

Comment on "Tuberculosis Studies in Muscogee County, Georgia"

■ The controlled clinical trials of BCG vaccine in Great Britain, carried out by the Medical Research Council, were almost contemporaneous with those in the United States made by the U.S. Public Health Service. The 20-year evaluation of one of the USPHS trials, by Comstock, Woolpert, and Livesay in *Public Health Reports* (1), showed little if any protection to those who were initially "nonreactors" to tuberculin. In contrast, the 15-year evaluation of the Medical Research Council trial showed a protection of nearly 80 percent to those who were initially "tuberculin-negative" (2). These widely disparate results have long been apparent, and the reasons have frequently been discussed (2-5). In particular, it was specifically argued by the British investigators in 1967 (3) that protective natural infections by nontuberculous mycobacteria, even if these had been widespread or even universal among the American participants, were inadequate to account for the lack of any substantial reduction in the incidence of tuberculosis in the vaccinees in this USPHS trial unless these other organisms had an efficacy approaching that of BCG itself—and that, from current animal evidence, was unlikely. The argument therefore implied, as an "inescapable" conclusion, that the vaccine used in this USPHS trial was not as potent as the Danish substrain of BCG used in the British trial."

Comstock and associates, on page 279 of their report (1), are now advancing the same argument as ours of 10 years ago, but without reference to its origin and apparently without any appreciation of the strength of the evidence it provides of the low potency of the vaccine used in this USPHS trial.

P. D'Arcy Hart, MD, and Ian Sutherland, DPhil, Medical Research Council Statistical Research and Services Unit, University College Hospital Medical School, London

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Authors' Reply

We are sorry that we apparently offended Drs. Hart and Sutherland by not referring to their earlier suggestions that low potency of vaccines accounted for the poor results of the USPHS BCG trials. That BCG vaccines might vary in potency has been noted by so many persons that it did not occur to us to give all the pertinent references. Possible potency variation was a topic of considerable concern at one of the early Ad Hoc Advisory Committees on BCG (1).

The potency of the Tice BCG strain has been questioned by others, one report dating back to 1956 (2). We chose to list only two references: Jespersen's work because of its comprehensive coverage (3), and the comments by Willis and Vandiviere because they seemed most directly aimed at this issue (4). We were indeed slow to accept such suggestions as the sole explanation of the poor effectiveness of the BCG vaccines in the USPHS trials. None of the animal work had been done with the particular substrain of BCG used in these trials, and routine animal testing done at the time of the trials failed to show any lack of potency. Only recently has there been convincing evidence that potency testing in animal systems can be so variable as to make it impossible to tell which system is valid (5).

It is true that Dr. Hart felt that population characteristics such as infections with nontuberculous mycobacteria could not account for variations in the reported effectiveness of BCG vaccines. Again we were slow to accept this argument, which was based largely on results with the so-called "Gause" mycobacterium in guinea pigs (6). None of us felt that this organism was necessarily the only or major source of mycobacterial infections in Georgia.

More convincing to us were results in humans. The first trial in Georgia school children was conducted only among those who did not react to 100 TU of PPD and who therefore seemed unlikely to have been infected with mycobacteria of any sort (7). Although based on small numbers, this trial gave the least indication of any protective effect of

vaccination. The much larger Puerto Rico trial, however, also failed to indicate that nontuberculous mycobacterial infections had "interfered" with vaccination (8). Among nonreactors to 10 TU of PPD, the effectiveness of BCG was essentially the same, regardless of the degree of reaction to 100 TU of PPD.

It was the cumulative effects of all these bits of evidence that led us to our present conclusions. Once again we are sorry that constraints of space did not allow us to give full credit to all our colleagues in this field. We particularly regret that we did not mention Dr. D'Arcy Hart's clear call in 1967 for additional trials to elucidate some of the important problems of BCG vaccination, problems which even today are being ignored by many of those in charge of BCG vaccination programs.

George W. Comstock and Shirley F. Woolpert

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Effects of Early Malnutrition, on Learning, Motivation, and Attention Span

■ Children who do not get enough to eat, in addition to being smaller and sick more often than better-fed children, may also be less able to learn, according to a new publication from the National Institute of Child Health and Human Development (NICHD). "Malnutrition, Learning, and Behavior" brings together findings of recent research on the effects of severe malnutrition and chronic undernutrition on learning and behavior.

Severe malnutrition affects 1 to 2 percent of the world's children, many of whom die during the first few years of life. A far greater number—up to half the children of the world—suffer from chronic undernutrition, probably mankind's most pervasive health problem.

Severe malnutrition is rare in the United States, but chronic undernutrition, resulting in poor growth, is more common, especially among poor families. Iron deficiency, however, is found frequently among children of all socioeconomic classes.

Recent studies indicate that prolonged severe malnutrition during gestation and early infancy—when the brain undergoes a rapid growth spurt—brings about specific and often irreversible effects on motivation, attention span, and arousal. Severely malnourished babies tend to develop into children with motor insufficiencies and with some as yet undefined retardation in sensory integration.

The effects of moderate or chronic undernutrition are not as clearly understood. A number of studies show, however, that chronically undernour-

ished children tend to lag in behavioral development, primarily in motor-integrative performance, reading ability, concentration, and motivation. Studies in Guatemala, supported by NICHD, show that the children of malnourished mothers who had accepted nutritional supplementation in pregnancy were larger at birth, and by early childhood, they did better in behavioral tests that involved motor and manipulative skills than children born of comparable mothers whose diets had not been supplemented. Other intervention studies have shown that nutritional supplementation, starting in pregnancy and continuing through early childhood, has resulted in children who are physically active.

As stated in the publication, malnutrition is intimately intertwined with environment; it creates a cycle in which succeeding generations of children are often caught and hopelessly revolve. Undernourished mothers bear babies who are also undernourished and underweight. The quality of breast milk and the duration of breastfeeding are reduced. The mother is inactive and plays little with her baby, who is timid, passive, and undemanding and becomes a child with little energy, listless, and accustomed to meager food supplies. In school the child is lost, discouraged, inattentive—a child with learning difficulties.

The aim of this booklet is to focus the attention of health workers and teachers on how hunger and malnutrition affect children's development and the extent to which it temporarily or

permanently handicaps them in learning and in the possibilities for rehabilitation.

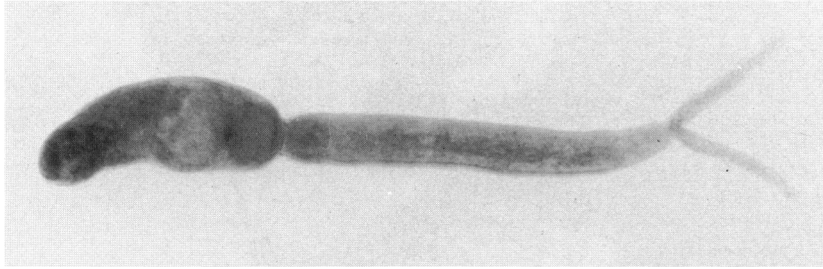
Single free copies of "Malnutrition, Learning, and Behavior" are available on request from the National Institute of Child Health and Human Development, Office of Research Reporting, National Institutes of Health, Bethesda, Md. 20014; telephone (301) 496-5133.

VA Can Pick Up Tab For Some Home Improvements That Permit Home Health Care

■ If the Veterans Administration and a VA hospital thought a small improvement in a patient's home would make it possible to care for him there, the agency might be able to pay for the improvements.

The Veterans Omnibus Health Care Act of 1976 permits necessary home improvements "to assure continuation of medical treatment or to provide access to the residence or to essential lavatory and sanitary facilities," a VA spokesman explained. Reimbursement, not to exceed \$2,500, is authorized for improvements and structural alterations made in connection with medical treatment of veterans with service-connected disabilities. Veterans with nonservice-connected disabilities may be reimbursed for home improvements up to \$600, provided the Veterans Administration agrees to and approves the alterations in advance.

Is Vaccination Possible Against Schistosomes?



■ Progress in immunization against schistosomiasis, a parasitic disease of man and animals caused by blood flukes of the genus *Schistosoma*, has been reported by Dr. George V. Hillier, head of a research group at the University of Puerto Rico.

A report appearing in the December 1976 issue of *Federation Proceedings*, monthly publication of the Federation of American Societies for Experimental Biology, entitled "Can We Vaccinate Against Schistosomes?," is one of eight scientific papers written by researchers of the Minority Biomedical Support Program, a program funded by the National Institutes of Health, Division of Research Resources.

These parasites are found in the Orient (an estimated 200 million Chinese are infected), in portions of Africa including the Nile, in South America (particularly Brazil), and in some of the Caribbean Islands. An estimated 300,000 persons in Puerto Rico are infected. Infection does not occur in the United States, but is present in the bloodstream of some immigrants entering the country.

It has been determined that when animals and man are infected with schistosomes, they acquire resistance to reinfection, a resistance which is immunologic in origin. Apparently the cells produce a toxicity that is induced by an antigen.

Hillyer and his co-workers have been conducting long-range studies on immunology induction in mice and hamsters before infection. In recent laboratory experiments, these researchers found that a complex of polyadenylic-polyuridylic acid (poly AU), when inoculated into animals together with an antigen, is a powerful stimulant of antibody production.

By combining *Fasciola* antigens (from another kind of fluke) with one

injection of poly AU, the researchers achieved a 67 percent reduction in the worm burden (schistosome infection) in mice. When two inoculations of poly AU were used, the worm burden was reduced 74 percent.

The researchers also have reported that mice immunized with *Fasciola* antigens had fourfold or higher titers of antibodies to schistosomes than mice infected with schistosomes but not immunized.

Concluding that *Fasciola* antigens prime the host to have a secondary reaction when infected with schistosomes, the Minority Biomedical Support Group at the University of Puerto Rico is now directing its attention to purifying the antigen or antigens involved in this protection.

Evaluating Competence in the Health Professions

■ Proceedings of the National Conference on Evaluating Competence in the Health Professions, held November 11-12, 1976, and sponsored by the Professional Examination Service, are now available. This conference brought together representatives of national certifying organizations, State licensing boards, State and Federal personnel agencies, and educational institutions, as well as other organizations interested in health manpower assessment. Thirty leaders in the field presented papers and led panel discussions on "National Problems and Trends in Professional Education, Credentialing and Employment" and "The State of the Art of Competence Evaluation."

The proceedings are available from Professional Examination Service, 475 Riverside Dr., New York, N.Y. 10027 at \$10 per copy.

First Pre-1970 Data on Hispanic Population

■ A study by the National Center for Health Services Research, Health Resources Administration, provides the first estimate of the pre-1970 Hispanic population in the States of its greatest concentration—Arizona, California, New Mexico, Texas, and Colorado. These data, presented county by county, make it possible to detect population trends and shifts, information that is essential in the planning and provision of health care. For example, the reported movement of Hispanics from rural to semi-urban and urban counties is confirmed by the new estimates. The NCHSR staff will use the estimates as baselines in charting Hispanic health status and morbidity rates (particularly for cancer).

Before 1970, Hispanics, our second largest minority group, were classified in the U.S. Census as white, despite their distinct ethnic and cultural identification. Dr. Marco Montoya and Joseph de la Puente of the NCHSR, who supervised the study on which the publication is based, ascribe the previous lack of separate identification of Hispanics to the fact that until recently most of them lived in self-sufficient rural communities, complete with language, culture, and a history dating back to 1530. As a result of this isolation, many people of these communities have not received adequate health care and therefore now impose a myriad of responsibilities on health care planners and providers.

Three undergraduate students synthesized the information for the report: Rowland Reyne, who completed his NCHSR summer internship on a Stanford University fellowship, Allison Smith of the University of Maryland, and Phillip Jaramillo of New Mexico Highland University. All three were participants in ACCESS, the Health Resources Administration's cooperative education program, and were assigned to NCHSR.

The National Center for Health Services Research plans a June 1977 distribution of the Hispanic data at county, municipal, and health planning agency levels in Arizona, California, New Mexico, Texas, and Colorado.

New Test to Detect Hypothyroidism

■ Physicians in Pittsburgh at Children's Hospital and Magee Women's Hospital have devised a laboratory test that can accurately and economically screen for congenital hypothyroidism, a subtle and difficult-to-detect medical condition that can cause irreversible mental retardation in infants if not discovered and treated early.

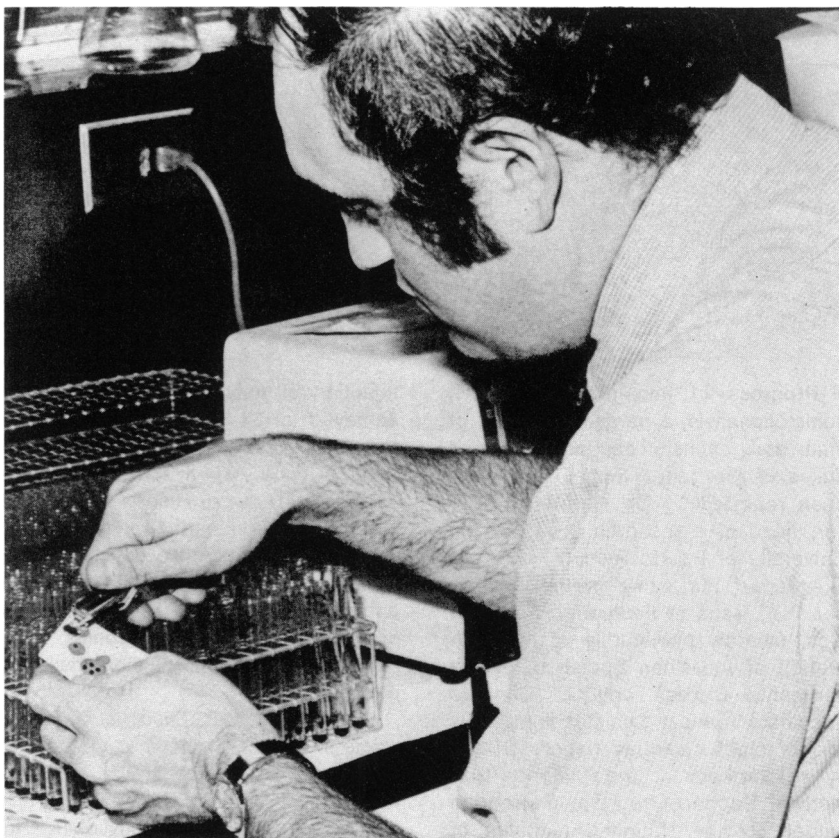
The screening test was developed with the help of a grant from the Biomedical Research Support Grant Program of the National Institutes of Health's Division of Research Resources.

According to Dr. Thomas P. Foley, Jr., who supervised the University of Pittsburgh team that devised the new screening test, congenital hypothyroidism affects about 1 in every 5,000 newborns. The problem, termed "cretinism," involves insufficient synthesis of thyroid hormone. The symptoms are usually so obscure during infancy that the disease is not recognized and, therefore, early treatment is not started.

In 1974, the Pittsburgh physicians discovered that congenital hypothyroidism could be detected by measuring the level of serum thyrotropin (TSH), a pituitary hormone that stimulates the thyroid gland to produce thyroid hormone. Originally, the physicians measured TSH levels in blood serum collected at birth from the umbilical cord. After further research, they were able to modify the procedure so that it could be incorporated into the existing phenylketonuria (PKU) screening program, which is mandated by legislation in most States.

The researchers believed that the test could be made even more convenient and cost effective if it were compatible with the fully automated laboratory systems used to screen for several metabolic disorders in newborns. Therefore, they began to measure TSH in material washed from 3-ml disks, using an automated radioimmunoassay system that easily discriminates between affected and normal infants.

With the various modifications that the procedure has undergone, Foley believes it meets accepted criteria,



Dr. Foley punches small disks from filter paper in preparation for screening test for hypothyroidism in newborns. A drop of blood from an infant's heelprick is applied to the filter paper before the 3mm disks are punched out.

including the ability (a) to screen for a disease considered to be serious and having some general importance to the community, (b) to differentiate with ease between the persons affected

and not affected, (c) to diagnose a disease that is not apparent clinically, and (d) to be performed at a reasonable cost.

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New Movie for Users of Analytical X-ray Equipment

■ "The Double-Edged Sword," a 23-minute color movie in documentary format, emphasizes that the individual users of analytical X-ray equipment have the most control over their own safety and must learn to recognize hazardous situations and take appropriate action.

In the movie, accident victims are interviewed, safety procedures are shown, and the role of Federal, State, and local officials is discussed. The film is especially recommended for indoctrinating new users of diffraction and spectrographic equipment. The film was produced by Durrin Films, Inc., for the Bureau of Radiolog-

ical Health, Food and Drug Administration, Department of Health, Education, and Welfare, under a contract with the National Bureau of Standards.

The film can be purchased for \$105.50, first-class postpaid, from the National Audiovisual Center (GSA), Washington, D.C. 20409. It can be obtained on free loan from Association-Sterling Films, 600 Grand Ave., Ridgefield, N.J. 07657. The videotape can be obtained on free loan from the Training Resources Center (HFX-70), Food and Drug Administration, Bureau of Radiological Health, 5600 Fishers Lane, Rockville, Md. 20857 (specify ¾-inch cassette or ½-inch EIAJ).

JAPANESE AND U.S. SCIENTISTS COLLABORATE ON VISION RESEARCH

■ An agreement between the United States and Japan to further research on blinding and disabling eye diseases through the exchange of scientists has been announced by the Department of Health, Education, and Welfare and Dr. Seiji Kaya, President, Japan Society for the Promotion of Science.

Under the terms of a Memorandum of Understanding, laboratory and clinical investigators of both countries will collaborate in important areas of vision research. This memorandum represents the first formal agreement for a vision research exchange program between the United States and any foreign country.

The memorandum will be reviewed at the end of the initial 3-year period, after which it will remain in force until either country decides to terminate it. In the first 3-year period, two scientists per year from each country will be selected for the exchange. One laboratory or clinical investigator will be on a short-term exchange not to exceed 4 months; the second will participate for not less than 3 months but no longer than 12 months. Interested scientists in the United States and Japan will select a research area in which they would like to work and then make tentative arrangements to collaborate with an investigator of their choice in the other country. Selections from this group will be made by a review panel in the scientist's country, after which the names of Japanese scientists will be submitted to Carl Kupfer, MD, Director of the National Eye Institute (NEI) for consideration. In turn, the U.S. panel's selection will be considered by Masso Yoskiki, MD, Director General of the Japan Society for the Promotion of Science.

The first participant, Hitoshi Shichi, PhD, NEI Laboratory of Vision Research, spent approximately 4 months working with Prof. Tokindo Okada and Prof. Goro Eguchi in the laboratory of Prof. Toru Yoshizawa at Kyoto University, Kyoto, Japan. The three scientists were engaged in studies of rhodopsin, the photosensitive pigment of the rod cells in the retina and a key element in transforming light energy into visual impulses.

Yoshizawa, Japan's first exchange scientist, has just completed 3 months with investigators at Princeton University and at the Bell Laboratories, Princeton, N.J. His fields of interest are photobiology and sensory physiology.

Makoto Tamai, assistant professor, Department of Ophthalmology, Tohoku University School of Medicine, Sendai, Japan, has been selected to collaborate with U.S. scientists for 1 year. His area of research is the morphology and function of the vertebrate retina. Tamai began his collaborative research in December 1976 at

the NEI where he will spend the major part of the year.

A bilateral research effort in the biomedical sciences has been in effect between the United States and Japan since 1965. This agreement, which concerns major health problems in many Asian countries, such as the control and prevention of cholera, leprosy, malnutrition, and parasitic disease, now includes vision research. Additionally, the National Cancer Institute has a collaborative program in cancer research with the Japan Society for the Promotion of Science.

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FDA Orders New Conditions for Selling of Hearing Aids

■ In an effort to assure that the people who buy hearing aids will benefit from them, the Food and Drug Administration has ordered new conditions for the labeling and sale of these devices.

About 15 million Americans suffer hearing impairment; more than 10 million have never had medical evaluation. About 3 million Americans use hearing aids; about 1,200 models are available.

Under the new FDA regulation, effective Aug. 15, 1977, hearing aids may be sold only to people who have had a medical evaluation of their hearing loss. Unless the examination is specifically waived by the purchaser, a statement from a physician that a hearing aid may help will be necessary before purchase. Waiver is not permissible for persons under 18 years of age. The regulation also requires manufacturers to provide a detailed brochure that tells consumers what hearing aids can do, how they work, and how to use them.

"Hearing loss can result from a number of conditions and diseases for which a hearing aid may not be helpful," said Sherwin Gardner, Acting Commissioner of Food and Drugs. "This regulation is designed to protect consumers from being sold hearing aids that won't help them and to assure that people see a doctor if

there is a medical reason for their hearing loss."

"This regulation," Gardner further stated, "is based in part on an FDA review of current information being given to consumers about hearing aids. The survey found this information to be inadequate and in some cases misleading. The mandatory brochure provided to prospective buyers will help avoid inaccurate information as well as misunderstandings."

Under the regulation, the medical evaluation must be within 6 months of the purchase of the hearing aid. Purchasers 18 years and older may waive the evaluation by signing a statement saying they know why a medical examination is advisable. The regulation forbids a hearing aid dispenser from encouraging prospective buyers to waive the medical evaluation. Hearing aid dispensers must let a prospective buyer read the brochure before the sale is completed.

The brochure warns dispensers to advise prospective buyers to consult promptly with an ear specialist or other physician if they suffer dizziness, ear deformity, pain or fluid drainage, rapid onset of hearing loss, or a foreign body in the ear.

The regulation also requires people who sell hearing aids to keep records for 3 years after the sale, including the required medical statement or waiver.

Expanding Role of the Nurse Depicted in Film

■ For those who envision the nurse as a stoic in stiffly starched white uniform, a hypodermic in one hand and bedpan in the other, a new film will destroy the image. Although nurse practitioner Jean Steel does wear a white laboratory jacket while on hospital rounds, for most of her working day she is conservatively attired in mufti befitting a professional, and the film depicts her as such.

Jean Steel, RN, featured in "Portrait of a Nurse," is a leading exponent of the new expanding role of nurses in providing direct, total patient care. She is one of the first nurses in the nation to share a joint private practice with a physician—Robert Funkhouser, MD, a Cambridge, Mass., gerontologist. She also practices in the Primary Care Clinic at Boston City Hospital. At the time the film was made, Ms. Steel was president-elect of the Massachusetts Nurses' Association.

The half-hour film shows Steel at work in a variety of settings—giving a breast examination, making a house call (on which she discovers that the patient has been taking a double dosage of heart medication), and visiting a nursing home.

The film captures the tension as nurses negotiate among themselves and with physicians over the expansion of nurses' roles. In one scene Steel explains to a nurse practitioner colleague why she should have the self-confidence to see a difficult patient herself instead of referring him to a physician. In another segment, the nurses argue for cooperation from their doctors because "Part of any joint practice has to be a trust in the other guy."

The documentary was produced by Susan Butler, RN, a surgical oncology nurse at Boston University Medical Center Hospital and a graduate of that institution's School of Nursing, who described the film's purposes as (a) to show members of the profession the need for nurses with the capability and desire to expand their careers in health care and (b) to explain to the public the role, limitations, and benefits of being served by a nurse practitioner in conjunction with a physician.

The film is suggested for use in nursing and medical school curriculums in the inservice and continuing education of health professionals, for consumer education in health care through libraries and community groups, in secondary schools' careers in health care, and by health care administrators and policymakers.

Inquiries about direct rental or purchase of "Portrait of a Nurse" should be sent to Butler-Freedman Films, P.O. Box 454, Cambridge, Mass. 02138 or telephone (617) 354-4991.

National Health Directory of 6,000 Key Health Policy and Health Delivery Persons

■ The 6,000-plus key health policy and health delivery persons in the nation are included in a recently published health directory.

The publication has information on key health personnel in 23 Federal agencies, regional offices, and State governments. Included are all PSRO (professional standards review organization) officials, all named Health Planning Agency and Health Systems Agency officials, and all Medicare/Medicaid intermediaries, as well as all State legislative health committee chairmen and State health unit heads.

The directory contains an extensive section on the key congressional health committees and a complete State-by-State section on all congressmen and their staff aides, both in Washington and in the district offices. Maps of congressional districts for each State are included.

New Carter Administration personnel are listed in the directory, except for some that had not yet been named by February, the date of publication.

Also, since the Senate reorganization bill was not yet passed, a few final appointments to Senate health subcommittees had not been made. On April 1, 1977, therefore, a paperback update was published to include the new officials named, as well as all top HEW agency heads, whether new or not. Purchasers of the 1977 directory receive this update free of charge.

It took more than a year to assemble the names, titles, addresses, and phone numbers of the 6,000 persons in the publication. The directories of more than 25 Federal agencies, as well as the rosters of congressional staffs and district offices and the office directories and organizational charts of State governments and regional offices, were examined, reorganized, and updated. The items were verified by telephone calls.

National Health Directory, 1977. Science and Health Publications, Inc., 1740 N St., NW., Washington, D.C. 20036. \$19.50. Extra copies of update \$1.50 each.

Fact Sheet on Dental Aspects of Educational Assistance Act

■ A special Fact Sheet summarizing provisions of the Health Professions Educational Assistance Act of 1976 (Public Law 94-484) that are of interest to the dental community has been prepared by the Dental Health Section of the American Public Health Association. Topics include capitation grants, health professions special projects, construction assistance, student assistance, allied health programs, public health and health administration programs, and funding authoriza-

tions for fiscal years 1977-80. The information was excerpted from a more comprehensive summary published by the Bureau of Health Manpower, Health Resources Administration, Public Health Service.

A free copy of the Fact Sheet may be obtained from Dental Health Section, American Public Health Association, 1015 18th St., N.W., Washington, D.C. 20036, or by telephoning (202) 467-5020.



Ring-Tailed Lemurs Studied at Primate Research Center in Oregon

■ Scientists at the Oregon Primate Research Center are finding the ring-tailed lemur (*Lemur catta*) to be a prime laboratory animal model for genetic studies, especially studies of twinning.

The ring-tailed lemur is a lower species of nonhuman primate that is comparatively easy to raise in captivity. The Oregon colony, which was begun in 1963 with 7 ring-tailed lemurs imported from the Malagasy Republic, now numbers 84.

Dr. Richard Van Horn, anthropologist, and Dr. Linda Pasztor, geneticist, are conducting physiology and behav-

ior studies with the lemurs at the Center, which is supported by the Division of Research Resources, National Institutes of Health. They report that female offspring of twin-bearers invariably produce twins. Six sets of twins were born in 1976.

Twenty-four female ring-tailed lemurs have had offspring since the colony was started. However, the fact that one-third of these females account for all the twins, leads the researchers to believe that fraternal or dizygotic (not identical) twinning is genetically controlled.

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Bibliographies Available From National Library of Medicine

■ Bibliographies on specific biomedical subjects are published periodically by the National Library of Medicine, National Institutes of Health. Prepared by MEDLARS in response to requests from physicians, researchers, and educators, these bibliographies are available to interested health professionals on request. They may be obtained (request by number and title) from the Literature Search Program, Reference Section, National Library of Medicine, 8600 Rockville Pike, Bethesda, Md. 20014. A self-addressed gummed label should accompany all requests, but no postage is necessary.

76-32. Ambulance service (Updates Literature Searches 72-26, 72-27, and 72-28) September 1972 through July 1976. 385 citations.

76-33. Vasoactive intestinal polypeptide. January 1974 through June 1976. 49 citations.

76-34. The National Library of Medicine: selected references from biomedical literature. January 1966 through July 1976. 471 citations.

76-35. Informed consent. May 1974 through June 1976. 403 citations. (Updates Literature Search 74-16.)

76-36. The role of interferon and interferon inducers in cancer. January 1974 through June 1976. 127 citations.

76-37. Provision of health care to the poor in the U.S. (Updates Literature Search 72-21.) July 1972 through July 1976. 359 citations.

1978 WHO Fellowships for U.S. Health Workers

■ The World Health Organization will make available in 1978 a limited number of short-term fellowships for travel abroad related to the "improvement and expansion of health services" in the United States. This support is limited to U.S. citizens engaged in operational or educational aspects of public health who are employed by State or local agencies or educational institutions. Employees of the Federal Government are not eligible.

A selection committee will recommend the awarding of fellowships

based on professional background of the applicants, field and locale of the proposed study, and utilization of the experience by the applicants upon their return. Applications will not be considered for the pursuit of pure research projects or attendance at international meetings or from students in the midst of training at either the undergraduate or graduate level.

Except in unusual circumstances, the fellowship will be limited to short-term programs averaging about 2 months. Employers of successful ap-

plicants are expected to endorse the applications and to continue the employee's salary during the fellowship. The fellowship award will cover per diem and transportation. Fellowships will be awarded up to the total amount of available funds. Deadline for receipt of applications is September 30, 1977.

Additional information may be obtained from Dr. Carl D. Olsen, Chief, International Education Section, Fogarty International Center, National Institutes of Health, Bldg. 31, Rm. 2B-55, Bethesda, Md. 20014.

Women's Health Care Issues Explored in NCHSR Publication

■ The future direction of health care for women is examined in a new publication of the National Center for Health Services Research, Health Resources Administration. The publication, which compiles 15 papers commissioned by NCHSR, is a result of a 2-day conference sponsored by the National Center in cooperation with the Health Resources Administration's Federal Women's Program and the School of Nursing at the University of California, San Francisco.

Dr. Gerald Rosenthal, NCHSR director and conference participant, explained, "The conference focused on women as consumers of health services and provided a forum for researchers from all over the country to exchange ideas and to propose vital questions about issues of women's health care for the future."

Gladys Handy, deputy commissioner of higher education, Pennsylvania State Department of Education, described the general themes that emerged from the August 1975 conference. She found agreement that the major issues related to the health of women have not been adequately investigated; that biases are reflected in the selection of issues, in research method and design, and in the analysis and interpretation of results; and that the exclusion of women from the research process, except as objects of research, has led to a failure to seriously consider certain issues that are relevant to health care for women.

Dr. Carroll Smith-Rosenberg, history professor at the University of Pennsylvania, suggested that there should be a "New Medicine" that asks how women's health may be affected by such factors as social expectations, responsibility and power, and traditional gender roles.

In a discussion of vital statistics and what they tell about women and their health, Dr. Jean Lipman-Blumen, director of the Women's Research Program, National Institute of Education, said, "As a brief overview, women are living longer, marrying later and less

often, remarrying less frequently, having and expecting to have fewer children, and often planning to have no children." The sociologist found that women are the largest consumers of the nation's health services, averaging 25 percent more visits to physicians than men.

However, Dr. Joanna Kravits, director of information services, Massachusetts Hospital Association, pointed out that childbirth and the fact that more women survive to old age "wipes out virtually all of the differences between the sexes in all kinds of health care use." Women also comprise 70 percent of all health workers in the United States; yet only 9 percent of the active physicians in the country are women.

Research into a total participatory model of health care—one that emphasizes healing from physical, moral, and emotional standpoints, rather than the "receipt and delivery" model of institutionalized Western medicine—was suggested by Dr. Cynthia Nelson, chairperson of the Department of Anthropology, Sociology, and Psychology of the American University, Cairo, Egypt.

Sheryl K. Ruzek, research associate of the Center for the Study of Women in Society, San Francisco, discussed the need for research into self-help gynecology. "Women involved in self-help," she said, "attempt to take routine care out of the hands of professionals, who typically operate on the medical model appropriate to acute illness."

Women and Their Health: Research Implications for a New Era, edited by Virginia Olesen, PhD, professor of sociology, School of Nursing, University of California, San Francisco. NCHSR Research Proceedings Series. DHEW Publication No. (HRA) 77-3138. Single copies available upon request from National Center for Health Services Research, Center Bldg., Prince Georges Center, 3700 East-West Highway, Hyattsville, Md. 20782.

1776 Issue of Publication "Promoting Community Health"

■ Community Health Centers are featured in Promoting Community Health—1976," the second annual report on activities of the Bureau of Community Health Services, Health Services Administration. The history of community health centers, program expansion, recent legislation, community benefits, and highlights from individual centers that show practical ways of dealing with current problems of health care in different situations are all discussed. The 52-page publication contains illustrations of community centers and charts showing program activities.

Program summaries of activities in Appalachian health, family planning, maternal and child health, migrant health, the National Health Service Corps, and the rural health initiative are also presented in the report.

Under "trends," there is a description of the changing aspects of the health scene that affect programs of other Federal and State agencies as well as those of the Bureau. These topics include amniocentesis, drug abuse, health profiles, immunizations, infant mortality (with charts), mortality rates, phototherapy in the newborn, rubella, and sterilization. In a section on program developments, those Bureau-wide activities are discussed which involve adolescents, child abuse, child health strategy, dental care, health education, health planning, hemophilia, high-risk infants, mental retardation, mobile health units, nutrition, professional standards review organizations, and the Sudden Infant Death Syndrome.

The publication lists the BCHS grants and contracts that have been awarded since the first issuance of "Promoting Community Health" (DHEW Publication No. (HSA) 75-5016). Grantees and contractors are arranged by BCHS program and by State, with the amount of funding given.

Promoting Community Health—1976. DHEW Publication (HSA) 77-5000 Single copies available from BCHS Publications Center, Rm. 7-88, Parklawn Bldg., 5600 Fishers Lane, Rockville, Md. 20857.

Inhaling Chemical Fumes Increases Risk of Cancers of Stomach, Esophagus, Larynx

■ Persons exposed in their work to inhalation of chemical fumes are more likely than the average person to get one of several forms of cancer, particularly cancer of the stomach and larynx. This is the latest conclusion in a series of statistical analyses of occupation-associated risks of cancer that have been published by the Department of Biostatistics at Roswell Park Memorial Institute (RPMI), the New York State Department of Health's comprehensive cancer center in Buffalo.

The latest RPMI study concentrates on two occupational subgroups; those whose members inhale chemical fumes (barbers, operatives in the leather and chemical industries, painters, and so on) and those whose members inhale combustion products such as smoke or engine exhaust (for example, kitchen workers, mechanics, repairmen, and bus, truck, and taxi drivers). Enrico Viadana, MD, coordinator of this portion of the ongoing studies, and his colleagues, report that the first subgroup, people who inhale chemical fumes, are "at considerably greater risk of developing cancer than people whose work involves combustion products."

Researchers used data collected from the case histories and work histories of 11,951 men admitted to Roswell Park between 1956 and 1965 to calculate the relative risks in each of 13 occupations of a worker's getting each of 17 forms of cancer. The relative risk indicates how much each occupation increases a worker's chances of getting a particular type of cancer.

The input used to calculate occupational relative risk for a given cancer includes the number of persons with that cancer admitted to RPMI who worked in the occupation, the number in the same occupation admitted to RPMI but who had a disease other than cancer, the number in a control group (clerks) whose work did not expose them to suspected cancer-producing agents but who did get cancer, and the number in the control group who had a disease other than cancer.

The relative risks in each occupa-

tion are also calculated according to the worker's age (over or under 60) and length of time on the job (less than or more than 5 years). Among the more eye-opening conclusions of the study is the finding that the relative risk of stomach cancer among chemical industry operatives (a broad category that includes skilled or semi-skilled workers who breathe in chemical fumes routinely) is exceptionally high: 4.25 for all ages on the job less than 5 years; 5.9 for all ages on the job more than 5 years; 11 for workers under 60 on the job less than 5 years; and 27 for workers over 60 on the job more than 5 years. A person who has been in this occupation at least 5 years and is over 60 runs almost 27 times the risk of stomach cancer as the average person.

Painters under 60 years of age also emerged as a high-risk group for stomach cancer, with relative risks of 12.6 (on the job under 5 years) and 16.6 (on the job over 5 years). It was concluded also that operatives in the leather industry are notably subject to a high risk of cancer of the larynx, the mouth and pharynx, and the bladder.

Following are the most noteworthy relative risks (rounded to the nearest one-tenth) run by men in several chemical-associated occupations, as reported in the study.

Cancer of the larynx: 3.2 among barbers (over 60, on the job less than 5 years); 6.8 among chemical industry operatives (under 60, on the job more than 5 years); and 22 among leather industry operatives (over 60, on the job more than 5 years).

Cancer of the stomach: 27 among chemical industry operatives (under 60, on the job more than 5 years); 11 (under 60, on the job less than 5 years); 12 among painters (over 60, on the job more than 5 years); 12 (under 60, on the job less than 5 years).

Cancer of the mouth and pharynx: 18 among leather industry operatives (over 60, on the job more than 5 years); 8 (over 60, on the job less than 5 years).

Cancer of the bladder: 24 among leather industry operatives (over 60, on the job more than 5 years); 9.7 (over 60, on the job less than 5 years).

Among occupations involving inhalation of combustion products, only these relative risks appear significant: 2.3 for cancer of the mouth and pharynx among bus, taxi, and truck drivers (over 60, on the job less than 5 years); 1.9 (over 60, on the job more than 5 years), and 2.2 for cancer of the prostate among mechanics and repairmen (over 60, on the job less than 5 years).

The Roswell Park biostatisticians stress that the study is "preliminary" and can do little more than offer some "working hypotheses" to account for the high relative risks in some occupations. The principal value of this kind of study is the identification of high-risk occupations. Further epidemiologic and laboratory studies are needed to identify definitely the actual sources in the work environments of the higher risks and to identify even more specifically the high-risk jobs, particularly within broad industrial categories such as "chemical industry operatives."

Kellogg Foundation Funds Center for Fiscal Management of Health Care

■ A Center for Advanced Study in Health Care Fiscal Management, Organization, and Control, supported by the W. K. Kellogg Foundation, will be established at the University of Wisconsin-Madison. The center, which will be a part of the Graduate School of Business, will offer educational programs at the doctoral, master's, and undergraduate levels.

The new center, developed by Profs. James B. Bower, Alton C. Johnson, and George B. Strother, will concentrate on training professionals in all aspects of health care fiscal management, including attention to cost containment and control in the health care industry.

The course sequences will be available to doctoral candidates with fiscal management qualifications. Since persons with teaching, public service, and research qualifications in health care fiscal management are in short supply, the center will be working to increase the availability of such skilled health care personnel.

For a master of science degree candidate, there will be emphasis on both residential and flexible off-campus sequences, designed to make well-quali-

fied people available with a broad background in financial management, planning, and control. Opportunities are to be offered for persons who are already in the health field to obtain advanced-level education while maintaining their employment.

At the undergraduate level, the emphasis will be on sequences of courses to provide students with a foundation for learning about health institution functions and relationships. Other areas of activity will be advanced con-

tinuing education programs and a repository for health care fiscal management information.

Grants from the center will enable visiting scholars, working with faculty and students at all levels in the program, to prepare monographs, papers, and demonstration cases or to study current problems in the health fiscal area. Fellowship awards will also be available for graduate students with objectives and interests in health care fiscal management.

Nutrition Congress Scheduled in Canada

■ The fifth Western Hemisphere Nutrition Congress, "Nutrition in Transition," will be held August 15-18, 1977, in Quebec, Canada, under the auspices of the American Medical Association, American Institute of Nutrition, Nutrition Society of Canada, Sociedad Latinoamericana de Nutricion, and American Society for Clinical Nutrition.

General sessions will cover such subjects as nutrition in transition, evaluation of nutrition intervention programs, technological and nutritional aspects of fats, metabolic basis of nutritional management, politics and realities of food safety and quality, implications of altered intakes of carbohydrate and fiber, protein conservation therapies during stress, nutritional modulation of behavior and brain function, evaluation and effects of marginal nutrition, research and technology in developing countries, nutritional adaptation to the environment, nutritional problems of Third World nations in transition, and international policies on food resources.

Some 800 delegates from Canada, the United States, the Middle Americas, the Caribbean, and South America will participate in lecture and study sessions on all aspects of nutrition in the Western Hemisphere. Lecturers from more than 12 nations will be included on the formal programs, and many others will present papers at a succession of five research forums.

Additional information on the congress is available from the Department of Foods and Nutrition, American Medical Association, 535 North Dearborn St., Chicago, Ill. 60610.

education note

AMA regional workshops for hospital medical staff leaders. The second of six workshops to be conducted during 1977 by the American Medical Association for hospital medical staff leaders of the present and future will be held June 10-11 in Atlanta, Ga. Additional workshops will be held September 16-17 in Columbus, Ohio; September 23-24 in Philadelphia; October 7-8 in Chicago; and November 4-5 in Dallas.

The 2-day meetings are designed to help medical staff leaders learn the managerial skills needed to carry out the increasing responsibilities they face in developing bylaws, rules, and regulations; in cooperating with other hospital groups to improve patient care; in evaluating the quality of medical care; and in resolving conflicts that may arise between the hospital medical staff

and the board of trustees and administration or within the medical staff itself.

The programs will consist of both general sessions and workshops. Topics will include problem-solving skills that can be applied to specific needs; managerial duties related to physician privileges, rights, and responsibilities; Joint Committee on Accreditation of Hospitals accreditation standards applicable to the medical staff; legal aspects of medical staff rights and responsibilities; negotiation techniques; risk management and medical liability problems; and professional liability insurance.

Registration is limited. Further information may be obtained from the Department of Hospitals and Health Facilities, American Medical Association, 535 North Dearborn St., Chicago, Ill. 60610.

publications

FEDERAL

The Nation's Use of Health Resources. *DHEW Publication No. (HRA) 77-1240. 1976; 104 pages.*

Actuarial Tables Based on United States Life Tables: 1969-71. *Vol. 1, No. 2. DHEW Publication No. (HRA) 75-1150. May 1975; 76 pages; \$1.40. (Stock No. 017-022-00380-5.)*

Research on Disorders of the Mind: Progress & Prospects. 100th meeting of the National Advisory Mental Health Council. *DHEW Publication No. (ADM) 77-362. 1977; 54 pages; \$1.20 (Stock No. 017-024-00559-2.)*

National Conference on Measurements of Laser Emissions for Regulatory Pur-

poses. Proceedings of a conference held in Rockville, Maryland, June 4-7, 1974. *Edited by Robert H. James DHEW Publication (FDA) 76-8037, 1976; 255 pages; \$3.25. (Stock No. 017-015-00118-1.)*

The Effect of the Man-Made Environment on Health Behavior. A report of the Inter-University Board of Collaborators. *Edited by Lawrence E. Hinkle, Jr., MD, and William C. Loring, PhD, DHEW Publication No. (CDC) 77-8318. 1977; 315 pages; \$3.25 (Stock No. 017-023-0011-8.)*

Evaluation of MDH Model 1015 X-ray Monitor. *By Thomas R. Lee. DHEW Publication (FDA) 77-8014. January 1977; 32 pages.*