lengths again did not differ significantly when the nativity groups were combined. When the two form-length groups were combined, however, the nativity groups differed significantly. Informants for British decedents required 1.76 mailings to respond, those for Norwegians 1.60 mailings, and those for U.S. natives 1.89 mailings. These nativity differences consisted principally of differences in reactions to the long form.

The informant groups did not significantly differ in the number of questions they answered.

Doubling the number of questions therefore did not significantly affect overall response but affected response within the three decedent nativity groups in different ways.