urea, whereas the same individual excreted a daily average of 68.9 grams of urinary solids and 11.5 grams urea in twelve specimens examined between attacks. A summary of the average of all the observations made is as follows:

Individuals.	Average weight, lbs.	Average quantity, c. c.	Average solids grams.	Average urea grams.	Indican.		
					Marked. Per ct.	Slight. Per ct.	Absent. Per ct.
Paralysis	145.8	174.2	74.95	11.019	49	36	15
Headache	113	127.4	75.19	17.57	55	42	3
Normal..	139.6	1313	73.28	20.006	30	47	23

In studying the accompanying tables every one can draw his own conclusions, but they seem to establish at least one fact, that the patients included in the paralytic group are not excreting the normal quantity of nitrogenous metabolic products. This being a family affection, there is doubtless a peculiar idiosyncrasy that makes these people susceptible to this peculiar affection when under the influence of some exciting cause, that would not so affect others. What relation there may be between this diminished excretion of urea and the paralysis, further observations may explain.

TREATMENT.

Believing that these attacks were due to a vasomotor spasm of the anterior spinal artery, I resolved to try large doses of bromid. I began this treatment twenty years ago, immediately after witnessing a death reported in this paper. The dose of bromid, preferably of potassium, usually consisted of 5ss with caffein citrate gr. i or ii, and this dose repeated in one or two hours. This seemed to give unmistakable relief, so that from this time on most of those who were subject to this disease kept the medicine on hand, and without exception, these patients were certain that while it did not cure, it did have a very decidedly abortive influence and hastened improvement, when taken during a paroxysm. Prior to this nothing was attempted but prophylactic measures when predisposing causes were known. Prophylaxis is an important matter with some, for if, in the presence of a severe acute catarrhal inflammation of the respiratory organs one should indulge in rich, heavy food, life might soon be in danger.

In one case reported, E. O. G. took one or two doses during the evening if he felt an impending attack, and for a period of two years he did not fail to meet a pulpit appointment. He was then taken with a febrile affection, which he attributed to the medicine taken, and from this time on he took no more bromid. During the two years he took the medicine he felt the attacks often. After the febrile attack, he was free from the disease for about a year. He was then taken with an attack on a Saturday evening, which continued until Monday at 4 a. m., when he died very suddenly. This was the first attack after he discontinued the bromid. He did not take the bromid unless he felt an impending attack, which he was always able to do. A number of these patients have told me that they feel an improvement invariably in half an hour after taking the medicine. I do not know of a single instance in which a severe attack developed when the bromid had been taken during the onset; small doses were never tried, only large doses to make a decided impression on the nervous system. The frequency of the attacks does not seem at all affected by the use of the bromid.

In these cases no autopsy has been obtainable, thus far, but the patient, aged 70, has consented to an autopsy after his death, and then we may learn more of the pathology of this disease.

AMERICAN HYGIENE.

CHAIRMAN'S ADDRESS BEFORE THE SECTION ON HYGIENE AND SANITARY SCIENCE, AT THE FIFTY-SIXTH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, PORTLAND, ORE., JULY 11-14, 1905.

JOHN S. FULTON, M.D.

BALTIMORE.

The same Scripture which forbids a man to think of himself more highly than he ought to think, warns also against the opposite sin, bidding him think soberly, according as God has dealt to every man the measure of faith. Applying to the duty of this hour the rule and measure of scientific faith which has been dealt to me, I desire to consider soberly the office of this Section as a member, first, of the body medical, and afterward of that greater body in which the profession itself is a member—the body politic. If I confess no surprise that a majority of the members of the American Medical Association see in this Section no very distinguished merit, I imply no disparagement of the past history of the Section, nor any want of intelligence on the part of those who think less highly than I of the capabilities of this Section.

The Section on Hygiene and Sanitary Science seems to me in certain respects the most important division of the American Medical Association, and includes among its future possibilities a very eminent distinction, that of becoming the chosen agent in bringing the powerful and beneficent influence of medical common sense to bear on public opinion. That the Section will be raised to a place of such dignity and influence seems to me manifest destiny, and the question is not whether it shall come to pass, but when. Early—the answer is—if we recognize the advantage of our position and carry forward our responsibility; late—and to our disgrace—if the event must wait until the great body of the profession discovers the advantageous position of the Section on Hygiene and Sanitary Science. A mere perception that this Section articulates the medical profession to the body politic will not of itself commend us to the Association. It is interesting information, to be sure, but, stated in words it carries no conviction. Stated in works, the special utility of the Section will compel the interest of the Association and rapidly develop in the Section its true organic function.

A brief consideration of the circumstances which have been determined internal boundaries in the Association may help us to a better understanding of our own relations. The purpose of these annual meetings is primarily educational. Every man who speaks is for the time being a teacher; every man who listens is for the time being a learner. In the pursuit of information the members are free to go wherever their personal interest leads them, but one's desire to impart information is stringently regulated, first by the individual sense of power to contribute, and next by the selection which a man has made for the sake of a particular technical excellence. A man may gather honey or wax wherever he will, but he brings the product of his industry home to his own hive. Each division of the Association, therefore, stands toward the remainder of the Association as a source of knowledge, a teaching

body; and, conversely, the Association as a whole is a student body, deriving from each of its subdivisions the particular knowledge on which the general efficiency of the profession is nourished.

The distinctions which separate the Association into sections are not equally sharp. Some of them cut so deep that, in order to be a highly efficient individual, one must practice within limits so definite and exclusive that he may lose in time many of the attributes and almost the name of a physician. Allowing for the influence of numbers, the most efficient divisions of the Association are made up of men whose names are but rarely in the mouths of the people, who are spoken of by us not as physicians, but as pathologists, anatomists or physiologists. These sections, in which the title of physician is most apt to be abbreviated so that the special designation may be spelled out, are central to the body of medical science. About them are grouped other sections with looser distinctions, not wholly enclosed by the natural sciences, but having some contact with human affairs. The place of Section on Hygiene and Sanitary Science is peripheral to the body of medicine, and, in contrast with all the others, fully half of its area lies in political science. Here, more than anywhere else, "special knowledge will leak out, and general knowledge will leak in, though a profession were covered with twenty thicknesses of sheepskin diplomas." Here, or nowhere on medical territory, "statecraft and medical knowledge should sincerely take counsel together for the health of the people." From the reaction between American medicine and American politics, American hygiene results, and all its virtues are not derived from medicine, nor all its vices from politics.

The profession should be deeply concerned about the fate of its members who venture into this field. It is a rash adventure for any man, and the wonder is not that so many fail but that any succeed. All honor to those who in the past have done good work in American hygiene, and all charity for those who have been lost. Every one of them, whether surviving or perishing, came to his task in all but nakedness, for medical education does not prepare a man for the dangers of this field, nor is it likely that, from an academic viewpoint, its dangers are visible. Great numbers of physicians feel qualified to practice hygiene, and great is the mortality of medical men in the service of Hygia. He who develops no political sagacity in this environment is rejected by the people; he who acquires political sagacity of a wrong kind is rejected by the profession. Both may continue in office, but neither can be a profitable servant of the people.

Of the notable faults in American hygiene, one owes its bad eminence equally to politics and to medicine. I refer to the abject, disgraceful, ignorant poverty of American hygiene in the fundamental data of the subject. A country which swells its population by admitting a flood of immigration, with no more than a show of caution about the physical and moral results to the country, can not be expected to care about the minutiae of loss and repair in its native population. A country which offers citizenship, on the simplest conditions, to any uncouth outlander, is not likely to learn, save in the shadow of disaster, the value of a son born in the land and nourished in its institutions for 21 years before he may become a sovereign citizen.

Excellent reasons justify four volumes of United States Census Reports on manufactures, two on agriculture, and abundant information published by state gov-

ernments and class journals. Complete and accurate data on these subjects are worth many times the cost of collection. Just as satisfactory reasons justify two census volumes on population and two on vital statistics, while a great majority of the states are absolutely silent on these subjects. And such reports! Better than formerly, but beginning in 1900, as in 1890 and 1880, with an apology for 30 or 40 per cent. defectiveness of the mortality evidence, on this point, or in that locality; loaded with asterisks which mean "data insufficient;" expressing a most reasonable doubt whether nine jejune pages on births ought to be printed at all—these reports express Columbia's sense of business responsibility for 78,000,000 lives. People are cheap; worth less than the cost of acknowledging the beginning and recording the end of life. Faster than disease, accident and crime can diminish their numbers, the land can be replenished by opening the gate to cheaper people.

Vital statistics originated, as the word statistics indicates, in political science, but the neglect of the subject in this country has incited so much medical preaching that politicians have come to regard vital statistics as a kind of medical arithmetic. Such progress as registration has made in the United States is undoubtedly due to the influence of a few physicians, but it is at least doubtful whether the vital statistics of this country would improve very rapidly if wholly committed to the medical profession. Numerical completeness of returns of birth and death might be obtainable, but in a qualitative sense the results would be but little better, for the value of the results depends not on the number of observations but on their accuracy, and their accuracy depends in part on the prevailing standard of medical education, and partly on the physician's sense of responsibility in making his small contributions. In one of the United States the whole subject of sanitary government is, and from its inception has always been, in the hands of the state medical society. No state in the Union is more ignorant of its population, no state more destitute of the fundamentals of sanitary organization. To those who believe that the sanitary destinies of a state would necessarily be safe if confided wholly to physicians, the history of Alabama is a sufficient answer.

The consent of the people to systematic registration of vital data may not be easily obtained, but after that is done the consent of the medical profession will still be necessary in order that the will of the people may be effective. If in certain parts of the country the total neglect of vital registration is a vice of politics, in those states and cities where registration laws are in force, the unsatisfactory results of registration are chargeable against American medicine. To the best of my knowledge, there are two medical schools in the United States whose students are taught to write death certificates. A very intelligent professor of hygiene told me recently that it had never occurred to him that a physician might not know how to write a death certificate. My own experience in handling medical certificates of death, and my acquaintance with the results of mortality registration in general, convince me that one physician in every three can not write a good death certificate because he is not a good enough citizen, and one in every four or five can not write a good death certificate because he is not a good enough physician. Instruction concerning the medical certification of deaths would not wholly remedy these defects, for they are, I am convinced, traceable to a neglect in medical education as

fundamental to the training of medical students as vital statistics are to the practice of hygiene.

The common omissions and occasional redundancies of medical certificates of death, as they have grown familiar to me, are more and more associated with the poor discipline of medical schools and hospitals in the matter of anamnesis. The habit of record-making is yet uncommon even among the younger men. Under the influence of a few schools the times are mending, but, with the exception of those who do undergraduate work in hospitals, very few medical students of to-day have any instruction whatever in medical anamnesis.

Assuming that the teachers of medicine in this country can write good death certificates, a rather large assumption, and assuming that they are able to ascertain the proficiency of students, I know of no exercise more likely to exhaust the complacency of a professor of medicine than to undertake the tabulation of a year's mortality records furnished by a hundred alumni. Whoever is greatly elated over the present status of medical science as compared with that of a generation ago may find in the "Census Manual of the International Classification of Causes of Death" an intimate and unflattering view of American medicine as revealed by American certificate of death. This work, rendered necessary because the mistaken notions of our grandfathers survive in the medical memoranda of to-day, shows what is probably true the world over, that the scientific advance of our generation over the last preceding, however great it may seem, can be measured by the length of a funis.

When the people have consented, and the medical profession is both willing and able to furnish memoranda concerning births and deaths, there will remain a few points for the careful consideration of hygienists. In the United States the records of public offices are apparently public in the most promiscuous sense. The laws usually state that they are open for inspection by proper persons for proper purposes. The most stringent laws hardly go further than this, and the custody of records under such loose provisions is very apt to be a nominal rather than a real guardianship.

In my first three years' experience as a registrar, access to the records was refused three times; once when information was desired to prevent a marriage, once with the design of separating a married pair, once by a physician in order to injure another physician. Later, when the records were numerically worth consulting, life insurance companies began to ask for copies of records for the purpose of verifying statements concerning the deaths of relatives made in applications for new insurance. The use of the records for this purpose was refused, and I was told that such use is constantly made of the records in all American registration offices. Thereon I sent the following inquiries to about forty American registrars:

Are records of birth and death exposed, or copies given, to any person who may apply?

Are copies of birth and death records furnished to relatives of the person named in the record without inquiry as to the reason for desiring such copies?

Are copies given to attorneys or agents of relatives asking such copies of record?

May a lawyer obtain a copy of a record to be used in the preparation or prosecution of an action at law to the prejudice or injury of the person named in the record or of a relative of that person?

May a life-insurance agent obtain a copy of a certificate of death to complete proofs of a death claim without authority from the beneficiary to receive such information?

May a life-insurance agent obtain copies of records for the purpose of verifying the statements of an applicant for insurance as to the cause of death of relatives?

May a copy of a record of birth or death be obtained merely for the sake of information?

In addition to categorical answers from twenty-eight of the men addressed, I obtained a great deal of unexpected information. Those registrars who have not the permanent custody of records of births and deaths could only reply in general terms to the inquiries. None of them knew any instance of abuse of the records. In cities the situation is different. The chiefs of health departments in large cities do not know that their records are subject to any abuse. Some of them have no restrictions about furnishing information contained in the records, and no instance of misuse has come to their attention. In some cities written memorandum is made whenever a copy of record is furnished, but copies are rarely or never refused. In some cities it appears that the records may be searched by private individuals, and that no harm is known to have arisen from this complete liberty. The records are open, and no questions asked, in Indianapolis, Cleveland, Detroit, St. Paul, Milwaukee, St. Louis, Washington, New Orleans, Memphis. The purpose of the inquiry is asked in Philadelphia, Savannah, Buffalo, Louisville, Rochester and Providence, but only the registrars of Savannah, Rochester and Providence claim the power to withhold information. One can not tell from the replies of Boston, Chicago and New York whether the registrars make any inquiry as to the reason for seeking such information, or may in any case refuse information. No inquiry is made in the state of New York nor in Michigan, but the records must not be subject to loss or damage. Attempts to regulate the use of the records have been defeated in Washington, Indianapolis, Rochester, New Orleans. The privacy of the records is partly secured in Providence by a court decision; in Minnesota, by a general statute, which declares that a public official may not be examined on any information obtained in his official character if its disclosure would create public scandal. In New Jersey the records are excluded from commercial uses by regulations of the State Board of Health. In Maryland the registration law forbids the state registrar of vital statistics, under penalty of a heavy fine, to communicate any of the personal details of the records in his custody to any person not authorized to receive the same. The discretion thus vested in the registrar has sufficed so far to protect the records of births and deaths. The recent law on the registration of tuberculosis contains a similar provision. Except local health officers, no one may inspect the register of tuberculosis or receive any of the personal information contained therein without an order of court. The health officer of a western city undertook to restrict the indiscriminate use of his records for idle, or curious, or injurious purposes. The difficulties encountered were too many for him, and the records of that city may now be consulted by any one for any purpose or for no purpose. The records of this city are interesting in the fact that they contain the records both of birth and death of unacknowledged children of distinguished Americans, including a president of the United States, and the city department of health has apparently no way of preventing the inclusion of such scandalous fiction in its so-called public records. In another city the chief of the health department protects the records to the best of his ability, and in so doing has met the successful opposition of a mayor, and the threat of open

war against the health department by a newspaper editor who desired to unearth a private scandal, though the records of the health department at the time included certain memoranda concerning a scandalous portion of his own life.

The state of Michigan has found it necessary to pass a special act providing for a secret calendar of marriages contracted for the purpose of legitimizing children born or expected. This seems to me only a plan of creating scandal out of materials not necessarily scandalous.

In a great many places the records of births and deaths are sold to commercial advertising agencies. Sometimes this sale has been effected secretly for a long time, but in some cities the practice is unconcealed. The buyers of these lists are milkmen, infant food and nostrum venders, tombstone makers, photographers, publishers of memorial cards, undertakers and florists. It is somewhat surprising that undertakers and florists should be willing to pay for records of death on the chance of getting business in so short a time. One registrar writes: "I do not know how it is in your state, but here I know that registrars in various parts of the country are under salary or commission by various firms to deliver regularly records of vital statistics for commercial purposes." In Baltimore an infant food vender went into court to compel the consent of the commissioner of health to the use of the birth records for advertising purposes. In the District of Columbia the commissioner of health asks Congress to pass a bill to protect the records, being unable, as matters stand, to prevent their free use for commercial purposes. In one city, a great one, an employe of the health department was found to be regularly selling to a quack the names and addresses of persons for whom sputum examinations were made in the laboratory. This practice was broken up, it is said, though its continuance was not made impossible.

If these experiences, or most of them, had been reported from the great cities, where the temptation to misuse of the records is greatest, or from the very corrupt cities where health departments may be expected to share in the political demoralization, one might conclude that these reports represented approximately the amount and kind of abuse existing in the field covered by my inquiry. But the populations in which these scandals are admitted are not especially good fields for advertising; with one exception all the cities concerned are free from notorious corruption; in two of them the stability and efficiency of the sanitary organization are remarkably high for American cities. Remember, too, that those who furnished me the information used official paper for that purpose, and it is likely that some officials would not communicate facts of the sort without precautions. It is significant also that, while one of my correspondents said that no abuse of the records had occurred in his department, a gross abuse was shortly after reported to me by another member of the same health department. That a majority of my correspondents have not heard of such abuses as I mention seems to be strange, for it is clear that such records are liable to be abused anywhere and can not be defended unless that liability is recognized.

I can not assent to the view that the records of a health department are public in the liberal sense which obtains with respect to other official records, and it seems to me vital to the sound development of our sanitary anamnesis that very close privacy should surround these personal memoranda. The records will always be

false on certain particulars so long as the statements of record are open without hindrance to the general public. Precautions sufficient to prevent abuse of the records need not be so stringent as to make them less serviceable for legitimate purposes. All of us will agree, I think, that they should not be available either by gift or by purchase for commercial purposes, nor answerable to the inquiries of the malicious or mischievous or merely curious, and that records with palpably and wilfully false or slanderous contents should not be admitted to the files. Reasonable care would prevent these abuses, and it is idle to hope for healthy progress of registration until the records are reasonably safeguarded.

We dare not limit the scope of registration to the subjects now included under that head. The particulars concerning population, marriages, births and deaths are by long custom established as necessary sanitary memoranda. The registration of the graver infectious diseases, though generally provided for, is not generally practiced. From time to time the list of notifiable diseases is extended, and it is evident that the scope of registration for the purpose of hygiene will continue expanding. The formal inclusion of pneumonia, tuberculosis, malaria and cerebrospinal meningitis among the notifiable diseases, idle as it is in most places, expresses a real need in public hygiene, and not to be tolerated indefinitely among the sham defenses of American communities. It is notorious that the notification laws in most American cities are practically inoperative, and the common explanation is that the people who enacted these laws do not want them enforced. Those who assume to know the real state of public opinion are the medical practitioners, and these, indeed, do truly represent the opinions of the citizens on whom, for the time being, the notification laws are brought to bear. The consent of the well can always be counted in favor of notification, and up to this time the opposition of the sick can be as confidently expected. This brings up the humiliating reflection that the American people still expect public health to be protected by punishing the sick. It is hardly less humiliating to reflect that the medical profession, perfectly able to represent us truly to the distrustful public, suffers this medieval view to persist.

There are, however, some boards of health able to operate their notification laws with very little friction, and these have found that the opposition of the public has disappeared as fast as the confidence of the medical profession was won. Where cities have made adequate provisions for infectious diseases, where the relations of boards of health to the afflicted are altogether helpful, and, above all, where the organization of the health department is not subject to the vicissitudes of party politics, there notification laws are effective.

So far as I know, the worst forms of political corruption are very seldom discovered in health departments. I like to think that the profession to which I belong is very little inclined to cupidity, and that in hygiene, as in other branches of practical medicine, moral principles are not easily broken down. I have encountered in my own experience but a single instance of what seemed to be a conspiracy to extort a bribe involving the health department of a great city. Last October (1904) a citizen of Maryland, Mr. E. T. D., asked my assistance in the following circumstances: While on a vacation tour with his family, his son, aged 9, was attacked with diphtheria and died July 13 in a western city. He engaged an undertaker, who said that

the cause of death did not prevent the transportation of the body to Maryland, and together they purchased transportation cases conforming to the interstate regulations. Permission to transport was refused by the health department on the ground that a city ordinance forbade it. There is, however, no such ordinance, though an ordinance does forbid the bringing of a body dead of diphtheria from outside into the city, and forbids the disinterment of such a body within 10 years. The Marylander was told that a permit could be obtained by "shaking hands" with the proper person. He understood this to mean the use of money, and definite instructions were given him, but when some tangible evidence of good faith was refused him he declined to do as he was instructed, bought a cemetery lot, interred the body, and returned to Maryland. He desired me to help him recover the body of his son. I gave him a letter to the western health commissioner and advised him about the legitimate cost of getting a permit. He left, saying that he would try to get his son's body without the unlawful use of money, but that if obliged to use money he would, on his return, declare all the details. In November he went west again, carrying letters from three Maryland officials besides myself. He returned with the body of his son, and on Dec. 4, 1904, told me the following story. I omit minor details: Going first to the health department, Mr. D.'s request was refused and the acceptance of his letters was refused. He went then to a railroad man of his acquaintance, who introduced him to the president of a bank, who, in turn, gave him the name and address of a lawyer. Mr. D. "shook hands" with the lawyer and gave him money for himself and several other people. He did not mention the name of the lawyer, and he implicated by name but one person, a superior officer in the health department. His resentment against this individual was very vigorous until I proposed to transmit all the information in my possession at once to the commissioner of health of that city. My fellow-citizen thereon explained that the money which he spent was in the form of gifts, and that it was possible for him to have gotten away without paying. I communicated the information in detail to the chief of the western health department. Two letters have gone each way, and such information and assistance as I can furnish are still at the service of the commissioner of health whose department is implicated in this scandalous business.

American hygiene is, as I said before, the offspring of American medicine and American politics, and is worthy of the two. While its worst faults are, perhaps, derived from politics, American medicine is measurably responsible for the moral as for the scientific deficiencies of the neglected bantling. Has the medical profession anywhere been resolutely arrayed against the corruption of American politics or ever concerned itself deeply about the welfare of its fellows exposed to extraordinary moral hazard in an honorable and necessary calling? Have the medical men who entered this field, and pursued honorable careers honorably, been defended from the predatory statesmen? Where were the physicians a few months ago, when a state, after more than twenty years of leadership in public hygiene, was turned back to the foot of the column, in order that a governor might compliment a friend?

When, "in the exigencies of politics, it seems to have been necessary, in the mind of the new mayor," to have a new commissioner of health, and to retire one of the most active and successful educators of the public that the country has produced, where were the physicians of

the city? Did the exigencies of politics really score so well that physicians can hope, with a show of reason, that a new man—any new man—may succeed at once to the efficiency of his predecessor?

At the end of this chapter of delinquencies, some uninformed person may ask whether there is any virtue in American hygiene. To speak to the affirmative of that question would have been an easy and agreeable task, for I am far more impressed with the merits than with the delinquencies of American hygiene. I am as much surprised as you can be that the honor of being your chairman has turned me to these sober reflections. Pioneers we are, every one of us; fit for the trail, perhaps, but unfamiliar with it; making in the field a new science which many suppose to have been previously made in the schools and laboratories; cut off from our former associates, yet not alone, but laboring, with other pioneers of statecraft, sociology and applied science, to build the principles of preventive medicine into the social structure. Better understood, we sometimes think, by our fellow-pioneers than by the people, on one hand, or the men of medicine, on the other, ours is a game of which the players know little and the referees know less, a game having a fine theory and a book of elaborate rules, but the crudest practice. To bring the conceited medical umpire and the willful citizen-referee together and make them know each other, to mix common sense with medicine and common honesty with politics, and to let the book of rules then and there be damned; that is the way we shall come to be known for what we are, and afterward for what we ought to be. Since the robes of Æsculapius were rent by the endosmosis of common sense, we have learned that knowledge is power in proportion, not to its concentration, but to its diffusion. I count it the highest distinction of a hygienist to be diligent and skillful in diffusing among the people a special knowledge to the salvation of their bodies. And I conceive it to be within the power of this section to diffuse among medical men a general knowledge to the salvation of their citizenship.

Of my two immediate predecessors in this chair, each very clearly expressed the feeling that the Section is not now in the full exercise of its function, if, indeed, the nature of its function is generally understood. At the Atlantic City session we agreed that at each annual session the Section should make an objective presentation of some phase of its subject. Our first exhibit in this line we devoted to the hygienic relations of water. The Board of Trustees approved our plan and promised the needful financial support. At their meeting in February the Board of Trustees appropriated \$200 to the use of the Section, and your Secretary and Chairman concluded that this amount would not finance such an exhibit as was planned at a point so remote as Portland. The exhibit here presented has cost the Association less than \$50. The program is nearly as full as we desired, but the exhibit amounts to no more than one-tenth of what could easily have been realized. Nevertheless, the program and the exhibit meet our original design very satisfactorily in one most important respect. Both program and exhibit include contributions from non-medical sources. If some foolish person suggests that this circumstance implies a poverty of medical resources, say to such a one that it indicates, on the contrary, that affluence of hygiene which we especially desire to share with our fellows in the ranks of medicine.

If I may, in concluding, express a choice of subject for a future hygienic exhibit, I shall say that our next

effort in this line should cover vital statistics, the dryest, most refractory and most neglected subject within our field, and, withal, the most necessary, the least expensive to display, and the strongest to save a man from thinking of himself more highly than he ought to think.

DISCUSSION.

DR. ELMER E. HEG, Seattle, Wash., said that in 1890 or 1891 the first vital statistics act was passed in Washington, and it took the old form of county registration. Strenuous efforts have been made at various times to have that changed to a central registration, without any result. At the last legislature they succeeded in having a bill pass the senate, but it was amended in the house. The amendment, in Dr. Heg's opinion, absolutely killed the bill. It was very short. It was carried by an Eddyite. The original bill required that no burial permit should be issued except on the "certificate of a legally qualified physician." The christian scientist changed it so that a burial permit could be issued on the "certificate of any member of the family or a legally qualified physician." Considering that that would vitiate entirely the accuracy of death returns, Dr. Heg asked the senate committee, at conference, to refuse to concur, and the bill died in conference, so they are now just where they were in 1891. From expressions that he has heard throughout the state, Dr. Heg is satisfied that at the next legislature a proper registration act will be passed for the state of Washington. He said that, not having had a central registration, he has not been brought in contact with the illegitimate uses of the records, but he can readily see that the bill they had before the legislature would not have safeguarded them sufficiently. In the state of Washington there is no trouble at all about the notification of eruptive diseases, but when the state board of health asks for notifications of such diseases as typhoid fever or pneumonia it meets a stumbling block, and it appears to Dr. Heg that physicians ordinarily will notify the health department of any disease when the notification receives recognition by a quarantine or something of that sort, so that they know some use has been made of the notification. For the past year or two local health officers, when they were notified of typhoid fever, for instance, have placed in each house the rules of disinfection, and physicians, on receiving that much recognition of their notification, report very much better than they did before. They used to ask: "What is the use of reporting typhoid fever? It does no good." Now, when they see these rules for disinfection, they report.

DR. W. C. CHAPMAN, Toledo, Ohio, declared that he finds that the great trouble with physicians is want of information and want of education in the matter. Physicians all through Ohio refuse to report because they do not see that there is any necessity for doing it, and the first thing that state boards of health have to do is to educate physicians to see the necessity of reporting diseases. Dr. Chapman has had a good deal of experience in the last several years with smallpox, and the physicians say: "We will not call it smallpox till we have to." Cases of smallpox are not reported in Ohio until some one finds out that it is smallpox. Some neighbor says there is smallpox in a certain house, and the health officer finds that it is so. In Toledo there has been a good deal of smallpox among the workers in the rolling mills and iron works, because the physicians have not reported it. The people themselves will not report it. The disease has been so slight that they say: "We will not report it; we will have to go into quarantine and all that trouble." Finding that this was the case, the health officer made an inspection of that whole ward; 1,500 or 2,000 vaccinations were made, and several health officers, with the physicians, inspected the region and found a great deal of smallpox among parents and children that had not been reported. Physicians must be compelled in some way to understand the necessity of reporting diseases. In Toledo Dr. Chapman believes there is not one case in four of typhoid fever reported. In very many cases this is because of a desire on the part of the people, backed by the physicians, to avoid the notoriety. This is especially so in measles, a very dangerous disease. The medical profession is very negligent about this matter, and Dr. Chapman thinks that this Section is the one that should take steps in this matter and undertake to educate

physicians and health authorities everywhere to appreciate the necessity of registration.

DR. M. L. PRICE, Baltimore, suggested that what Dr. Chapman says shows that the laws of Ohio are a little lax in prosecuting these cases. In Baltimore, in smallpox and other serious contagious diseases, health authorities have been in the habit of prosecuting in every case where it is found that a report is not made. They have obtained several convictions under that law. The essential point in vital statistics is correct and accurate returns, and if that is true as to deaths it is certainly much more essential to have reports of sickness. Dr. Price regards the confidential nature of such records as absolutely essential to secure both correctness and accuracy in mortality returns. Returns in many countries do not give the correct cause of death. The returns of tuberculosis in France are practically *nil*; they are all stated as bronchitis.

DR. WALTER F. MORRISON, Spokane, Wash., said that there is no law in Washington governing this subject and that, therefore, there is difficulty in getting people to conform to what the health authorities think ought to be law. In regard to reporting diseases, Dr. Morrison said that much depends on the health officer and the public sentiment behind him. In Spokane the physicians are pretty good about reporting those cases, because the health officers have taught them to do so. The health officials keep a supply of pamphlets for distribution among the physicians, and the reference to prosecutions, under the law, of physicians who do not report these cases is underlined. In several cases when there were two competing doctors in the same town who were antagonistic to each other, when one of them stated a case was scarlet fever, if slight, the other would say it was measles, or when smallpox, the other would say it was chickenpox. The trouble, Dr. Morrison thinks, is with irresponsible newspapers. These make trouble sometimes and give a good deal of annoyance when the health officers are trying their best to do their duty. Stringent quarantine laws have been established in Spokane, and they are strictly enforced, and the health department is very particular about disinfection of the premises afterward. Dr. Morrison recalled a very interesting case which occurred a short time ago, in which a girl of 16 came from an adjoining county. Three months before she came to Spokane county she had diphtheria; the town had been afflicted with diphtheria, and there was no quarantine and no disinfection in the town so far as this girl, who was very intelligent, knew. Their premises, she said, had not been quarantined and had not been disinfected. When three months time had elapsed, she thought she was safe in visiting her friends. She was suffering from conjunctivitis at the time, and came to Spokane for treatment, and within ten days of the time when she visited this family one child was attacked with membranous diphtheria and died. The mother, who had not received any antitoxin, was attacked with diphtheria and had a very severe case. In this case Dr. Morrison urged the physician to give all the members of the family immunizing doses of antitoxin. Dr. Morrison examined the girl's arm three months after she came from the house and found that a scar where she had been burned was diphtheritic, and, while there was no actual test, he is satisfied that she went to Spokane suffering from diphtheria, and that the secretions from her eyes and from this sore were diphtheritic, because within ten days two members of the family developed diphtheria and one died. He said that if there is a defect in this matter in Spokane county it is in raising quarantines too soon. He said that it is almost impossible to obtain reports on typhoid fever and tuberculosis. Dr. Morrison has not enough notices to send to the physicians in the city of Spokane who practice in the country, but sends such notices to the physicians practicing in Spokane county, without the city, and he occasionally gets a notification of tuberculosis and occasionally of typhoid fever, but there is no quarantine established. If there were some form of quarantine against typhoid fever and tuberculosis and the supposedly less severe forms of contagious diseases there would be less trouble in getting reports and enforcing health laws.

DR. N. K. FOSTER, Sacramento, said that he can sympathize with Dr. Heg in his trouble in getting through the legislature laws to his liking, although the health officials' success in

California last year was a good deal better. They had been working under the old laws which were passed in 1870, under which the county recorders were expected to report to the state board of health every three months. During the last legislature they succeeded in getting passed a law providing that before the remains of a person could be legally buried the undertaker must get a permit, which is issued only on the presentation of a properly filled death certificate. This law, Dr. Foster thinks, they will succeed in enforcing. In the matter of births they will not succeed quite so well, although the law has been in effect only six weeks, and the returns are coming in pretty well. In the matter of reporting deaths they have a law that will cover the ground pretty effectually. They have followed very closely the law as suggested by the Census Bureau. The question of quarantine and the reporting of cases is one that is open to a good deal of discussion. It is a broad question, and has got two sides to it. Dr. Foster is not so much enamored with quarantine as are a good many. Take, for instance, smallpox as it has been known throughout the country for the last few years. The California state board of health has taken a little different ground than any other. When there is a case of smallpox that case must be isolated; everybody that has been exposed to the disease from that case is to be offered vaccination; if they accept it and will promise to report to the health officer every day for examination, they can go on about their work. If they refuse vaccination, then they are to be isolated, of course, not with smallpox cases, but separately, until twenty-one days have passed. In that way the health officers think that they will minimize the expense and get the maximum of protection. If isolation of every person who has been exposed is insisted on, many cases will not be reported, whereas, if the exposed ones are allowed to go about their business, there will not be that incentive to secrecy and they will accept vaccination and be protected. This method is to be given a trial. In case of diphtheria, Dr. Foster believes that the patients ought not to be let out too soon, but if the health officials say that they must stay in for six weeks they can not enforce it. The patients will say, "We won't stay." In order to make a success in reporting and controlling contagious diseases three things are necessary: Good laws, a public sentiment behind them, and an executive department that will enforce the laws. If there is a law that the public will not consent to, that it thinks is unreasonable, it can not be enforced. If the law is reasonable the physicians and the people will stand with the health officers. If there is an executive officer who will enforce those laws and once in a while make a good prosecution for the non-reporting of cases, not picking out a physician that has only a case occasionally, but the man who is at the head and not at the foot, much good can be done. By educating the people and getting good laws a condition of things can finally be obtained in which all cases will be reported, and the laws will be enforced without any great amount of trouble. It is not possible anywhere, Dr. Foster thinks, to get all tuberculosis cases reported. Dr. Foster does not believe in quarantining tuberculosis, because a person with consumption is not dangerous if he knows how to take care of himself. Efforts can be better directed to teaching people how to take care of their sputa and to make themselves safe to be with others than in quarantining them.

DR. W. C. CHAPMAN, Toledo, Ohio, agreed with Dr. Foster that isolation of the smallpox patient and vaccination of contacts is practical and all that is necessary. He mentioned an illustrative case.

DR. CHARLES V. GENOWAY, Spokane, said that in a case of smallpox he would vaccinate everyone who had possibly come in contact with the patient and would take the person who had the disease to the isolation hospital. He uses serum in every case of diphtheria. He isolates the patient and gives every one who has come in contact with the case an immunizing dose of antitoxin. About the only cases of typhoid reported are those that are fatal, but he thinks they can get physicians to report those cases better than in the past. He agreed that physicians are very good in Spokane about reporting diseases. He thinks they hardly quarantine long enough for scarlet fever and diphtheria. When he went into office, ten days after the disappearance of the membrane was the rule, but he has increased that

period; now it is two weeks after a culture from the throat is taken and proves negative.

DR. DENSLOW LEWIS, Chicago, said that the most important matter is to secure the active co-operation of the profession. It is a good many years since he was health officer of what was the village of Hyde Park and of what is now a very large portion of the South Side of Chicago. In 1879 he was health officer, and at that time many physicians objected to reporting cases because cases of infectious diseases were quarantined; cards were put up in cases of diphtheria and scarlet fever, and the smallpox patients were removed to the pest house. The families often thought it a hardship; in many instances they thought it almost a disgrace; in some cases, when the family lived in the back room of a little shop, it interfered with business, and, of course, that was most serious. In order to have statistics of value they must be complete, and for that reason it is important to have every case reported. In large cities this can only be done if the profession co-operates with the health officials; no law will make physicians report. It has been tried in Chicago; fines have been tried, and recently, in the return of vital statistics, physicians were paid, or were offered pay, for returns of births. The experience in Illinois has been very peculiar. In some towns of perhaps twenty or thirty thousand inhabitants there would be reported about twenty births a year. The prosecution of physicians will not make them do their duty; it remains, therefore, to appeal to their sense of propriety, so that an intelligent and willing co-operation may make statistical records complete. It should be understood that notification of disease does not necessarily imply that an uncomfortable quarantine shall be instituted; in other words, it is well for the health officer to exercise his judgment. At the time when Dr. Lewis was a health officer there was an epidemic of scarlet fever. He was called to see one mild case after it had been in progress a couple of weeks, when the child was practically well. The family and physician both objected to the card. They had facilities for isolation; they occupied a large house, and it was possible to put the child up in the attic away from everybody; in other words, it was possible to make the quarantine complete and to protect the public perfectly. Under those circumstances Dr. Lewis thought it advisable to omit placarding the house and no harm resulted. The health officer in these cases should have some discretionary power. The main factor is to prevent the spread of contagion, and, while it is usually advisable to secure publicity in these cases so that the public may take all due precaution, there are cases in which the placarding of houses may consistently be omitted.

DR. L. M. POWERS, Los Angeles, said that he generally advises the administration of antitoxin as a prophylactic measure in those who have been exposed to diphtheria, especially children. He is doubtful, however, whether this is a benefit to the public, though it is of undoubted benefit to the individual; it permits mild forms of diphtheria to develop, while the disease is prevented from manifesting itself sufficiently to allow the condition to be recognized and the patient isolated. Consequently these individuals may go around and infect more people than one with a malignant form would. His experience has been, not only with diphtheria, but with smallpox and typhoid fever, that the mild cases are the ones that spread the disease from town to town and over the country; therefore, he looks for mild forms of transmissible diseases which are too often not diagnosed. For years all patients with diphtheria have been separated from well persons and kept separate as far as possible by placarding the home; this is an incomplete quarantine; it is impossible to maintain a complete quarantine without a guard. By placarding the home and with no guard one can not keep people from visiting, the divine healer, christian scientist and others who wish to demonstrate their powers will take chances, and these are the people who help to disseminate the disease. Diphtheria patients in Los Angeles are not released from quarantine restrictions until they show an absence of the germ in the throat, whether that be one week, two weeks or six weeks or even eighty days. Dr. Powers has held patients in quarantine as long as eighty days, and the germs would show in a virulent form in the throat. As long as those germs exist in the throat, whether they are virulent or

not, such patients are liable to transmit the disease to others with whom they come in contact. Consequently Dr. Powers thinks that quarantine restrictions should be maintained until every case shows an absence of germs at least with two consecutive cultures. In quarantining large schools or homes this procedure is necessary in order to prevent mild forms of the disease or to prevent patients who have had severe forms of diphtheria returning and reinfecting the building. The injection of small doses of antitoxin permits a mild form of the disease; the antitoxin does not kill the bacilli; it only neutralizes the toxin.

DR. KATE LINDSAY, Boulder, Colo., stated that whooping cough has been the most troublesome disease for her to quarantine, and it is a very dangerous disease, certainly during the first three years of childhood or between 6 months and 3 years. As a rule, children have whooping cough in a mild form if they are from 6 to 8 or 10 years old, and they go around the neighborhood, and yet it is a very dangerous disease in young children and very liable to be followed by sickness. Dr. Lindsay said she would like to have some light on the matter of quarantining whooping cough and saving the babies.

DR. N. K. FOSTER, Sacramento, said that in California there is no law making whooping cough a quarantinable disease; it is a reportable disease under the rules of the state board, and it is a misdemeanor to disregard these rules. He also spoke of the number of properly educated sanitarians. Our health officers are largely recruited from physicians—from those who are young and inexperienced and generally without having had any special training. He said he wished the American Medical Association, starting through this Section, would insist that the medical colleges in this country educate sanitarians or at least provide some good course of sanitary science. Let them give a two years' course, so that we can have men all over the country who are competent sanitarians. Of course, there are many good men now—men who have had extended experience and education, but throughout the country sections and a good many of the thriving cities there are men who are not what is needed, and Dr. Foster supposed that it is the same throughout the United States. There is difficulty in getting men who have had any instructions whatever in sanitary science; they may be good physicians, but bad sanitarians. Dr. Foster thinks it would have to be a postgraduate course, but thinks these men should have some teaching, at least an optional course of a few months, in sanitary science.

DR. JAMES CARROLL, Washington, D. C., said that the George Washington University is now contemplating the establishment of a course with a view to conferring the degree of doctor of public health, the special object being to qualify men for the sanitary service.

DR. W. C. CHAPMAN, Toledo, said that the only trouble is that health officers are not well paid. There is no inducement to take that course for two or three years for \$25 a year, which is about the sum paid health officers in Ohio.

DR. E. E. HEG, Seattle, said that Dr. Foster's idea of a course in sanitary science is exceptionally good. He thinks, however, that such a course should be a part of the general training of a physician. The whole point of getting reports is getting the co-operation of physicians; if they were to understand the necessity that the health authorities have for accurate reports there would be no trouble in getting those reports. If that was a part of the general training in colleges, a requisite for a degree, just as a knowledge of the eye is, they would know the necessity of it and education on the subject would start with the younger men. The older men would some time die off, and the younger men would know something about it. He said that Dr. Foster's method of handling smallpox in California has been done in the state of Washington for nearly three years. In Washington, on one side is a state with no health authorities whatsoever, on the other side is British Columbia, and there the authorities are exceptionally strict. If even one case of smallpox drifts over the line from any one town in Washington it means an absolute quarantine of a whole section of the state, so the Washington health officials have to be careful. All quarantine regulations should be tempered a great deal with tact. The object, of course, is to get the greatest possible protection with the

least possible inconvenience. Tact is a valuable quality in any health officer or in any physician.

DR. CHARLES C. BROWNING, Monrovia, Cal., said that co-operation has been dwelt on at length, and he thinks not too greatly, because that lies at the foundation of being able to secure reports. Recently he was visiting a physician, who was going to stop at a place, and asked him to step in. He stepped in and saw a child with scarlet fever and was a little surprised. The physician made a hurried call, and after leaving the case said he would not call it scarlet fever because the health officer would put a card on that house, and the man had to make a living. It seems in that particular town the physicians are not in as good accord as they are in Washington. That is one of the stumbling blocks. Another is that the people generally understand that a report means quarantine. Now, the large number of cases of tuberculosis and typhoid fever do not need to be quarantined in the general sense of the term; it is not proper or necessary, but if physicians understand that when such cases are reported a certain latitude and assistance will be extended, the disease will be attacked by educating the people. First get the physicians educated, and then educate the people to look on the health authorities as their friends, and not as a great inconvenience. That is especially true of typhoid fever and tuberculosis, diseases which are responsible for a great deal of suffering. Then get at the teachers of the public schools through the state board of health and through the county and city boards.

INNOCENT FIBROMYOMA OF THE UTERUS.*

THOMAS B. EASTMAN, M.D.

INDIANAPOLIS.

During the last few years there has appeared in the surgical literature a number of articles wherein the writers have advocated the removal of practically all fibromyomata of the uterus. This position has been taken for the most part on the ground that in many cases complications threatening life, such as the various diseases of the tubes and ovaries, etc., were found which warranted the removal of these structures together with the uterus itself.

It is my purpose to urge that in a very large proportion or in practically all fibroid tumors there exists in the tumor itself at the time of diagnosis, or will exist with considerable degree of certainty at some future time, conditions which warrant their removal, or that the tumor will sooner or later produce such conditions elsewhere. I do this with the full realization that there come to the autopsy room numerous cases wherein such tumors had existed for years symptomless, and in which they were no way responsible for the death of the woman.

That there is a tendency to exaggerate the extent to which these degenerations are found is conceded; nevertheless, that they are found in such a number of cases as to render them of much importance requires for confirmation only the careful perusal of the literature of the subject.

Camus¹ reports a case of multiple fibromyoma of the uterus, weight 4 kilograms, which had undergone calcareous degeneration in one part, the degeneration evidently having started on the periphery. There were no symptoms, but large abdomen.

M. Cornil² describes the removal of an intramural fibroid of the size of a fist in a state of edematous and colloid degeneration. The tissue was semitransparent

* Read in the Section on Obstetrics and Diseases of Women of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.

1. Bull. et Mém. Soc. An., Paris, 1904, lxxix, 707.

2. Bull. et Mém. Soc. An., Paris, 1904, lxxix, 696.