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PAPERS PRESENTED AT THE MILWAUKEE MEETING OF THE AMERICAN PUBLIC HEALTH ASSOCIATION

BY JANE STAFFORD
Science Service Medical Writer

PUBLIC HEALTH workers are lining up their forces for a fight to the finish on mental illness. Those valiant disease fighters who have brought under control such foes of mankind as smallpox, typhoid fever and diphtheria, laid their plans for the attack on mental sickness, which fills half the hospital beds in the country, at the opening session, on October 5, of the sixty-fourth annual meeting of the American Public Health Association. The drive will start with efforts to promote mental health in children. School physicians and teachers hold the key positions. Mental disease, it is agreed by mental hygienists, is mainly acquired in childhood, according to Dr. A. O. DeWeese, director of health at Kent (Ohio) State Normal College. "It is a family disease in the same sense that tuberculosis was a family disease in that some adult has communicated it to the child by prolonged and repeated exposure during a period of weak resistance." Since it is agreed that mental patterns are laid down in childhood, the prevention of mental diseases becomes a problem of leadership and guidance on the part of psychiatrists in the schools and home.

FROM one tenth to one half of mental maladjustments are perhaps preventable, Dr. Frederick L. Patry, psychiatrist of the New York State Education Department, pointed out. Dr. Patry presented a ten-point program for the guidance of health officers and school physicians in their drive to prevent mental disease. One point is that the school physician should pay special attention to every child who is failing at school, who is a misfit in the group, or who is unhappy and protesting his unhappiness with "nerves." "No child wants to fail. Failure means only one thing: that some one has blundered; some one has failed to show the child off to advantage on his own level of ability to succeed." Another of Dr. Patry's ten points related to the importance of the home. This is the most important educational institution of society with respect to mental health, he said. Every effort must be made to see that every child has this part of his birthright guaranteed. "If the start of life's journey is well prepared, we have little fear of maladjustments later on, although it must be kept in mind that human machinery may go awry at any point along the life span."

A CHANGE in the standard methods of controlling or trying to control scarlet fever epidemics was urged by Dr. John P. Koehler, commissioner of health for Milwaukee. Dr. Koehler based his recommendations on experience during the epidemics of the disease in Milwaukee this year and the year before. Testing school children by the Dick test, to discover those susceptible to the disease, and then making them immune to it by suitable doses of Dick scarlet fever toxin, is the most effective measure for controlling the disease. Quarantine is less effective, he believes, because the disease is so largely spread by healthy carriers whom it is almost impossible to quarantine, as they may carry the scarlet fever "germs" for many weeks after they have recovered from the disease. "More money for immunization and less for contagious disease hospitals should be the slogan of all progressive health departments," Dr. Koehler said in emphasizing this point. "Scarlet fever quarantine is based more on tradition and expediency than on strict scientific facts." Strict isolation of all children under seven years of age for six weeks during a scarlet fever epidemic not only reduces the number of scarlet fever cases but aids in the control of other childhood diseases. This measure was practised with good results during the recent Milwaukee epidemics. Children under seven years are the most susceptible to contagious diseases and also the most exposed to them.

A NATION-WIDE uniform system of grading all milk produced in the country so that consumers would know the quality of the milk they were using, whether at home or traveling, was urged by Leslie C. Frank, sanitary engineer of the U. S. Public Health Service. Such a system would be of advantage to both consumer and producer. There are in this country each year at least 30 to 50 outbreaks of disease resulting from infected milk, Mr. Frank said. Most people who use milk know that not all milk supplies are safe, but they have no way of distinguishing a safe from an unsafe supply. Milk producers would benefit also from the plan Mr. Frank presented. The problem of the producers is one of overproduction, or of production of more milk in certain areas than can be profitably sold. Price-fixing efforts have failed and curtailing production would be unwise, in Mr. Frank's opinion. From the public health viewpoint, not enough milk is being used in the country as it is. According to Mr. Frank, "The only logical solution of both problems is that consumers and industry members coordinate their efforts in a unified nation-wide program to increase milk consumption to the optimum. This can be done best by increasing the desirability and safety of milk."

DISCOLORED teeth with ugly brown spots that no amount of scrubbing with any kind of tooth paste or powder will polish to shiny whiteness are the unfortunate lot of all the children in certain towns in the United States. Just how much there is in the whole country of this disfiguring, incurable condition, known as mottled enamel, is unknown. A method for determining the extent of the disease, however, has now been developed by Dr. H. Trendley Dean and Elias Elvove, of the U. S. Public Health Service. Mottled enamel is caused by fluorine in the water used for drinking and cooking during the period when the child's permanent teeth are being calcified. It can not be cured, but it can be prevented by using water that

does not contain harmful amounts of fluorine. As little as one part of fluorine in a million parts of water will probably cause the condition. Practically, prevention is a difficult matter, since it may involve changing the water supply of a community. In many of the communities where the disease is prevalent, especially in the Southwest, the fluorine-containing water is the only water available. At present there are in this country alone more than 300 areas where the condition is prevalent. The areas are distributed among 23 states. There are no figures as to how many American children are afflicted with the condition, but the total number must be quite large, since as many as 90 per cent. are affected in some communities and 100 per cent. in others.

A QUESTION as to the relative importance of prenatal care for the expectant mother was raised by Dr. Margaret Tyler, of the Medical School of Yale University. Obstetrical care at the time the child is born may play by far the greatest part in improving the outcome for the mother, a survey reported by Dr. Tyler indicated. Groups of patients receiving contrasting amounts of care and supervision during pregnancy but attended at childbirth by the same obstetrician were studied. The outcome at labor was strikingly similar for the contrasting groups, revealing no definite superiority on the part of those who had the more extensive care. The better prenatally cared for group was found to include an excess of complications of pregnancy, many of which had apparently prompted the seeking of extra care. This same group revealed an excess of complications of labor, the ratio of which to those in the poor-care group did not appear to have been markedly altered from the ratio noted in pregnancy.

A TEST which shows the approach of lead poisoning before the disease has actually developed was reported by Drs. Carey P. McCord and F. R. Holden and Jan Johnston, of the Industrial Health Conservancy Laboratories, Cincinnati. The test is particularly valuable in protecting industrial workers who are exposed to lead in the course of their work. By means of the test, which is called the basophilic aggregation test, the physician can tell whether or not lead poisoning is the early prospective lot of the individual being examined. "In this test," Dr. McCord explained, "counts are made of embryonic blood cells which in normal persons rarely exceed one per cent. of the total number of red cells in the blood, but which in the case of lead poisoning may amount to much higher percentages, such as 4, 6 or 10 per cent." An extensive lead poisoning epidemic which took place in the automobile industry in 1934 and 1935 provided an opportunity for evaluating the new diagnostic procedure. In this epidemic 8,000 tests were made with results more than 95 per cent. accurate. The epidemic resulted from the use of metallic lead in automobile body production, it was explained. Lead in the form of dust and fumes was inhaled by exposed workers, with the result that many hundreds were injured by this industrial intoxication. The total number of persons affected either with clinical lead poisoning or who evinced evidences of lead absorption is not known for the entire industry, but it has been approximated at 4,000.

A SERIOUS public health problem, pulmonary asbestosis, has arisen in recent years as a result of the four-fold increase in the manufacture of asbestos products. The health hazards of the asbestos industry were pointed out by Dr. J. Donnelly, of Huntersville, N. C. Lack of protection from the inhalation of asbestos dust has been the cause of the disability of many workers. In an examination of x-ray films of 151 workers in asbestos mills, 52 films showed definite evidence of lung disease. Of the 151 workers, 86 had worked in the industry for periods varying from four to twenty years. In this group were found 51 of the positive cases of asbestosis, a percentage of 59.3. Only one case with positive x-ray evidence of asbestosis had worked in the industry less than four years. The positive cases comprised 34.4 per cent. of the total number of 151. Five films of this series showed a healed tuberculosis with no asbestosis, and three showed a healed tuberculosis complicated by asbestosis. These workers had spent from four to ten years in the industry. There was no evidence that their work had any tendency to re-activate their tuberculosis lesions. Asbestosis is a slowly progressing condition after it is once acquired, even though there has been cessation of exposure to the dust for extended periods of time.

IN rural areas more new cases of tuberculosis develop from contacts with tuberculous persons in schools, factories or other work places than from contacts within the home and family, according to a report by Jean Downes. Miss Downes, working under the Milbank Memorial Fund, investigated the spread of tuberculosis at Cattaraugus County, N. Y. She found that in this region for every case resulting from a family contact there were two in the community as a result of contact outside the family. "Tuberculosis in that rural area has been acquired chiefly through contact in the small centers of life, the family, the factories and other work centers, and the schools. The individual living in the tuberculous family has a definitely higher personal risk of contracting the disease than other individuals in the community, but the spread of serious disease from the tuberculous family into the community at large is probably as great as the spread within the family."

OVER six hundred persons have been supplied by the Philadelphia Serum Exchange with serum for the prevention or treatment of various diseases. How the preventive and curative serums are preserved and distributed through the exchange was described in a report by Dr. Stuart Mudd, of the University of Pennsylvania School of Medicine, and his associates, Joseph Stokes, Jr., Aims C. McGuinness, Earl W. Flosdorf and Harry Eagle. The serum handled by the Philadelphia exchange was obtained from patients recovering from disease and from normal adults. It is frozen and dried by special processes which make it possible to keep it indefinitely. When it is to be used, all that need be done is to introduce sterile distilled water through a syringe and the porous dehydrated material goes quickly into solution. Convalescent measles, scarlatina, chickenpox and mumps serum, and pooled serum from normal adults have been used satisfactorily for protecting persons who have been exposed to these various diseases, Dr. Mudd reported.

Scarlatina convalescent serum has also been used for treatment with most satisfactory results, he said. A point of special interest to public health workers, Dr. Mudd pointed out, is the preservation of serum from diseases like influenza and encephalitis, in which the cause is uncertain. Serum from epidemics in Alaska and Philadelphia, for instance, has been made available for current investigation, and samples have been preserved for comparison with serum from patients in future epidemics.

THE teacher and the physician are the two persons who can contribute the most toward an effective program of school health, according to Dr. J. T. Phair, of Toronto, who spoke at a joint meeting of the American Public Health Association and the American Association of School Physicians. Next after the teacher and physician, in order of importance of their contribution to the school health program, are the psychologist, the physical director, and finally the others such as nurse, dentist and mental hygienist. The teacher should be impressed with the fact that good mental and physical health and the ability to make social adjustments are greater assets to the graduates from our educational system than the greatest possible absorption of the mass of inapplicable information which is generally forced on him. Little can be expected in the way of further improvement in school sanitation until standards scientifically sound are established for the guidance of school designer, administrator and medical officer. "Approximately 2,500,000 children enter the state-operated schools in Canada and the United States for the first time each year," Dr. Phair said. "The majority of them come from homes in which personal health is thought of as an abstract thing that you are born with and die from the lack of, and where community health is considered as the removal of nuisances and an avoidance of the hardship of quarantine."

HOWEVER disappointed the taxpayer may be with the quality of service given him by public officials and employeees, he has no cause for complaint against public health workers. Praise for these public servants was given by Dr. W. W. Bauer. "There is a great disillusionment abroad in the land with respect to public service," Dr. Bauer stated. "That this is without foundation for the great majority of public health workers, I am convinced." Ways in which community organizations can be interested in the official health program were discussed by Dr. Bauer, who is director of the Bureau of Health and Public Instruction of the American Medical Association. The program itself must be worthy of interest, aside from publicity techniques for popularizing it. The health official and his whole department must work at their jobs of protecting the public health, if they wish to win the interest and support of community organizations, he continued. Popular appeal, practicability, economy and timeliness were stressed as important qualifications of the health program. As examples of health projects easy to establish because they had these qualifications, he cited infant hygiene, diphtheria and smallpox immunization, and certain types of sanitary work which abolished or mitigated disagreeable nuisances.

ITEMS

SEPTEMBER was a little cooler than normal, taking the country as a whole, a U. S. Weather Bureau survey of the month, just completed, shows. In the central part of the country, September began cool, warmed up considerably during the middle of the month, but was again cool at the close. In most of the East the month was cooler than normal, while in the South and Southeast near-normal temperatures prevailed. In the Northwest, however, it was continuously warm, with temperature departures averaging five to six degrees above average. The month was unusually dry in the lower Ohio Valley and most of Tennessee, while precipitation in much of the Northwest and Far West was seriously deficient. In most of South Dakota, western North Dakota, Montana, and from Idaho westward, September rainfall was less than one fourth of normal, and wide sections reported practically no rain for the month.

ANNOUNCEMENT that the giant 200-inch glass disk from the Corning Glass Works will not be shipped until the middle of December has altered the plans of the U. S. Army Air Corps to use the specially built flat car to transport east a huge airplane wing now under secret construction at the plant of the Douglas Aircraft Co. at Santa Monica, Calif. The glass disk, destined for future use as the world's largest telescope mirror, is sixteen feet in diameter. The chord of the huge airplane wing—the distance from front to back at the widest point—is approximately the same size. Aviation officers at Rockwell Field, Calif., had been investigating the possibility of using the special flat car to bring the huge wing back to Middletown, Pa., for assembly. Because of the delay in shipping the glass disk, the wing will probably have to be shipped by water *via* the Panama Canal, since it will be completed long before December 15.

TREES that sprang up from seeds scattered by airplanes are growing to-day in mountain fastnesses where man has never trodden, according to the reports of Hawaiian foresters. Because some areas in the precipitous volcanic mountains are inaccessible for planting by the usual means, the idea of sowing seeds from airplanes, borrowed from the United States Army, was hit upon. At the time they were first scattered, it was impossible to determine whether any of the seeds took root, since the area sown could not be reached on foot. Now, however, foresters report that the trees are visible from a distance, particularly such varieties as the African tulips with their vivid scarlet flowers. This method has been particularly useful in replanting areas on the island of Hawaii devastated by forest fires. According to a report of George McEldowney, forest supervisor for the Hawaiian Sugar Planters' Association on the island of Oahu, trees of the African tulip, Moreton fig and hutu have been found in the mountains behind Honolulu, growing from plane-scattered seeds. Dr. H. L. Lyon, forester of the Hawaiian Sugar Planters' Association, about ten years ago originated the idea of using surplus seed in such a manner. He made several experimental flights in the Maitland-Hagenberger plane *Bird of Paradise,* first to fly from the continent to Hawaii.