before excluding the diagnosis of diphtheria in a given case, and if three consecutive negative cultures are required instead of two before quarantine is lifted, combined with the efforts of the bacteriologist to differentiate between virulent and non-virulent bacilli with the judicious use of the animal inoculation test in suitable cases, we believe that the bacteriological diagnosis and management of diphtheria will be efficient and satisfactory to all.

AMERICAN ASSOCIATION FOR STUDY AND PREVENTION OF INFANT MORTALITY.

SIXTH ANNUAL MEETING. HELD AT THE BELLEVUE-STRATFORD HOTEL, PHILADELPHIA, NOV. 10-12, 1915.

DR. CHARLES A. FIFE of Philadelphia in the Chair.

THE STATISTICAL STUDY OF RESPIRATORY DISEASES AS A FACTOR IN THE CAUSATION OF INFANT MORTALITY.

DR. WILLIAM C. WOODWARD, Washington, D. C.: The importance of the part played by diseases of the respiratory system in causing deaths during the first year of life has been to a very considerable extent overlooked. The extent to which such deaths are preventable by any practical method or methods now known remains to be determined. Machinery having been organized and methods adopted for the prevention of diseases of nutrition, including diseases of the digestive tract, through "infant consultations"; and for the prevention of still births and deaths due to complications of labor and diseases incident thereto through the same agency and through prenatal nursing; the next step to be taken toward the lowering of infant mortality should be directed toward the establishment of machinery and the adopting of at least tentative methods for the prevention of respiratory diseases.

In the registration area of the United States in the calendar year 1913, diseases of the respiratory system caused 15.85% of the total mortality in the first year of life. A propaganda against diseases of the respiratory system as a factor in infant mortality is fully justified by the position they occupy. The mortality from diseases of the respiratory system in the first year of life constituted in the registration area in the calendar year 1913, approximately one-quarter of the total mortality from these diseases at all age-periods taken together. One-quarter of the total mortality from diseases of the respiratory system lies, therefore, within the purview of the agencies for the conservation and promotion of infant welfare, and a campaign against diseases of the respiratory system in infancy will form an important factor in any campaign that may be inaugurated against such diseases generally. Bronchitis and pneumonia together caused 95% of all deaths in the first year of life due to diseases of the respiratory system. Deaths from diseases of the respiratory system apparently occcur to a greater extent during the third week of life than during any other weekly period, while the heaviest month's toll was levied in the first month of life,—a percentage of 18.62. The prevention of deaths in infancy from diseases of the respiratory system is, therefore, a task for the prenatal nurse, the obstetrician, the midwife, the pediatrician and the infant welfare station.

THE PREVENTION OF RESPIRATORY DISEASES.

DR. ROYAL STORRS HAYNES, New York City: In the prevention of respiratory diseases, two important factors are destruction or exclusion of the infecting organism, and preservation of the resistance. Transference by contact is the method of infection in most instances, and this may be avoided by real cleanliness. In connection with the second factor, the preservation of a perfectly functionating vasomotor system is of the greatest importance. In the prevention of respiratory diseases I would suggest the appointment of a committee on the prevention of respiratory diseases, among the duties of which should be: (*a*) supervision of the conduct of an intensive investigation of respiratory affections in a selected area in a selected city. Such an investigation should be able to determine with some accuracy the relative importance of various factors in the etiology of the diseases and the value of prophylactic measures. It would embrace the work of social workers, physicians, physiologists, sanitary engineers and bacteriologists; (*b*) to arrange for the publication of articles in the medical and lay press dealing with the importance of these affections, acquainting the laity with the loss of time, money, health and life which the diseases cause; (*c*) to investigate the health laws of the various States, with the view of determining the present legislation upon these subjects, and, where desirable, to improve it; (*d*) to inaugurate an educational campaign by lectures for those which the printed articles will not reach; (*e*) to stimulate the care of the child before entering the school age by laying greater emphasis upon his medical supervision between the milk station and school age.

THE TREATMENT OF RESPIRATORY DISEASES, WITH SPECIAL REFERENCE TO THE VALUE OF FRESH AIR.

DR. JOHN LOVETT MORSE, Boston: There is much confusion among writers in the use of the term "fresh air," some apparently meaning pure air without regard to its temperature; others, cold air without regard to its purity; others, air which is both cold and pure. It was formerly supposed that the discomfort felt in a close room was due to the presence of toxic organic constituents from the breath or to an excess of carbon dioxide in the air. The weight of evidence seems to show that the expired breath contains very little, if any, organic matter, and it has been proved that symptoms experienced in a badly ventilated room are not due to poisons excreted in the breath; also that people can breathe for many hours, without discomfort, air containing a very much larger proportion of carbon dioxide than is ever present in a room, provided that the temperature of the air is low and that it is in motion. In view of experiments, fresh air may be defined as air which is cool, dry and in motion. Cool air is not cold air. The action of the latter may be divided into that upon the respiratory mucous membrane and its effect upon the system as a whole. The conclusions of my own observations are that in the early stages of acute nasopharyngitis cold air increases the irritation of the mucous membrane; but in the later stages relieves the discomfort to a certain extent. Cold air

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predisposes to affections of the ears; fresh air is of advantage. In acute laryngitis cold air has a strongly irritant action upon the inflamed mucous membrane; cold air is not indicated, but does not harm in the later stages. In the early stages of acute bronchitis cold air increases the cough and the sense of constriction of the chest and of heat under the sternum. The cough is less troublesome when the air is moist than when dry. In very acute bronchitis associated with dyspnea and cyanosis, the contraindications to the use of cold air are the same as in the milder cases, and the only possible advantage of cold air is as a vasomotor stimulant, and it is problematical whether this action is of value. In bronchopneumonia there is no contraindication to the use of cold air, but there is no advantage unless there is a vasomotor paralysis, and here the advantage is also questionable. Children with bronchopneumonia are, however, unquestionably benefited by fresh air. In lobar pneumonia the stimulant effect of cold air is of value. Children, therefore, with this disease should be treated out of doors or near open windows. While children so treated are more comfortable, it is questionable whether the mortality of lobar pneumonia has been materially lessened by cold air treatment. It may be said that fresh air is of advantage in the treatment of all diseases of the respiratory tract. It is also of advantage to have pure air. Cold air is of advantage in some conditions, but harmful in others, and must be used with discretion.

DISCUSSION.

Dr. L. Emmett Holt, New York City: We can not too strongly emphasize the importance of quarantining the infant when other members of the family have colds. This particularly obtains in connection with premature infants. Against the contagiousness of pneumonia our efforts must be directed largely to raising the resistance of the infant. There have been almost as many deaths caused by cold air as there have been cures effected. I think, with Dr. Morse, that cold air is a means of treatment to be used with great discrimination. I have seen a great amount of harm done by the treatment of acute respiratory diseases, especially in young infants, by exposure to cold air.

Dr. S. McC. Hamill, Philadelphia: The gentlemen who have spoken have given us the foundation upon which we should build in our fight against infant mortality, and I feel that we owe them an expression of sincere gratitude. I have nothing to say in criticism, but I do think it necessary to say a word of caution in regard to two phases of Dr. Haynes' paper: (1) In the use of vaccines in the prevention of colds. It seems to me that the whole question of vaccine therapy is so much "up in the air" at the present time, the dangers connected with its use so manifest, that the subject should never be presented to an audience, especially one composed largely of laymen, without a word of caution against its promiscuous use. (2) While I agree thoroughly with Dr. Haynes concerning the results which have been obtained by the use of the nasal douche in the prevention of the common cold, I think that here again a word of caution should be given, because the promiscuous use of any form of nasal douche is apt in the final analysis to do more harm than good. I am in entire sympathy with Dr. Morse in believing that the use of fresh air has been incautiously employed. When Dr. Morse says that in the treatment of all conditions, the individual, and not a group of cases, should be treated, he has said practically everything that is essential in this connection. Dr. Morse defines fresh air as cool, dry and moving air. I believe that the proper way to obtain this is through the open windows, and not by a ventilating system. This is especially true in the homes of the poor, in which class of society diseases of the respiratory system are especially prevalent.

Dr. J. P. Crozer Griffith: It never has been proven to my mind that the universal employment of cold air, or fresh air, or open air, for the treatment of pneumonia or other respiratory diseases was the correct measure. When I ventured to make this statement a number of years ago, I stood without any spoken support, and I am glad to note the changed sentiment. The question arises, Why this change? We are subject to the failings of human beings, one of which is the following of fads. The excessive use of cold air for the treatment of respiratory diseases has been a fad and has gone beyond the medical profession into the hands of nurses, hospital managers and the laity in general. If among medical men there is doubt concerning the cases in which this treatment may be used, certainly the measure is not safe in other hands. I am a believer in fresh air for many diseases of the respiratory system, but it must be used with the greatest judgment. I agree with Dr. Holt that we see cases that are made worse by its indiscriminate use. We see others which improve only by this treatment.

Dr. Cressy L. Wilbur, Vital Statistician, New York: The foundation of the work for the prevention of mortality is the registration of births and deaths. It is a shame to this country that the births of its infants are not registered. The only exception to this lack is in the state of Pennsylvania, and I want to congratulate the people of this commonwealth and municipality upon their influence in compelling legislation in this matter.

Dr. Pisek, New York: I think that fresh air and exposure to cold should be differentiated that there may be no confusion in the minds of nurses and social workers upon this apparently unsettled question.

Dr. Emerson, New York City: Respiratory disease incident to the epidemic of measles which swept over our city in the present year, will give a higher infant mortality than at any previous time. The death rate in the hospitals has been larger than in the homes where the children were cared for by the visiting nurse and physicians. To the question that might be asked, why the children were taken into the hospitals,—there were no homes in which they could be kept, the mothers being away at work. It has become a rule that no children of this age are to be referred to hospitals unless the home conditions make this necessary. The influence of prenatal care upon the resistance of the young child should be emphasized.

Dr. Hoover: I gathered from the discussion that the writers of the papers speak of two groups of cases; one which did well and one which did not do well out of doors. I think it is possible to classify these by observation. If it is found that a child's hands and feet are cold and that it is uncomfortable, regardless of the amount of clothing it has on, we may be certain that such a child will

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do better in the ward. A child perfectly comfortable and breathing well in the ward, but who becomes dyspneic when taken out, should be returned to the ward.

DR. ABRAHAM JACOBI, New York City: A good deal of what I have heard this morning has convinced me that some sixty years ago when I began teaching I was not quite so stupid as I took myself to be twenty-five or thirty years afterward. I was of the opinion, as has been expressed this morning, that to speak about the treatment of pneumonia is a misnomer. The several pneumonias are not one and the same thing. In teaching on this subject I always tell my students that they have a patient to deal with. The principal thing in diagnosis, and in the head of the doctor, is brains. Unless every case is studied individually you will not get your patient well. So long as the doctor is not able to impress his nurses with the fact that he is their superior in knowledge, that he knows what he is about in a given case, the nurses will be his superiors in the management of the case, and he will be in the peculiar situation of being run by the nurses and the hospital managers.

DR. WOODWARD, closing: I am disappointed in the trend of the discussion, which has been upon curing pneumonia rather than upon preventing pneumonia and diseases of the respiratory system. Prevention is summed up in the matter of clothing, housing, exercise and personal cleanliness. When this Association can present these four factors to those responsible for the care of babies and children we may hope for a reduction in diseases of the respiratory system.

DR. HAYNES, closing: In connection with Dr. Holt's remarks on the infection of the nursing child by the mother, I have in mind an infant who was nursed by its mother who had whooping cough, without taking the disease. This was because the mother knew how to be careful. I recollect another case in which cleanliness and care prevented the infant taking whooping cough when every member of the family had the disease. In the matter of cold air, I agree that fresh air hurts no one, that possibly cold air does not hurt any well individual. It becomes a question to choose what ill children should be subjected to cold air, and their passivity should be considered in this decision. Dr. Morse spoke of the dryness of fresh air. The dryness should be qualified. I agree with Dr. Hamill regarding the vaccines and postnasal douching. I did not recommend in my paper that these methods of treatment should be used, but said that they were employed.

DR. MORSE, closing: The question concerning the difference between cold, and cool air is a rather difficult one to answer, but in general it may be said that a temperature of fifty is cold and one above that is cool. I wondered whether the gentlemen who spoke upon quarantining the baby realized what a hole they were getting the doctors into. If the patients have to be isolated from the children coming from school, the nurse with a cold discharged, logically the doctor, when he has a cold, would have to give up his practice and his income. In reference to deciding by the thermometer in the morning rather than by the calendar, how to dress the children, it should be remembered that in Boston it is impossible to tell in the morning what kind of clothing will be needed in the evening. Upon the matter of fresh, pure, and cold air, it seems to me that a child ought to have fresh air and pure air, and that the temperature of this fresh pure air, should be regulated in relation to the disease and the individual patient.

THE EDUCATION, LICENSING, AND SUPERVISION OF THE MIDWIFE.

DR. J. CLIFTON EDGAR, New York City: The midwife for traditional, social and economic reasons attends about forty per cent. of confinements in this country and is at present a necessary evil. The solution of the question in the rural districts is in the inclusion of midwifery service in rural district nursing, should a physician not be available. In illustration of this we have the proposed course of midwifery in Washington University Hospital in St. Louis. The midwife should never be regarded as a practitioner. Her only legitimate functions are those of a nurse plus the attendance on a normal delivery when necessary. No unlicensed women should be permitted to practise, and even as a temporary measure, only properly qualified women should be granted a license. Even licensed midwives should be supervised by the local department of health as is done in Buffalo, Pittsburg and Providence, the system following closely that in operation in England and New Zealand, where infant mortality is conspicuously low. A recent study of the midwife question in England made by Miss Carolyn V. VanBlarcom, Secretary of the New York Committee for the Prevention of Blindness, has been used as a basis for midwife control in this country.

IS THE MIDWIFE A NECESSITY?

DR. J. M. BALDY, Philadelphia: This country contains several groups of foreigners who have been accustomed to the midwife, and until immigation ceases and these people are evolved into Americans, the midwife will be demanded. The question resolves itself into the proper education and control of the midwife. Results are obtained by meeting existing conditions and improving them. There is no state, city or town in the United States in which, by the passage of laws, it has been possible to eliminate the midwife. Any measurable degree of success has come only through education and contral.

PROGRESS TOWARD IDEAL OBSTETRICS.

DR. JOSEPH B. DELEE, Chicago: I am opposed to any movement to perpetuate the midwife. She is a relic of barbarism and her perpetuation demands a compromise between right and wrong. She is a drag upon the progress of the science and art of obstetrics, her existence stunting the one and degrading the other. The foreigner is becoming enlightened upon the value of medical attendance and demanding it. The visiting nurse does an amount of maternity and prenatal work not fully recognized. There are thousands of young physicians who would take cases now cared for by midwives, were it not considered undignified work and also undignified to accept such a small fee for the service. In educating the midwife we assume the responsibility for her, we lower standards and compromise with wrong, and I for one, refuse to be *particeps criminis.*

DISCUSSION.

DR. WILLIAM R. NICHOLSON, Philadelphia: Without inspection of every case we cannot control the midwife. We have in Philadelphia five inspectors, graduates in medicine, who inspect every case after

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delivery has taken place. It seems to me that an association of this sort could do an immense amount of good, if its members worked upon a common ground. There appears to be a division of opinion into those who favor the midwife and those who do not. To me the question at issue is the benefit of the women now attended by the midwife. We do not believe that the midwife can be eliminated at present, and all we are doing is carrying out a police supervision,—there is no other word for it. The women are brought to account for any infraction of requirements. We have saved the lives of babies and mothers and improved obstetrics by our work, which may be regarded as a temporary expedient. I believe that if we had a certain number of English speaking, intelligent young women trained to care as nurses for women in labor, we should be able to get rid of a number of the midwives. We have nine such young women who have been in training from six to eight months.. They attend lectures given by one of the inspectors, and must see and deliver twenty cases under inspection. This is an experiment which Dr. Baldy has given us permission to try out, and we believe that the results in a year or two will be good.

Dr. J. Whitridge Williams, Baltimore: When you come to face the inspection of midwives in the big cities, unless there is a man at the head of the work like Dr. Baldy, the effort is going to be a miserable failure. One of the greatest advantages in modern obstetrics is the development of prenatal care. Further development of obstetrics lies in the oversight of the woman after confinement, but this pre- and post-natal service involves the work of the obstetrician, the pediatrist and the social service worker. The crux of the matter is the proper education of doctors to be competent obstetricians. We have just begun to understand in this country what the obstetrician is. It is much more than a "man midwife". The man who invented the obstetrical forceps was named Chamberlen. He called himself, Hugh Chamberlen, man midwife. "Man midwife" and "accoucheur" are two terms that raise my ire. The "man midwife" has disappeared and the "accoucheur" is disappearing; what we want is the scientific obstetrician. We can get him only by the development of our medical education. We need a large thoroughly equipped woman's hospital, where everything pertaining to women and child-bearing is studied from the point of view of teaching that which we now know and for the acquisition of new knowledge. Such a hospital has been endowed in Pittsburg, and this should set the pace for other cities.

Dr. S. Josephine Baker, New York City: I think this discussion which has been annual for the last five years, is just about as near solution to-day as it has ever been, and this, it seems to me, is because we have failed to get together on the fundamental principles of this whole proposition. My interest in the midwife is solely to make her, as nearly as we can, a fit person to give the mothers and babies their essential care, but it is an absolute impossibility to abolish her in the city at the present time. The situation in regard to their work, particularly in New York City, has been misinterpreted. When Dr. DeLee speaks of the high mortality and morbidity following the work of the midwife, he is, I assume, expressing his personal opinion. The statistics of New York do not bear this out. The mortality and morbidity of mother and baby attended by midwives is, in most instances, in proportion, less than that among those attended by physicians. We are coming to the better education of the medical student, but in the interim we are doing, just so far as we are able, that which seems the most efficacious and most nearly protects the mother and baby. We ask if you have anything better? Many of you say eliminate the midwife. What we want is a practical, working program that is better than that which we have at the present time. The midwife is being eliminated. We have in New York only half as many as there were seven years ago, as Dr. Edgar has told you. It is probable that this elimination will come about by making the standard so high that none of the ignorant and untrained women can reach it. At present the women will practise whether you want them, whether licensed or not, and it is infinitely better to see that the care given by the midwives is at least adequate. In prenatal work my experience is that the midwife is one of our best co-operators in referring the mother to us for instruction; and, contrary to what has been said, the women do engage the midwife quite as early as women engage the doctor. We are having meetings with the midwives for instruction to them, and they are beginning to look upon the health department, not as something to be feared, but as something which is a very definite help to them. Through such co-operation we believe we shall obtain reforms more effective than those by radical measures.

Dr. Arthur B. Emmons, Boston: Nothing is being done in Massachusetts to eliminate the midwife. Our law registers physicians, and if a midwife wants to qualify before the Board of Licensure, she must pass the examination. It is interesting to note that the daughter of one midwife has already done that, —has taken a course in medicine and qualified as a physician. I believe this plan which we have in Boston is an answer to the question of eliminating the midwife. We have been working out a plan of holding prenatal clinics and conferences. From among the graduates of the lying-in hospital we have a number of young physicians who attend these patients, receiving from five to ten dollars, depending upon the section in which the women live. The follow-up work is done by the visiting nurse, and I am satisfied with our results from a medical point of view. I have worked the idea out with graduates in medicine with the thought of its adoption in other parts of the country. Pennsylvania is leading this country in its requirements for medical licensure.

Dr. Abraham Jacobi, New York City: The paper of Dr. DeLee is well written but it does not contain anything that has convinced me at all. The paper of Dr. Baldy will carry conviction. Dr. Edgar's paper does not carry conviction this year as it did a year ago. He is going back upon himself a little, and I am very sorry for it. I am interested only in the poor woman of the people. In its last report I read that the Lying-in Asylum of New York has taken care of about 6,000 women, and at the same time I read that 52,997—three less than 53,000 women—have been confined in their homes by midwives. That tells the whole story. Fifty-three thousand in New York City, and more than a million women in tht United States must have midwives. If you want to do away with the midwives, let these women who want midwives be satisfied that they are in just such hands as they want to have about them or that they can afford to pay for. I know

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what I am talking about, for I have been a midwife myself. I do not know whether you know what a midwife was fifty or sixty years ago. I was midwife at that time at a five or ten dollar fee. I attended the woman through her confinement and I attended the baby. I washed the baby, and I washed it the next day, and for eight to ten days,—nine days was the usual time. I do not know whether you have heard of those antediluvian times.

DR. GEORGE W. KOSMAK, New York City: I differ with Dr. Baker in believing that the problem of the midwife is no nearer solution than when we began this discussion. We have advanced in that those who favored her are admitting that this practice must be eliminated. There is no stronger argument for the elimination of the midwife than the statement that she should be under supervision.

DR. WILLIAMS, Health Commissioner, New York: There is no demand for obstetric hospitals or dispensaries in the rural districts; there is a demand for good midwives. If the midwife is not available, the farmer's wife cannot get anyone but the neighboring farmer's wife to look after her. For myself, I expect to see the midwife in the State of New York for some time, and I intend to see that some such supervision as that developed by Dr. Baldy is established.

The following officers were elected:

President, Dr. S. McC. HAMILL, Philadelphia.

President-elect (1917), DR. W. C. WOODWARD, Washington.

First Vice-President, DR. JOSEPH S. NEFF, Philadelphia.

Second Vice-President, DR. THOMAS MCCLEAVE, Berkeley.

Secretary, DR. PHILIP VAN INGEN, New York.

Treasurer, MR. AUSTIN MCLANAHAN, Baltimore.

Executive Secretary, MISS GERTRUDE B. KNIPP, Baltimore.

The next place of meeting, Milwaukee.

ECONOMIC ASPECTS OF INFANT WELFARE.

Joint Session with Philadelphia County Medical Society.

MR. SHERMAN C. KINGSLEY, Chicago, Chairman.

WAGES AND EMPLOYMENT AS FACTORS IN INFANT MORTALITY.

MR. SHERMAN C. KINGSLEY: Districts which have the largest measure of poverty have also a higher mortality from all causes than have localities better circumstanced. It is difficult to assess baby deaths definitely against low income, but poverty involves housing, overcrowding, quality and amount of food, sunlight, air and wholesome leisure for mothers. The infant welfare program has many points in common with that promulgated in the early days of the anti-tuberculosis crusade, and the brilliant achievements of the former have resulted largely through overcoming difficulties of circumstance and environment. The correction has come through wisdom and advice, the gifts of the community taken to the mother and child through the medium of the doctor and the nurse. Among the last trench operations, however, in this warfare, deep-seated and obstinate are difficulties due to inadequate wages. With the baby, as with communities, life and health are purchasable. Figures show that babies of families living in one room have less than half the chance of those living in four; and the infant whose father receives less than $10.00 a week has about half the chance of life of the one whose father earns twice this amount. Our life-saving advice to the mother must be accompanied by an industrial order, which gives a living wage to the father.

MATERNITY INSURANCE.

DR. LEE K. FRANKEL, of the Metropolitan Life Insurance Company, New York City: The paper presents an historical account of the development of organized protection for motherhood, showing that, from the 13th century provision, either in the home or in hospitals, was made under the auspices of philanthropic agencies for the care of indigent women in childbirth. Changed industrial conditions have necessitated legislation protecting women working prior and subsequent to maternity. In practically all European countries such legislation has been enacted under which women are forbidden to work for periods varying from two to six weeks before and after confinement, while in the United States in only four States has such legislation been established. These States are New York, Vermont, Massachusetts, and Connecticut. The next logical step to this compulsory legislation was the development of a scheme of insurance for the lying-in period to replace the wages lost, and such schemes of insurance have been organized in nearly every European country. In Italy alone has the insurance plan developed as a distinct maternity insurance to which both employer and employee contribute. In other countries insurance against maternity is a phase of general sickness insurance, the dues being paid by all members of the scheme. It has been estimated that under a sickness insurance scheme in which practically all of the working element of the population are members, it would be possible to give maternity benefits for a period of from four to six weeks and in addition medical care and medicine at a cost varying from one-half to one and one-half per cent. of the wages. I believe that if a scheme of maternity insurance were developed in the United States it would be wiser to make it a general sickness insurance scheme rather than a specific maternity insurance.

TO WHAT EXTENT MAY THE MOTHER SUBSTITUTE PROPRIETARY PREPARATIONS FOR THE ADVICE OF A PHYSICIAN.

DR. CARL L. ALSBERG, Washington, D. C.: The question involved is one of vital interest to the mother, the physician, the welfare worker, the dealer, and state and federal officials. The health officer must be as fair in his acts as it is humanly possible to be. The mother in giving proprietary remedies is governed by false ideas of economy and convenience, and the truth should be presented to her by all possible means. The physician has a public and professional duty in the education of the public upon this vital question. The dealer is concerned solely from the business standpoint. The solution lies in an educated public opinion.

In the annual business meeting held on Thursday morning reports were received from affiliated societies. Through its affiliated membership the Association is in touch with baby-saving activities in 71 cities, representing 28 states, the District of Columbia, Canada and the Philippine Islands. The activities covered by these organizations include: Prenatal care and instruction of expectant mothers; infant-feeding conferences; milk stations; instruc-

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tion of mothers in care of babies, well and sick; hospitals for babies; care of homeless babies; social service work in connection with hospital care of mothers and babies; visiting nursing, town and country; city and state departments of health.

Dr. Gavin S. Fulton, Louisville: In our babies' milk station we have done away with the rule of giving free milk to everybody and give it only to those in great need. This change has made no difference in attendance and the interest in the teaching side has not abated. In our obstetrical clinic which has been in operation for two years—we started out without money and are still without money—we have discontinued its connection with the University of Louisville and are running it solely from the standpoint of helping the child and leaving out the student side. We have five stations in which a weekly clinic is held with a doctor and nurse in attendance. We have had a death rate among the children seen in these clinics of 1.2%.

Dr. J. H. Mason Knox, Baltimore: We have been able to enlarge our work during the past year by the addition of four new welfare stations. We have a supervising nurse in the central office where the matter of publicity is looked after. The new features of our work have been possible by funds given us largely through an educational campaign carried on by the *Baltimore Sun,* and by an alliance of eight of our federated charities. We have in connection with the Johns Hopkins clinic a nurse visitation service and we are undertaking the visiting of all dispensary cases. We have access to the birth registrations of the city, and every week our nurse visits the homes of the newborn babies. In this way we shall be able to keep the newborn babies under skillful advice for the first year of their existence.

Dr. Thomas B. Cooley, Detroit: An interesting new departure which we made in Detroit was to establish a health center in a manufacturing village on the edge of our city. We have had here a baby dispensary. In the first quarter the mortality for the village, as a whole, was reduced from approximately 27% to 17%, and in the district where intensive work was done, the mortality dropped from 25.8% to 12.6%.

Miss Helen MacDonald, Hamilton, Ontario: We have had an encouraging year. We have had requests for new stations and have opened two permanent ones with weekly clinics. We have only volunteer workers.

Miss Carr of Montreal: We have 23 French and five English stations, all supported by the city. We have people coming to them from almost every nation in the world.

Dr. Joseph S. Wall, District of Columbia: We have had an increased attendance at our welfare stations from 76 in the first year to 1749 in the present year. We established the prenatal work two and a half years ago, and the total number of mothers reached is 244. We have added to our nursing staff a prenatal nurse and a field nurse. Every one of our mothers has had the ability to breast-feed her babies, and satisfactory results have been obtained by instituting the four-hour nursing schedule when the mothers were working away from home. We have an eight-hour law in our city, and this gives the baby one nursing, if the mother can go home or have the baby taken to her. We have three and four conferences a week in our milk stations. We try to make the stations as attractive as possible and look upon them as mothers' clubs.

Dr. Henry F. Helmholz, Chicago: I can report for Chicago an increase of from 5400 to over 8000 cared for at our milk stations. We have worked successfully in co-operation with the Illinois Home and Aid Society. A special nurse visits all the homes in which the Aid Society has placed its babies and sees that the foster mothers come to an infant welfare station once every two weeks.

Dr. William N. Bradley, Philadelphia: Among the newer activities of our baby welfare work is an investigation of the manner of control of homes for children under three years of age, and a plan has been worked out for their government. An effort has been made to have hospitals adopt certain regulations helpful to child welfare, in the matter of number and lengths of visits to children in the hospitals, the wearing of gowns by visitors entering the wards, in the answering of inquiries by some one in intimate charge of the patient with the least possible delay. One other activity has been the establishment of a wet nursing bureau under the control of the new department of child hygiene which has come about largely through the efforts of the Babies' Welfare Association.

Dr. J. Herbert Young, Boston: The work of our baby welfare association has grown from 738 babies under our care in 1909, to 4679 for the year ending October, 1915. This means that approximately 25 per cent. of the entire infant population of Boston is now receiving milk and nursing at our twelve stations. Our medical staff has increased from 14 to 24 physicians. Almost without exception these men are specialists in the care of infants and children. Although we are still unable to pay our physicians, these appointments are highly esteemed.

Miss Mary Arnold, New York: Our Babies' Welfare Association is a federation of all organizations affecting babies directly or indirectly. Our Board of Health sends a letter to all mothers losing their babies, asking if they would like to nurse another. A nurse is sent to inspect the case, and if the conditions are satisfactory, the mother is sent another baby to nurse. The Association acts as a clearing house in the federation. We have now fifteen hospitals which report their babies to us on discharge. The nurse in the milk station waits to see whether the mother brings her baby to us, and if she does not, visits the home, so that in the first month of life the baby may receive the care it needs.

Dr. Collins H. Johnston, Grand Rapids: We got our inspiration from Cleveland, where we sent our first delegation four years ago. Our death rate has not been above 10% in the last five or six years. We have two outdoor clinics and shall have two more this fall. "I would rather have the nurse of the infant welfare than any doctor in this city with my baby," I hear almost every day. As one of the baby doctors of Grand Rapids, you can imagine the pleasure I take in hearing that. From all over Western Michigan people bring their babies to Grand Rapids, not to any individual but to our infant clinic.

Dr. George W. Coler, Rochester: We are trying to link our baby welfare work with the schools, placing the emphasis chiefly upon education. We also have a day nursery for the care of children of women obliged to work away from home, and in one school we have 35 children under three years of age. We give them a decent meal, have provided a victrola and altogether they have an exceedingly satisfactory time in this station. Our aim is prenatal and postnatal work with the care of the child after it leaves

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the milk station, so that it may not be thrown on a one- to five-year scrap heap. At five years, when entering the school, the school physician will follow it up until it goes to work. This, it seems to me, should be the real aim of welfare work.

MRS. MAX WEST, Federal Children's Bureau, Washington, D. C.: We are preparing for a nation-wide baby week next spring. We have prepared a circular of information which we are glad to furnish upon application. The Children's Bureau is especially anxious to deal with the rural problem.

THE VALUE OF NEGATIVE GENETICS.

PROFESSOR E. G. CONKLIN of Princeton University: The question has been proposed to me, "How the number of births of children receiving a faulty heritage from their parents may be reduced." Theoretically, it may be slightly reduced by segregation or sterilization of the parents; practically, this can be applied only to the most defective individuals who are usually under the care or duress of the state, and it would not greatly reduce the number of defective children. Many defective children are born of normal parents who still carry the taint in their blood; if such persons could be prevented from having offspring, a much larger reduction in the number of defective children would result. Finally, many defective chldren are born of apparently normal lines; in some cases these defects may be traced to adverse environment, in many cases their causes are wholly unknown. If the methods of animal and plant breeders could be rigidly applied to man, there is no doubt that a great improvement could be effected in the human race, but for many reasons these methods cannot be closely followed.

DISCUSSION.

MR. HOMER FOLKS, President: While in New York State we have a law looking toward the sterilization of the undeniably defective, it has not been urged by the social workers of the state and has remained a dead letter. It is the consensus of opinion among social workers in New York that the segregation of the metally deficient should be brought about.

DR. CHARLOTTE ABBEY, Philadelphia: I am inclined to believe that the fact of 30 per cent. of normal parents bearing defective children is due to lack of responsibility and ignorance of the laws of nature. When our teaching emphasizes the fact that the act which brings a child into the world must be kept sacred, as Nature intended, children will be well born.

PROFESSOR CONKLIN, closing: Undoubtedly the best method for the prevention of reproduction by the seriously defective lies in one of the two methods suggested. Segregation would probably be less offensive to the public mind and more readily enforced than sterilization, and is in large measure being done. We cannot bring about the segregation of any but the dependent class and that can and ought to be done. Coming now to the positive side of eugenics, it is probable that much more can be done here than on the negative side. The rate of breeding among the seriously defective is not very high. On the other hand the great danger is that the good stock shall disappear; the good heredity lines are running out A campaign of education is needed, emphasizing to every man and woman that they live not unto themselves; that their most important duty is to leave in the world wholesome, happy children who shall perpetuate their ideals. The saddest thing I know is to see these splendid families from which our great men came, disappearing. We hear the maxim, "As rare as a dead mule or a Quaker baby," and certainly the fine stocks are running out in many places. This can be prevented by a campaign of education. If we prevent the reproduction of the best and allow the reproduction of the worst the race is doomed.

THE PROBLEM OF PRENATAL LIFE AND INFLUENCES WHICH MAY FAVORABLY AFFECT THIS PERIOD OF THE CHILD'S GROWTH.

MRS. MAX WEST, Federal Children's Bureau, Washington, D. C.: It has been abundantly demonstrated that the proper and adequate care of prospective mothers decidedly increases the probability that the babies of such mothers will be born healthy and normal. The problem is first one of education, for until a sufficient proportion of the "effective public" appreciates the importance to the race of the prenatal period, it will be needless to look for widespread work of this nature. An important function of the Association should be the reporting from time to time upon the most practical working methods of giving prenatal care and of popularizing the work. Medical care, though conspicuously important, can produce only a part of the desired result, since the social conditions surounding women at this time very largely determine their welfare.

PREPARATION FOR MOTHERHOOD.

DR. FLORENCE R. RICHARDS, Medical Director of the William Penn High School for Girls, Philadelphia: If it be true that "The women hold the destiny of the nation," it behooves us to prepare our girls to be good wives, mothers and home makers. This knowledge comes by careful training, and but few parents give this training to their growing girls, either because of ignorance or of false modesty. Of necessity, therefore, it must be done in the higher schools by women physicians able to speak with authority. A broad course in eugenics for girls should include a study of the family and the home and their value to the state; home nursing; a consideration of adolescence, marriage, reproduction (from the biologic standpoint); care of the baby, the racial poisons, prostitution, etc. Girls receiving such a course of study realize more fully the sacredness and responsibility of marriage and their duty to the next generation.

DR. W. GREGORY, Philadelphia: We need the well trained biologist to give to girls and mothers the information outlined by Dr. Richards. We need to lay special stress upon the importance of the right attitude toward right. It is beautiful to watch the development of a flower, but we find that the attitude toward human life has been abnormal, and that that which is the highest and most beautiful of all, has been looked upon as something to be ashamed of. Mothers, as well as daughters, are capable of correct training in this respect, and with this training given to mothers, much will have been gained without waiting for the next generation.

PRESIDENT'S ADDRESS.

ARE BABIES WORTH SAVING? INFANT WELFARE WORK: ITS PURPOSES, OPPORTUNITIES AND AGENCIES.

MR. HOMER FOLKS, New York: It has seemed to me that the only contribution I might hope to make

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to this session was an attempt to interpret some phases of our work to the general public. Being one of that general public, I may, perhaps, sense some of their difficulties more clearly than our professional members, considering the matter from the layman's point of view under (1) The underlying purposes of infant welfare work; (2) The largeness of opportunity; (3) Agencies upon which the chief reliance must be placed. Under the first heading we find the outstanding fact to be that the work is preventive rather than remedial. In a very few years the infant welfare movement has changed from the dealing with the few for curative purposes to dealing with the multitude for preventive purposes. From every point of view infant welfare must be regarded as raising the level at which the struggle for existence occurs, and not simply a concession to humanitarian instincts. From the point of view of the largeness of opportunity we find great encouragement from the history of recent years that infantile illness and mortality are preventable with relatively little effort and expense. Compared with other large public health movements the reduction of infant mortality is simplicity itself. The New York State Health Department states that there are about 300,000 deaths per annum in the United States among infants under one year of age, and that 150,000 of these are preventable. For this work, we know that elaborate institutions are not required. We need chiefly plenty of paper, printer's ink, and trained nurses. I am indebted to one of my associates for the suggestion that printer's ink, rightly and continuously applied, will save many babies. Baby saving is the bargain counter of philanthropy. Infant welfare work is the great opportunity of the moment to do something in which everybody must believe. Just how much we can do is uncertain, because of many factors, chief among which is the lack of vital statistics. Concerning the agencies for this work, we find that the bulk of effort is being done by private initiative, receiving in many cases some public aid, with the tendency toward the transference of the work to public responsibility. It seems to me that the job is clearly a public one. Public health generally is certainly a public function, and infant welfare is an integral part of the public health problem.

THE POSSIBLE REDUCTION OF MORTALITY AMONG SUB-NORMAL INSTITUTIONAL BABIES.

DR. S. JOSEPHINE BAKER, Director of the Bureau of Hygiene of the Department of Health of the City of New York: The paper is a combined experimental study of the Bureau of Child Hygiene of the Department of Health of New York, The Child Helping Department of the Russell Sage Foundation, and the New York Foundling Hospital. The high mortality of infants in so-called "foundling asylums" is well known. In properly supervised placing-out systems this mortality has been reduced. Available statistics of the relative value of institutional versus placing-out care have been generally founded upon a mass consideration of all infants in the institution and broadly selected groups of the better physical type of infants placed out. The present study is based upon the placing out of the physically poorest type of institutional infant. These have included the premature infants, severe cases of marasmus and other nutritional disorders. The selected group included only the type in which the institutional mortality has previously been approximately 100%. The results of this procedure have shown a mortality rate decreased to 52%. The experimental study covered a period of 16 months.

INSTITUTIONS AS FOSTER MOTHERS FOR INFANTS.

DR. ALFRED F. HESS, New York City: We are convinced that the sweeping denunciation of the institutional care of infants is not justified. If the administration is poor the babies will suffer whether in homes or in asylums, and there is nothing inherent in either system which leads to health or to disease. At present there is no established statistical basis of approach to the question as there is no approved method of calculating the death rate in an institution. This Association would perform a valuable service if it devised a method having the approval of experts. It would then become possible to carry out comparative investigations of this important subject in various large cities of the United States.

REPORT OF A STUDY OF SELECTED COMMUNITIES WHERE INFANT WELFARE NURSING IS DONE ON A SMALL SCALE, INCLUDING A SUGGESTIVE FORMAL PLAN IN WHICH THE VARIOUS FORMS OF PUBLIC HEALTH NURSING ARE REPRESENTED.

MISS BESSIE S. LELACHEUR, New York: No large city in the United States can consider itself up to date without a well-defined program of infant welfare work. There are also countless smaller communities whose needs are as great and infant mortality greater. The report considers the work in 215 small towns and villages where many are doing infant welfare work and general nursing. The general nurses eagerly ask for sugestions upon effective infant welfare work to be fitted into their daily duties and responsibilities. The committee, therefore, concludes that a suggestive and flexible program should be worked out for the general nurse in which the family's health rather than that of the individual becomes the responsibility of the nurse.

A COMMUNITY PROGRAM OF PUBLIC HEALTH NURSING AND SOCIAL SERVICE AS WORKED OUT IN FALL RIVER, MASS., AND IN DAYTON, OHIO.

MR. RICHARD P. BORDEN, Fall River: Social agencies should be co-ordinated so that each shall work in its special department and all work together. Health is fundamental in community efficiency. Hospitals are expensive, and it pays to avoid the necessity of hospital care. Therefore, visiting nurses are necessary adjuncts of hospitals. Sources of accident and disease are ignorance and improper methods of living. Settlement houses teach the family that it is cheaper to prevent disease than to cure it, and in consequence, hospital costs are reduced. Day nurseries, children's societies, and other social organizations are directly related to the hospital and its kindred agencies. While it is valuable to preserve entities of social organizations, business and benevolence should combine.

MISS ELIZABETH GORDON FOX, Washington, D. C.: Believing that the old plan of specialization in public health nursing was wasteful, confusing and inefficient, in 1914 the Visiting Nurse Association, the Tuberculosis Society, and the Department of

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Health of the City of Dayton, Ohio, "pooled" their interests, and combined the three staffs of nurses into one, under one superintendent, in one headquarters. While each governing body retained its own autonomy and raised its own budget, the work of the three was administered as a unit. The nursing specialties were eliminated, the city was divided into small districts, one nurse to a district, and each nurse did all kinds of nursing in her own district. The infant welfare work was greatly increased in quantity and quality as a result of this plan of centralization and generalization. The infant mortality rate fell from 133 during the four summer months of 1913 to 85 during the same period of 1914. This was felt to be largely due to the efficiency of the new plan of administration.

DISCUSSION: SPECIAL VERSUS GENERAL NURSING IN INFANT WELFARE WORK.

Dr. H. J. Gerstenberger, of Cleveland: That which we most desire to accomplish is the adoption of a plan which will bring the best results to the individual and to the community. I have believed for many years that the best results in public health and social work are to be secured by placing all of the work of a district in the hands of one worker, who shall be supervised and directed by a physician who, upon the basis of knowledge and common sense, is competent to have such supervision and direction.

Miss Marie Phelan, Chicago: The infant welfare nurse must be interested in the family and in the sanitary conditions of the home that she may create a proper environment for the baby. It is through her influence that the father is referred to the tuberculosis clinic and the nurse is welcomed to give information concerning the conditions of the home. The question of more than one nurse coming into the home has been greatly over-estimated; in reality there is litle fear of overlapping. In only two families in eighteen districts were the infant welfare nurse and the district nurse visiting at the same time. I think but few nurses are capable, mentally and physically, to look after every branch of nursing.

Dr. S. Josephine Baker, New York: I take issue absolutely with Mr. Borden that the function of the public health nurse is nursing the sick. Those of us who heard Mr. Folks' address could not but be impressed with the emphasis he placed upon the primary function of this Association being the prevention of infant mortality. Just in so far as we emphasize that note shall we be successful. The nurture of the well has its place in contradistinction to the nursing of the sick. If we are going to deal only with the sick baby, our ideas will be so diverted from the main purpose that our well baby is going to stand in the background. In our municipal work when we have tried to keep the well baby well, our mortality has dropped sharply. The public health nurse, from the point of view of the department of health, is a sanitary officer with the education of a nurse. She is a teacher, but she is not like the district nurse, a nurse of the sick. There is great danger of overspecialization, but not necessarily so if our ideals are kept clearly in mind.

Book Reviews.

The Medical Clinics of Chicago, Vol. I, No. 4, January, 1916. Philadelphia and London: W. B. Saunders Company.

The fourth number of the Medical Clinics has nine contributors. The subjects discussed include the Schick reaction, tic douloureux, malaria, cerebrospinal meningitis and infantile la grippe, among others. The discussion is usually presented in the form of an informal clinical lecture, based on a particular case. In other words, the Clinics represent a number of case reports, quite unrelated, with a certain amount of space devoted to the personal views of the contributors. The publishers promise that beginning with the March number, there will be contributions by Dr. Case on Roentgenological subjects.

A Treatise on the Principles and Practice of Medicine. By Arthur R. Edwards, M.D. Third edition, thoroughly revised and rewritten. Philadelphia and New York: Lea and Febiger. 1915.

Dr. Edwards is Professor of Medicine in the Northwestern University Medical School in Chicago. The plan of the third edition, like that of its predecessors, is along the conventional lines of medical text-books. The scope of the book covers the whole range of medicine, including diseases of the nervous system. It is, of course, impossible for one man to write with authority on all the subjects covered in this vast range. Dr. Edwards is unusually successful in avoiding errors. The book is well balanced, not only as a whole, but in the discussion of individual diseases. The discussion of treatment is particularly good in its brevity and soundness.

Principles and Practice of Physical Diagnosis. By John C. DaCosta, Jr., M.D. Third edition, thoroughly revised. Philadelphia and London: W. B. Saunders Company. 1915.

The first edition of this book appeared in 1908. The third edition brings the work up to date by including recent advances, particularly in electro-cardiography and radiography. It is essentially a discussion of the technical methods for the detection of thoracic disease. In the book of 560 pages, less than 70 pages are devoted to abdominal diagnosis. The author confines himself strictly to physical diagnosis. Diagnosis by history and diagnosis by laboratory methods are not included.

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