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Address.

LESSONS FROM THE SELECTIVE MILITARY DRAFT.

By OLIVER H. HOWE, M.D., COHASSET, MASS.

THE selective military draft was in many ways a wonderful revelation. It showed, throughout our nation, a respect for authority, a submission to law and a patriotism far greater than we had reason to expect. This is all the more wonderful because of the impression that many of our young men are growing up without sufficient restraint, with too marked individualism and too little respect for authority. Dread of the consequences of war was present, but flagrant cases of evasion were not frequent; while on the other hand, we found a quiet courage, a willingness to serve and often an enthusiasm and passionate patriotism in instances where we did not expect it. To these must be added the fact that a fair proportion of the aliens did not claim exemption on that account, but were willing to fight for their adopted country.

Compared with conditions during the Civil War, when frantic search was made to secure substitutes, we may well be proud of the type of public sentiment revealed during the draft.

* Read before the Norfolk South District Medical Society, April 1, 1920.

Probably every draft officer had a lingering fear that some friend or acquaintance would try to draw on his sympathies or attempt to use improper influence upon him. Such was not the case in my experience. Numbers of persons made inquiries of me in order to ascertain the proper procedure to comply with the law, but not one suggested any evasion or attempted to influence my decision.

The absolute democracy of the draft examination was remarkable. The bank cashier, the millionaire's son, the mechanic and the laborer undressed side by side and were upon the same footing. Each had to appear on the day appointed, wearily await his turn and abide by the decision made. In view of the facts that the accommodations of draft headquarters were of an improvised nature and that the work was usually done under pressure and with scant time for courtesy, the infrequency of complaints was noteworthy. The Government did not choose army officers or officials for this draft work, but appointed civilians, many of whom had never before served in any official capacity. Perhaps the draft measures were more readily accepted by the public because local men were everywhere in charge of it. The patriotic service and fine type of integrity manifested by members of local, district, and medical advisory boards, is a matter of satisfaction.

To lawyers, business men and doctors alike, this is creditable. The work always involved inconvenience and sacrifice, but was cheerfully performed by all and in so impartial a manner that charges of collusion or corruption are practically unknown.

To the physicians it was a valuable experience in systematic physical examination. It developed expeditious methods and furnished training in prompt diagnosis and conclusions. The fact that several physicians worked together gave opportunity for consultation and comparison of views. The medical advisory boards added the judgment of specialists and decided many doubtful cases.

The draft officer was many times overwhelmed with puzzling detail, yet was led to see in the whole conception a wonderfully planned machine and was filled with admiration that it could have been conceived and put in operation so quickly. The Act of Congress was passed May 18, 1917, and on June 5, only 18 days later, the whole organization of registration, involving 125,000 members and assistants, was in operation and all men in the United States between the ages of 21 and 30, about 10,000,000 in number, were registered in one day. The appointment of local and district boards was completed by June 18, only one month after the Act was passed by Congress! The order of draft numbers was evolved by lottery on July 20, and on August 6 physical examinations were begun in the division in which I served. The first Massachusetts men were put into the Army through the draft on September 3, but the Provost Marshal states in his report that some were inducted elsewhere as early as July 30.

Changes in the regulations and in the standards of physical examination were made from time to time, but all with military needs in view and to the end of perfecting the scheme. One year from the first registration, another was held, to include those who had recently attained the age of 21. A supplementary registration of the same kind was held on August 24, 1918, and on September 12, 1918, a third registration included all unregistered men between the ages of 18 and 45, both inclusive. In all 24,234,021 men were registered.

Meantime a simplification of printed forms had been made and about December 15, 1917, registrants were required to file questionnaires giving full information about their social and

occupational status. These were examined and classified by the local boards. This method thenceforward limited the physical examinations to Class A, comprising single men, without encumbrances or exempting occupations; and saved much valuable time. It moreover considered the individual in all his relations to the community and served to place him in the most useful relation to the Government, whether that might be to make a soldier of him or retain him as a munition worker, food producer, or skilled artisan of one kind or another, or to allow him to support and educate his family for the good of the nation. The underlying idea of the whole draft system was to yield the greatest military return with the least disturbance of civil activity. Occupations were further classified into essential and non-essential as related to war. Of particular interest is the famous "work or fight" order, which would have had marked results if the war had lasted longer. The questionnaire furnished the ideal method and might well have been adopted from the start. The original draft plan included only the Army, but was later enlarged, so as to furnish recruits for the Navy also. Many men had anticipated the draft and had voluntarily enlisted in the Army or Navy. These men enlisted from commendable and patriotic motives, but because of their enlistment the draft plan was never all inclusive. Doubtless many of these volunteers would have been of greater service to the Government had they remained as expert chemists or machinists, or wherever placed after a careful consideration of their aptitudes and abilities. In Massachusetts 52% of the quota called for by the draft had been already filled by voluntary enlistments. Portland, Maine, and Portland, Oregon, had each sent so many men to the war that their quotas were already filled and these cities required no draft.

The addition of a classification for "special and limited service" allowed many men with defects to be assigned to serve the Government in clerical or occupational capacities and the classification of "remediable defects" enabled many men to enter the fighting service after the Government had provided for them curative surgical operations or the requisite dental work.

As to real malingering, I saw very little of it. Some men tried to exaggerate dyspeptic, rheumatic, or nervous symptoms. Asthma was never proven without a physician's affidavit,

and some shallow claims were made for it by the registrants. Pretense of deafness was readily detected by the examiner, but defective vision was more easily simulated. All doubtful cases of the latter were referred to an oculist. In the latter part of the work we had the assistance of the medical advisory boards, composed of the various specialists and therefore did not have to reject so many men, but could more fully give the Government the benefit of the doubt. One man of robust physique so managed his breathing as to fail in the required chest expansion. After repeated trials in the presence of the whole board, we promptly certified him as qualified for military duty.

Most of the attempts of evasion in our experience came through alleged dependency or occupation. Husbands giving only slender support to wives and families, sons really supported by their "aged and infirm parents," or claiming fully to support them when there were other brothers equally able to maintain them, were common and obliged us constantly to be on our guard. To these were added men who married to escape the draft. Agricultural and industrial claims required close scrutiny and often a visit to the farm or factory by the Government claim agent. Incomplete, unsatisfactory and misleading answers were often given in the questionnaires, but even in these it was rare that downright perjury could be proved.

Having briefly outlined the main features of the draft plan, it is of particular value to us as physicians to consider it in its health relations and to draw from it various lessons.

There were examined physically at local boards about 2,510,000 men between the ages of 21 and 30 years. Of these 46.8% were found to have defects and 730,000, or 29.1%, were rejected on physical grounds. Additional physical defects discovered or emphasized in mobilization camps, resulting in the discharge of the men, would perhaps increase this to nearly 35%—a rejection of more than one man out of every three. It is a reproach to a nation to have such a record of its men during the period of their greatest vigor, especially when most of these defects could have been prevented or cured if they had received early treatment.

There are, however, several circumstances which serve to modify these percentages, so that the real condition is not quite so bad as it

seems. The first of these relates to the large number of voluntary enlistments—a number amounting in Massachusetts to 52% of the quota of the first draft. These men were healthy and without marked defects or they could not have been retained in the Army or Navy. The body of men remaining and subject to the draft did not, therefore, represent the normal man-power of those ages, for the reason that a considerable number of its sound and most enterprising men had been combed out in advance by voluntary enlistment. Again, the rigorous standards required for war efficiency would lead to rejection of a few defects that would not materially interfere with civil pursuits. Stature less than 60 inches, loss of sight in one eye, dependence upon eye glasses or upon artificial teeth, would not incapacitate the individual for civil occupations.

The number of defects was far greater than appears in any reports, for the reason that it was not uncommon for a man to have more than one serious defect, while rejections in these cases were often made naming one defect only. A man examined by me was deficient in height and weight, had defective vision and teeth, had heart disease and hernia. He also had deformity of one arm and was mentally deficient. We must also consider the numerous disabilities in men accepted for the Army, in whom the defects were not present in sufficient degree to cause rejection. Although Army surgeons estimate that 90% of these were not of such a nature as to interfere seriously with occupations in civil life, there would doubtless be some restriction or limitation in the occupation chosen, and nearly all were caused by some form of neglect. We should not be content with making the best of a bad thing, but should aim to have strong citizens, who can follow the occupation most suitable without physical handicap.

Personal observation during the draft and subsequent study of statistics impress me with the fact that the physical condition of American manhood is far below the standard it ought to represent. Statistics vary a great deal in different parts of the country, but for the sake of studying our local conditions, I will analyze the cases of 233 men rejected physically by me in the first draft. The causes of rejection were as follows:

Defective teeth	45	
Defective vision	33	
Hernia	29	
Underweight	27	
Flat-foot and other deformities of feet	22	
Other deformities and losses	18	
Organic heart disease	15	
Otitis	6	
Varicose veins	6	
Deficient chest measurement		
Overweight		5 each
Deafness		
Loss of one eye		
Underheight		
Varicocele		
Epilepsy	2	
Undescended testicle	2	

Considering, first, defective teeth, which was the most prominent cause of these rejections and constituted 18.3% of the whole number, let us inquire as to the cause. For the first 15 years of my practice, there was no dentist in the town. The bulk of the population had not formed the habit of going to a dentist and many of them were averse to doing so. A common axiom with the parent when a child complained of toothache was: "Does it ache? Have it out." Physicians extracted many teeth, usually for the benefit of the patient, but when comparatively sound teeth were desired removed, the urgent advice to go to the dentist and have treatment to save the tooth in many cases met with a flat refusal. I have sometimes reluctantly and under protest, extracted teeth after ineffectually begging the parents to have them saved. Neglect is most disastrous in the case of the six-year molars, which come before the parents are aware and often decay beyond recovery before they are given any recognition. As nine of the ten towns included in my draft division are small, the lack of dentists, and lack of dental education of parents undoubtedly prevailed through all these towns and the fruit of this neglect was seen in the draft.

Aside from the pain and loss of time caused by toothache and jaw abscesses, decayed teeth lead to imperfect mastication of food, poor assimilation and nutrition and the ills of various dyspeptic affections. Moreover, abscess cavities connected with the roots of the teeth are common and serve as centers of focal infection, which may be the direct cause of various rheumatic and arthritic affections. They may also be the source of boils and carbuncles and any acute process like otitis or appendicitis will more likely become purulent because of focal infection.

The draft regulations regarding the teeth were later made less stringent and provision was made for dental repair by the Government in order to fit some of these men for service. A certain proportion of rejections for teeth were made on account of removable plates, which could not be replaced in war if broken or lost. These men, of course, were not unfitted for civil life, but still bear the stigma of probably having lost their natural teeth unnecessarily. New England, New York and New Jersey have a far greater proportion of defective teeth than any other part of the country. A comparative freedom from it is found in the prairie states and those to the southwest. It is more frequent in cities than in rural districts and it is not unlikely that the old English stock that settled New England and the French Canadians who have colonized within it both have a racial lack of resistance to dental caries.

Defective eyesight formed 13¼% of these rejections. A large proportion of these wore glasses and were not thereby badly off as civilians. The tests, however, had to be made with the unaided eyes, for a soldier dependent on glasses would become useless if they were broken or lost. Doubtless some of these may have suffered from neglect or misuse of the eyes in earlier life. Here again New England and some of the Middle States show an excess of defective vision, possibly due to close use of the eyes in the large cities and perhaps owing to a constitutional tendency to myopia.

Underweight constituting 11¼% represents a lack of nutrition and of physical power. Perhaps a few of them had recently recovered from illness, but the majority were no doubt associated with some special cause, in manner of life, occupation or habits, which might, on investigation, be remedied. This proportion of weaklings in this land of plenty is a reproach to our civilization. New England has a large excess of underweight, but the greatest areas of it are in Tennessee, Kentucky and adjoining states, ascribed to hookworm disease.

Hernia formed about 13% of our rejections. Our early regulations obliged us to reject them all, but later we were allowed to accept all small, easily reducible hernias and all others were referred to the medical advisory board. It was the intention of the Government to operate upon many of these and put the men into military service. In many cases the registrants

did not know they had hernia and the draft was useful in discovering the disability.

Flat foot, with other deformities of the foot, was the cause of 9% of our rejections. This is larger than was obtained in our Board in the later drafts, when rejection was limited to cases of functional impairment of the feet. Flat foot in its various degrees is extremely common and in all the mobilization camps was found to exist eight times as frequently as any other defect. The slighter degrees cause no inconvenience and curiously this is true of a few of the more pronounced cases. Flat foot, however, is a very important cause of disability and impairs the freedom, efficiency and health of many people in civil life. Its causes are faulty habits of standing and walking and the wearing of improper shoes. When the knee-joint stands vertically over the center of the ankle, the weight rests upon the ball, heel and the strong outer border of the foot. If the knee stands a little outside the vertical, it accentuates and confirms this correct position. If, however, the knee stands inside the line of the ankle, the inner part of the sole comes nearer the ground, resulting in time in a rolling inwards of the astragalus and a lowering of the internal malleolus. The exact condition of one's weight-bearing surfaces is graphically shown by stepping on a floor with the wet foot.

Unfortunately shoe lasts give the same height across the metatarsals with scant room for the large first metatarsal. To ease this condition, the wearer of the boot turns the toe outward, bringing the foot into the position of eversion and predisposing to flat foot. The remedy consists in ample width and fulness below the instep or in a shoe that laces far down toward the toe.

Most of us were taught in childhood to "toe out." The Indians, however, always walked toeing straight ahead and their instinctive gait proves to be the correct one. It is a curious fact that soldiers are still required to stand with toes widely divergent during their drills, thus perpetuating a position of the feet that conduces to flat foot.

The greater part of cases of flat foot show no bony structural alteration and can be cured by having the patient learn to stand and walk correctly and by proper shoes and a few simple exercises. Drs. Bradford and Cotton both consider plates useful in the early part of the treatment, but find they can be discontinued

when proper shoes are worn and the muscles become properly trained. Raising the inner side of the sole and heel of the shoe is useful in the same way as plates.

Other deformities and losses constitute 6% of our rejections. These included stiff knee, ankle, wrist and elbow joints and loss of limbs or fingers. These were due mostly to accidents, infectious inflammation, to tuberculosis and to rheumatic affections, many of them, no doubt, preventable or the result of unskillful treatment.

About 6% of our rejections were due to so-called organic heart disease. These we identified by a systolic murmur, loudest at the apex and transmitted to the axilla and back. We had to reject all who showed these signs in the first draft, because the regulations then in force required us to do so. Later a change was made, embodying the following sentence: "Systolic murmurs unassociated with enlargement of the heart, alteration of the first sound, accentuation of the pulmonic second sound or abnormal response to exercise, may be considered without significance." Also, "All diastolic murmurs at apex or base, including presystolic murmurs, shall be considered evidence of valvular disease." Rheumatic history was also given weight.

Our original regulations coincided with the views we all held for many years, while the revised regulations represent the modern view as set forth in an article by Dr. Henry A. Christian (*BOSTON MEDICAL AND SURGICAL JOURNAL*, Nov. 29, 1917, pp. 750-753).

Following this change, we reexamined our heart cases and qualified almost all of them for military service. It was rare to find disabling heart disease in men under thirty and even if an occasional systolic murmur should prove to be associated with valvular trouble in a heart of normal size and action, the individual would readily serve through a war and would not reach his day of reckoning for some years in the future.

Valvular disease in early life should be preventable by protecting the individual from the exanthemata and from focal infection arising from diseased teeth and tonsils. In the whole country and throughout the draft 5½% of the men examined were found to have defects of the valves or blood vessels.

Otitis and varicose veins each made 2½% of our causes of rejection. Otitis can be mini-

mized by early removal of adenoids and by prompt and skillful treatment of ear troubles. Varicose veins are not so easily preventable, although early recognition and treatment will serve to limit their extent.

Deficient chest expansion, overweight, deafness, loss of one eye, underheight, and varicose each caused rejection of $2\frac{1}{2}\%$. Deficient chest expansion must be classed with underweight, as each shows faulty development or lack of nutrition. Overweight might have been prevented by proper diet and treatment, and deafness due to acute ear trouble may have been preventable.

Two per cent. were feeble-minded; $1\frac{1}{2}\%$ had hemorrhoids; less than 1% had epilepsy, and the same number undescended testicle.

The regional distribution of defects is well stated in an article by Davenport and Love (*Scientific Monthly*, Feb. 1920, p. 141) as follows: "The northeastern part of the country appears to be characterized by congenital defects and those of city life. The Northwest is characterized by deformities due to accidents, by goiter and by flat foot. The Southeast is characterized by venereal diseases, hookworm and similar complications, including blindness of one eye, arthritis, and ankylosis, underweight, mental defect, emotional disturbances; by pellagra, hernia, loss of upper extremity and bullet and other wounds. The Southwest is characterized by tuberculosis, drug addiction, hypertrophied tonsils and hernia. . . . From a military standpoint, the Northwest contains the best men of the country." The cities show about 15% more defects than the rural districts.

Kansas leads the country with the fewest defects—only 42%—with only 14% of rejections. Nebraska and South Dakota come very near to the record of Kansas. These states were settled by a young, active and enterprising population, reinforced by wholesome immigration from Southeastern Europe.

Rhode Island, with 80% of defects, has the poorest record of any state. It contains a larger proportion of city population than any other. Massachusetts makes a very poor showing as regards health of its man-power, ranking forty-seventh among all the states and territories of the Union. Only Rhode Island and Vermont have worse records. Forty-seven per cent. of all Massachusetts men examined were rejected because of physical defects. Why should our state have such a bad record? Be-

ing one of the oldest and most conservative parts of the country, it perhaps has had more intermarriage of relatives, thus causing deterioration of the race. It has also suffered from emigration to states and territories farther west. In these cases the most vigorous and enterprising have gone, leaving at home those of less marked ability. Thus there has gone on in many parts of New England a gradual selection, which has amounted to a survival of the unfit. We claim to be the most enlightened part of the world and yet one does not have to travel far to find conservatism born of dense ignorance. Western states, although called by us "wild and woolly," are very quick to seize upon new ideas and do so all the more readily because they are not steeped in tradition.

Dense ignorance has allowed a generation to grow up showing numerous individuals with defective teeth, with all digestive troubles and focal infections inherent in the condition. It has marred the race by round-shouldered, narrow-chested, flat-footed individuals with the "hatchet faces" produced by adenoids. These facts, revealed by the draft appraisal, may well cause alarm and lead us to inquire how to escape from a continuance of these conditions.

Some of these registrants were the unwilling victims of heredity, and improvement should have been begun, as Dr. Holmes long ago suggested by more carefully selecting their grandparents. No one doubts the wisdom of careful breeding of live-stock, but the human race, vastly more important, is allowed to propagate itself without guidance. Let us hope that in the requirements of the future, eugenics will have a place. Mankind no longer consists of detached units and we are constantly learning that the welfare of the whole community is of the highest importance and that it can be obtained only by forethought and by the development of the community spirit.

Our next best recourse is to begin with the very young in the public schools, preferably in the kindergarten. Medical inspection should here make its first survey, providing hygienic conditions in the school and securing the early elimination of adenoids and diseased tonsils. A little later the six-year molars should be sought out and saved, either with the coöperation of the parents or by a dental clinic under the direction of the school. Meantime close watch must be kept upon the weight and nutrition of the pupils, for full vigor must be maintained

during the period of rapid growth. Talks on hygiene should be given at intervals during the course, with particular instruction in proper methods of standing and maintaining erect carriage. If this plan is followed underweights and defective chest expansions will be discovered and remedied long before the individual reaches adult life.

Many times faulty conditions exist in the home which will balk all measures for the improvement of the child. These must be discovered by the school nurse, who should visit the home, observe the conditions there and tactfully educate the parent as needed.

Backward pupils are a problem in every school. They not only fail themselves, but they retard whole classes. Mental tests are now used, which readily show the mental power of a given pupil. In my work as school physician, I have seen the need of devoting particular attention to backward pupils, including those frequently out of school because of illness. I have, with the coöperation of the superintendent, begun to bear down on these cases in three ways: (1) Physical examination. (2) Mental tests. (3) Study of the home by the school nurse. Sometimes the mental dulness disappears when adenoids are removed or when deafness is relieved. In others, improvement of the home conditions removes the difficulty, while in still others the backwardness is entirely mental. It is a rare kind of backward pupil, in which the nature of the difficulty cannot be revealed by this method, although unfortunately some of these cases can be remedied only in part.

All these measures will fail in their best results unless there is in every town a department of physical education with some gymnasium facilities and supervision of the outdoor sports.

Annual physical examinations of pupils, properly recorded, will show the need of individual attention and also improvement accomplished from year to year. Medical supervision of schools in Massachusetts was introduced largely to limit the spread of contagious diseases, but it has come to mean much more than that. It should guard the well-being and physical perfection of the pupil throughout his school course. If obstacles to his success exist, they should, if possible, be removed. His physique should be strengthened and well maintained. He should receive such instruc-

tion that, on leaving school, he will be able to care for his health and to insist on a high grade of living.

I believe that no field of human effort can be more productive in these days than the care of the well-being of our young people. By these means we can hope to produce a race that will be erect, vigorous, alert and successful. These are the days of preventive medicine and it is not unlikely that many of these pupils brought up in the atmosphere of regular inspection will desire to continue such inspection at intervals through life, forestalling many a preventable complaint, maintaining a high degree of efficiency and fortifying the system against the advance of age.

I already find a few individuals who desire to have a physical examination made once a year. It is in line with other practical methods of efficiency. The prudent manufacturer has his production department, his cost and sales systems examined by experts. The automobile will give its best service if it is critically examined at regular intervals. Why not the human machine also? Deviations from health can be discovered and dealt with in the incipient stage. The individual with a tendency to high blood pressure can be advised so to regulate his life as to restore the balance of his circulation. The first indications of pendulous abdomen or obesity can be observed and dealt with. These and a host of other conditions can be noted by the physician before the patient is aware of them and such advice given as will not only serve to prolong life, but to give it greater facility and satisfaction. This method is far more advantageous than waiting till the man is sick and the disease may have done irreparable injury to his system. Moreover, we all know of men supposedly well, who have dropped dead upon the street. By keeping a careful record of successive examinations in a card system, variations can be readily noted and if the man falls ill at any time the record and history of his normal state will be of great value in the conduct of his treatment. General examinations of the eye, ear, nose, throat, and teeth should be included for completeness, serving, if for nothing else, to remind the patient to go to his oculist, dentist or other specialist as needed.

Someone may object that examinations of well people may direct their minds abnormally to symptoms and diseases. This, in my experi-

ence, does not occur. Assurance of health always has a tonic effect and coöperation is readily secured. Talk with the man who has just been accepted for life insurance and see what he says.

Such examinations should not be made in dull routine, but with the sympathetic interest of the physician, visualizing the life and regime of the individual, lightening the load here, bestowing precaution there, and injecting common sense and optimism where necessary.

The busy practitioner in his daily round should not be content with simply getting the patient through his attack of tonsillitis or influenza, so that he can resume his occupation, but should review his physical condition and consider whether he is getting the best out of life. If not, he should study his case and advise him accordingly. The general practitioner holds a rare position as confidential friend and adviser and should manifest a vital interest in his families from generation to generation. If specialists are needed, he should wisely select them and see that their work produces the required results. He should be the strong coordinating influence, directing and enforcing all good measures for the welfare of the patient. He should not lightly hold the responsibilities of this relation, but should remember that for the time being the family look up to him as to no one else. He should therefore not necessarily confine himself to the particular patient he is called to attend, but should show a friendly interest in the family welfare, tactfully advising them of any errors in their method of life. He should, by no means, allow a defective or sickly child to grow up unnoticed or lightly pass by any source of focal infection. Such matters as these can be dealt with in a friendly spirit, without officiousness. A little interest here and there will contribute to that perfection of the race for which we all should strive.

Universal military training is now under discussion. Should it be adopted, the benefit of examinations like those of the draft, would be further extended. In fact, a physical survey of the youth of the land would be made every year. This would undoubtedly stimulate the race to greater physical stability. The military training would eliminate the last tendency to round shoulders and would improve the physique as it uniformly did during the late war.

Should the measures I have suggested be carried out in the schools and in the home and by the general acceptance of the means of preventive medicine, I feel sure that another generation will show a man-power that we can regard without reproach—a physical perfection of which we can be proud.

Original Article.

TUBERCULOSIS AND INFLUENZA.

BY JOHN B. HAWES, 2ND, M.D., BOSTON.

WHAT is the effect of an attack of influenza on previously existing pulmonary tuberculosis? This question has been asked countless times during the past two years. Physicians all over the country and especially those who deal extensively in pulmonary diseases have again and again met this problem and worried over its solution. There is an amazing difference of opinion in regard to it. Some, notably Fishberg, have held that consumptives possess a high degree of immunity against influenza and that an attack of this disease does little or no harm to the previously existing tuberculous process; others look upon it as a very grave and serious complication.

Raymond Pearl, of the Department of Vital Statistics of Johns Hopkins University, in a preliminary report has furnished the most valuable information on this subject that I have seen. Of over 2,000 tuberculous persons that he investigated, 25% had influenza; of 8,000 non-tuberculous persons 22.3% had influenza. This difference is small and not significant one way or the other.

The question of immunity is an interesting one. Does a consumptive really possess any such immunity or is the decreased incidence of influenza among consumptives which apparently does exist as compared with that incidence among the population at large due to the careful hygienic and better living conditions under which the consumptive lives? This is not an easy question to answer. In order to get further light on it from the experience of others, I wrote personal letters to a representative group of physicians whose practice deals largely with cases of pulmonary tuberculosis and asked their opinion as to the relation of influenza and tuberculosis and the effect of one