

we believe, in due time, ask for these cards as proof of age. The same will be the case in the enforcement of the child labor law. As the public becomes better acquainted with the requirements of the law, and the value of accurate and complete records of births and deaths, opposition is disappearing and we are meeting with the cordial support of all classes.

We have a system of checking off, from the birth certificates, the monthly records of each of our 2,500 physicians and nearly 8,000 midwives. Semi-annual reports to each physician, and annual reports to the midwives of his or her records, shows that we are keeping in close touch with each, and has a stimulating effect upon the securing of complete reports. Already some friendly rivalries have arisen amongst physicians, as to the number of births reported. With the report is included such message as is indicated at the time, with any new blanks which may have been issued.

Our chief difficulties are in securing the registration of deaths when there is no undertaker, particularly of colored infants, and also in getting certificates of their births from midwives, who have not yet learned of the law, or do not know how to proceed. A few physicians claim to be too busy to give their patrons the benefits provided by law, in the registration of the births in their practice. These difficulties, we believe, will gradually disappear as an enlightened public demands the protection afforded by birth and death registration.

Before being admitted to the registration area, our certificates were inspected and checked off by a representative of the United States Bureau of the Census, who was satisfied that we were securing at least ninety per cent of the deaths occurring in the state. We are now, not only securing a larger per cent, but our certificates are in much better form than at first.

In summing up, I wish to say in conclusion that I believe distinguishing features of our work are:

1. Our persistent effort, by correspondence, to instruct individuals into the requirements and benefits of the law.
2. Our economical and simple system of keeping local registrars' accounts.
3. Our pink and blue birth cards.
4. Our individual reports to physicians and midwives of their recorded births.
5. Our method of securing registration by persuasion and education, rather than by recourse to law, except in extreme cases.

†Since this paper was read, the State Health Officer of South Carolina read before the American Public Health Association, September 8, 1915, a paper giving a most favorable report of the inauguration of the work in that state.

VITAL STATISTICS—BASIC PRINCIPLES OF ORGANIZATION.*

BY F. L. WATKINS, M.D.,
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The value of vital statistics can be readily understood when you consider that no work along the line of sanitation was begun until after the state took charge of the registration of births and deaths. Prior to this time registration was a matter of interest only to the church, and so long as it remained there no use was made of it, other than for legal purposes. At that time the birth of a child was of no particular interest; the real important event was its baptism. Now we know that the registration of a birth is of the utmost importance, as no intelligent study of infant mortality can be made without an accurate registration of births.

I quote Dr. W. S. Rankin, secretary of the North Carolina State Board of Health, who says: "That a board of health is not doing effective work unless it lowers the death rate." That a state may be enabled to do this it must

*Read in Section on Public Health, Southern Medical Association, Eighth Annual Meeting, Richmond, Va., November 9-12, 1914.

have efficient registration of its births and deaths. Vital statistics being the basis of all public health work, the efficiency of registration of both births and deaths depends largely on the thoroughness of the organization. The registration of births and deaths does not become a reality by having enacted a vital statistics law. This is only the beginning, and this law must be one which has certain requirements. It must provide for well defined registration districts, the appointment of local registrars for each district, the compensation for registrars, a definite date on which local registrars are to report, compulsory burial or removal permits, standard forms of birth and death certificates, keeping of the records of all inmates of institutions, control over cemeteries: in some states a report to the central office of all caskets sold, and penalty for neglect or refusal to comply with all requirements of the law. I know of no law that provides for all of these necessities as well as the Model Law. There have been many different opinions as to just what was needed for this purpose, but after giving a trial to these laws which did not embody these principle features resulted in most instances in that state adopting a law that would give results.

The efficiency of the Model Law is probably best illustrated in Maryland, where registration had been required for a number of years. Its adoption immediately showed a marked increase in the registration of both births and deaths. We know from results that if properly administered it is efficient. The early admission of Kentucky and Virginia to the registration area for deaths is significant. Knowing this, why attempt to enact other measures which oftentimes have a provision that will not bring about or permit of bringing about results. One very good reason for its adoption is that it will make uniformity in vital statistics laws. Uniformity of all laws in the several states at this time is a matter which is receiving a great deal of attention.

After having enacted a law the next step is the organization necessary for carrying on

the work. The results obtained will be in direct proportion to the thoroughness of the organization. Anyone having had experience in this work will tell you that it is useless to attempt registration without a sufficient amount of money to provide a clerical force that can at least do certain necessary parts of the work. Registration must be under the direct supervision of some one who devotes all of his time to the work, and he must have full authority to act in all instances. If the law does not designate certain officials registrars, the central office must have full authority to appoint and remove them. It will be found that some person recommended for this appointment professes to be greatly interested in this work, but later fails to make a report and will give no attention to correspondence. In order to secure reports from that district it is necessary to immediately remove him and appoint another person.

The all-important thing to consider in organizing is the division of the state into registration districts, as each district must be a well defined territory, and the registrar having charge of it must be held responsible for the registration of all births and deaths occurring within the district. This district must not be so large that a registrar cannot keep informed as to such events as births and deaths. If it is possible it is best that the registration district be some minor civil division which is provided by statute. Otherwise, if any part of two or more registration districts are co-extensive, the responsibility for the reporting of births and deaths is divided, and it is only natural for one registrar to assume that a birth or death was registered with the other registrar. If in the beginning he is not satisfied that such is the case he will, after a few investigations upon finding such birth or death was registered with the other registrar, lose interest. Then it is easier for him to assume that it was registered than for him to carry on an investigation. Whereas, if he has complete control of the district, and a birth or death is not registered with him with-

in the time limit fixed by law, he knows that it has not been properly registered and can at once call the attention of the person responsible for making such registration and require the certificate to be filed. The longer length of time elapsing after a birth or death makes it more difficult to procure a report. If such event is not registered at the time that it occurs the person responsible for making such report may leave the jurisdiction of the registrar, or if he is not responsible for filing the certificate, he may be the only person who has sufficient knowledge to give the information necessary to make a certificate which would be of any value for either statistical or legal purposes.

When definite territory is not assigned to the registrar, it is liable to cause confusion, and ofttimes affords a pretext for failure to comply with the law.

A great deal of care should be used in the selection of registrars. Many times they are confronted with very knotty problems, and if they are not discreet in the handling of such cases they may do something that will make the registration law very unpopular. This is especially true at the beginning of the work. Many of these cases never come to the attention of the central office until the next session of the legislature, when some member who has not a thorough knowledge of vital statistics proposes an amendment that will relieve the people of his community of their re-occurrence, and I may say that usually the amendment will do everything intended and more too. In fact, it may leave the state without a vital statistic law, if allowed to pass.

The argument may be advanced that by adopting a minor civil division as a registration district that you may have a district which is too large to be handled by one registrar. In such cases the Model Law has admirably taken care of just such contingencies. It provides that a sub-registrar may be appointed for a definite portion of a district for

the convenience of the people in filing birth or death certificates.

One of the greatest difficulties which we have encountered in our work in Mississippi has been to establish our registration districts. Every county is divided into five beats, or supervisors' districts, each of which is subdivided into two to five voting precincts. The beat or supervisor's district was considered too large to use as a registration unit, therefore the voting precinct was deemed the logical subdivision for this purpose. Our trouble in using the voting precinct as a unit of registration is that the negro population is not, as a rule, familiar with the boundary lines of the voting precincts, and does not know the registrar with whom certificates should be filed.

Mississippi has an excellent public health organization, which has been of great assistance to the central office in organizing and carrying on the work. I refer particularly to the system of county health officers. The county health officers are appointed by the State Board of Health, and serve for the period of two years. He must qualify for the work as county health officer by appearing before a notary public, or other person qualified to administer oaths, and sign an agreement with the State Board of Health that "I hereby bind myself to discharge the duties of the position according to law, and to enforce all the rules and regulations made by the State Board of Health to the best of my ability. I further agree to answer all correspondence relative to health matters promptly, to supervise the work of the Bureau of Vital Statistics in my county, using every means to make this work a success." etc. . . . A failure to comply with the above requirements is deemed sufficient cause by the Board of Health for the secretary, with the approval of the executive committee, to remove said official from office.

From the beginning we have depended on the county health officer to recommend all persons for appointment as registrars. By doing

so we have a man on the ground who knows personally the person recommended for appointment. In this way it is possible for him to select efficient registrars.

When we organized this work it was thought that the physicians should have the preference in the appointment as registrars, as they were of material assistance in securing the enactment of the vital statistic law. We therefore requested the county health officers to recommend physicians. This was done in most instances, but we did not receive the co-operation expected from such procedure. In many small towns his fellow practitioner resented having to report to his competitor. This has resulted in many instances in securing laymen for registrars. As a whole we find that we are getting much better results, and are avoiding much of the friction that we had at the beginning. In many districts the difficulty that we have had with physicians has resulted in the appointment of a lady as registrar, and in all cases, I am glad to say, we found that they make very efficient registrars, this being especially true in the rural districts.

While making appointments of local registrars the work of preparing blanks should be carried out, and all copy should be placed in the hands of the printer at the earliest possible date to insure the delivery of the numerous blanks necessary.

Upon receiving recommendation of persons to be appointed as local registrars, the central office should write them a letter telling them that they have been selected for this purpose, and asking them to sign an acceptance blank in which they agree to do the work required by the law. At the same time they should be notified of the probable date on which the law would go into effect. Along with their acceptance blank there should be one for their deputy registrar to sign, accepting such appointment. With these two acceptance blanks it is well to enclose blanks requiring certain information concerning their district, namely, the number of physicians, the number of midwives, the number of undertakers, or persons

selling caskets at retail, and the number of cemeteries which have a sexton in charge. By obtaining this information it will be possible in shipping blanks to observe the strictest economy. With this information there is no necessity for any registrar's failure to be supplied with a sufficient number of blanks of each variety to carry on the work in his district, of his having a surplus of some blanks, which might result if the central office attempted to send out the supply of blanks without this information.

I presume that you have the proper kind of a law; that is, one that makes provision for all the necessary requirements mentioned heretofore, and repeals all acts or parts of acts which may be in conflict with the law under which you are to operate.

In many states where caskets are sold at retail, and licensed undertakers or embalmers do not have charge of the interment of the body, it is very important that all persons selling caskets at retail shall be required to make a report on the first day of each month for all caskets sold during the preceding month. The checking of these reports against the certificates of death on file will increase the efficiency of the registration of deaths to a considerable extent. We found this true in Mississippi. During the first three months' operation of our law, by checking these reports against our death certificates, we were able to locate more than five hundred deaths which were unregistered. To obtain the best results from these reports it would be well to make an index card for each sale, which may be filed alphabetically by the name of deceased, or by counties, the same to be used in connection with the correspondence. It may be used as a follow-up system and kept alive until the certificate of death is received.

The reports of local registrars should be fixed by law for a certain date each month, and all reports should be required to be made at that time. This date should be set so that it will allow time for a birth that occurred on the last day of the preceding month to be re-

ported to the local registrar before the date on which he reports to the central office. The laws of some states provide for the reports of deaths on one date to the central office, and the report of births on another. Unless the volume of work is unusually large there is some advantage in requiring the reports of births and deaths to be made at the same time. This permits of checking the still birth birth and death certificates against each other, and at the same time affords the central office the opportunity in checking over the report to note omissions either of certificates or items thereon. Such certificates and additional information may be secured through immediate correspondence. There are two things in this connection that require considerable attention, that of still births I have referred to, the other being individual certificates for each child in a plural birth.

A numerical designation of each registration district will be found of advantage in checking the receipt of reports and correspondence with delinquent districts. This system of numbering the districts will be found of considerable service in locating the place of birth or death when used in connection with the name of the district. This is especially true with births or deaths that occur near the corporate limits, either inside or outside. It is very important that such births or deaths be given to the proper district, as in case of municipalities, as it may unjustifiably increase or decrease their birth or death rate. Local registrars must, for the best results, be under the direct supervision of the central office. In addition to having well defined territory they must be required to report direct to the central office. When reports are sent through other persons, the responsibility for making such reports is divided, and it hampers the securing of additional information. The securing of additional information is necessary in a great number of cases, in order that the certificates may be made of any statistical or legal value.

The original certificates must be filed in the

central office. It is necessary that the central office use every precaution in guarding the safety of these records against fire or destruction by other means. This is not always the case where original records are placed in the hands of local authorities. When visiting one city for making an inspection of their work it was necessary for me to go over their records covering a calendar year. I had reason to believe that all of the records were not placed in my hands, and after making inquiry I was informed that an employe had placed some of them in a box which was kept in a storage room. These records were absolutely destroyed by rodents.

In speaking of having control over cemeteries, I referred to the requirements which made it a violation of the law for any sexton or any person having charge of a cemetery to permit the burial of a body without a burial permit. Control over the transportation of dead bodies by common carrier is also necessary. With complete instructions to all the railroads that they must not accept for shipment a corpse that is not accompanied by the proper transit permit or removal permit, will enable you to register all such deaths. The only way in which I can see that you can have control over the shipment of such bodies is by placing the transit and removal permits in the hands of registrars. Under no circumstances should an undertaker be permitted to have transit permits in his possession, nor should railway agents have them, as was the usual custom before the enactment of the vital statistic laws. It was only natural that this custom was followed at that time. It resulted from the action taken by the National Funeral Directors' Association, which devised a transit permit for the purpose of facilitating their shipment of dead bodies. The transit permit should be prepared so as to allow the local registrar to fill in all of the information required, and the undertaker should not be required to go to the physician or coroner in order to secure his signature to the transit permit. This necessitates delay, and the full

co-operation of the undertaker may not be had.

The possibilities of your organization depend entirely on the kind of a law that you have enacted. The result of your organization, and the application of your law depends entirely upon the individual who is conducting the work. It is well to establish well defined rules for procedure in the central office and adhere to them very closely in handling of all questions that may confront you. By doing this you will find that you will have less difficulty as persons in the office become familiar with the usage and know the procedure to be followed. If every irregularity that comes to your attention is made a strictly individual matter it will entail a great deal more work, and at the same time you will be liable to have parallel cases in which you reverse your opinion formerly expressed.

DISCUSSION SYMPOSIUM ON VITAL STATISTICS.

Dr. Oscar Dowling, New Orleans, La.—I am intensely interested in this discussion, and I wish now to acknowledge our gratitude to Mr. Harris and his assistants for the valuable aid they have given us and for the additional help they are going to give us. The law as advocated by his department was adopted in Louisiana in 1911 as a part of the Sanitary Code. The last legislature, 1914, enacted a bill which requires each municipal unit and the parish to pay a fee of twenty-five cents for each birth and death properly reported within its jurisdiction, and twenty-five cents where the report is "no birth, no death."

By special permission of the postoffice department we have been able to appoint the postmasters as registrars. We would rather not have done this, but our efforts with the doctors were a hopeless failure. As was suggested just now, there is a disposition on the part of doctors, especially in the rural districts, not to report because they don't want to tell other doctors what they are doing or the number of their patients.

Louisiana has 1,268 postoffices. I recall signing a check last month for one man for \$70.00 for births and deaths. He had made a canvass of all the families he knew and got up all the births and deaths for years back. A portion of his bill was turned down, but we were glad to have evidence of his zeal.

At the last meeting of the state society I heard a doctor say, "I did not put in a report because it is not worth any money." We have fully determined to catch a few doctors and "go after" a few most prominent. The law provides that the court shall set a penalty of not less than \$10.00 nor more than \$200.00 for the first offense; not less than \$25.00 nor more than \$400.00 for the second

offense; not less than \$50.00 nor more than \$500.00 or imprisonment for not less than ten days nor more than six months, or both, in the discretion of the court, for each subsequent offense. If the doctor finds he is going to pay a fine of \$10.00 it is possible it will make him put a few blanks in his pocket and see that they are filled out. I contended some time ago at a conference it was just as much the duty of the physician to report the birth of a child as it was to give a receipt for the payment of the bill. We find the qualified midwives take an interest in sending reports, but, unfortunately, many in the rural districts are very ignorant. The plantation midwife, or midwife of rural practice, is not required to have a certificate.

Dr. J. Farrar Patton is in charge of this part of our work, and I have suggested that he appoint as many women registrars as possible. Some of our best work is being done by women. From a town with a population of a little more than 10,000 we get complete reports. It is a woman who does the work. I hope this little city, Bogalusa, may be admitted into the registration area for births and deaths. In another small town a woman lawyer is doing excellent work.

Before we had money for a force to organize this bureau, I, myself, handled this work, all of it, and I realize we are going to get more accurate and complete reports from the system now in operation, and the assistance promised by Mr. Harris. I wish to assure him that we are going to do what we do well. We want Louisiana placed on the honor roll among the registration states.

Dr. F. A. Coward, Columbia, S. C.—I wish to take up a subject which has been discussed on many floors and which has been adequately handled in at least two editorials with which I am familiar. I presume that all of us here in this room are physicians. It is coming sooner or later that the medical men of this country are going to lose control of the public health situation unless they change their methods. As I say, that is not original with me. I have read editorials in the Journal of the American Medical Association and similar editorials in our Southern Medical Journals. The lay journals are also taking it up. Now, either we as medical men, and I say "we" because while it has been some ten or twelve years since I have practiced medicine, I say "we" and I claim the right to use "we." While we claim to try to prevent the very diseases that we are trying to cure and we get up and make talk and say that our profession is perhaps the only one in the world which is attempting self-annihilation or suicide, I do feel that we are letting this thing slip from us. I would not presume to speak in this body if it were not that in the past six weeks I have, at the expense of the state of North Carolina, which pays my salary and pays my postage and pays my stenographer, had sent out to 300 physicians of the state of South Carolina a statement of the amount of typhoid vaccine which had been furnished to them, and we can tell each man exactly what he received. I got letters in reply from less than 200 men and those men reported eighty cases of typhoid fever. A successive letter sent to those men resulted in less than twenty replies to a detailed question as to the

diagnosis of their cases which had followed inoculation against typhoid fever.

I simply have one point I should like to call to the attention of the medical profession. This matter of vital statistics is also vital to health work. Without statistics we cannot prove results. I merely wish to bring out the laxness of the medical profession in replying to questions concerning public health.

Dr. Coward, continuing: I wish to say this, what I was going to bring out if I had been given time. In the last three years South Carolina, which was the first state to send out typhoid anti-toxin free of charge, has sent out 74,000 doses. We have a right to believe that 25,000 were immunized against typhoid. Certainly at least 20,000 have been immunized. The doctors have turned in 11,000. Eighty cases who had typhoid during or after immunization and 4,000 cases among the unvaccinated, which is more than the health officer's report will show. We are trying to get at the facts. We don't want to spend our people's money and get nothing for it. And I wish to say, further, to the gentleman from Kentucky that I yield to no man in my loyalty to the medical profession.

Dr. E. C. Levy, Richmond, Va.—When I hear health officers complaining of the negligence of the medical profession in reporting contagious diseases, births, etc., I cannot help wondering how hard they have tried to get the co-operation of the doctors, and especially what plan they have followed in trying to get this co-operation. Conditions in this connection were pretty bad when I took charge of the Richmond Health Department eight years ago. On considering the problem I came to the conclusion that doctors were men of far more than the average intelligence and that furthermore they were men who would do their duty as they saw it. I believed that there were three difficulties to overcome: (1) That the doctors did not fully understand what was required of them; (2) that they could not always find blanks for reporting the various things required of them; and (3) that they did not see where any special use was being made of the information which they were required to furnish.

Working on the above hypothesis, I devised an outfit box, which is furnished to every physician practicing in the city of Richmond. This box is rather ornamental than otherwise, and on its inner lid there is a full description of the duties required of practicing physicians, especially information as to what things they must report. This box contains all necessary forms for making the various reports. There is also a requisition card to be used when the supply of any form is running low. On receipt of such a requisition card we send the forms requested and also another requisition card. This outfit box gets around the first two difficulties above mentioned. As regards the third difficulty, we have endeavored to show the doctors that the reports which they furnish are absolutely essential to us, and that the work which we have done in lowering the death rate from contagious diseases would have been impossible but for their prompt and full reports.

Working along these lines we have secured very

complete reports from the physicians of Richmond, and have had very few prosecutions for failure to make such reports. There are so many occasions when a health department needs the solid support of the medical profession, and when not to have this support would hamper the health department very severely, that it seems to me better not antagonize doctors needlessly. On the whole, I much prefer having a heart-to-heart talk with a physician when it has been found that he has failed to report some case than to hale him into police court and thereby make an enemy for the department for all time. Of course, repeated delinquencies must be severely dealt with.

Dr. Roy K. Flannagan, Richmond, Va.—Doctors hate to simply beat the air; reports with no purpose in them find small response. I know of a small city health department where there was nothing to remind the doctors of the existence of a health department but the monthly morbidity reports. There were no other vital statistics gathered, and no use whatever was made of any returns. They were not even filed. Fines were freely imposed. I know, for I had to pay five dollars myself once. A new health officer came in who set to work to make use of the records. Dr. Levy's office (Richmond) was freely drawn on for forms and methods. The filing policy was stopped, but delinquents were "phoned" instead. Co-operation was secured and real work in "public health" there dated from that time.

Citizens and parents as well as physicians will always respond to a city government's work that is getting somewhere.

Dr. Jas. A. Hayne, Columbia, S. C.—I seem to be put in the position of a defendant at the bar. I have a right to defend myself for my criticism of the medical profession, for I have been one of them for eighteen years. Eight years I practiced in a town of three hundred inhabitants, most of them preachers or preachers' families, and we do not charge such in South Carolina. I know the medical profession from A to Z. I know all the ins and outs of a country practice. I know government practice, for I was in the Pension Bureau at Washington, D. C., was a physician in the Isthmian Canal Service, in the army as a surgeon for two years, and have been State Health Officer of South Carolina for three years. Now, gentlemen, there is no use in talking about it, you have got to face facts in this business of getting doctors to report contagious diseases. They simply will not do it. There is no possible excuse that a physician can offer why he does not take the time to fill out a postal card sent him for that purpose, and why he can't check off the diseases printed on that card. I know the doctors in North Carolina and in South Carolina and lived long enough in Mississippi to know them twenty years ago in that state. I was delighted to hear of the wonderful change that the State Health Officer of Mississippi reports to have come over the physicians of Mississippi and how easy he finds it to get morbidity reports from them, but, with due apology to the gentleman, I have my doubts.

Dr. Coward, continuing: I simply want to say, gentlemen, that perhaps from something that arose in my talk I may have said something that

I certainly did not mean. If my remarks irritated the speaker in any way, I did not so intend them. I do wish to say, gentlemen, and I don't know whether my figures were gotten by the stenographer or not, that the State of South Carolina cannot show by doctors' figures that her appropriation for health protection is being properly or improperly spent. When we remonstrate with physicians, some say, "You have got a fat job." "What is the use? You don't ride out in machines. You are not called out of bed." The point is, gentlemen, we do as good work as doctors, but I say when we send out letters to 800 people and we get back 200, we don't feel that we are earning our money, and again I say that the warning has been sounded first by the Journal of the American Medical Association and by the Southern Medical Journal. Unless we change our methods, public health work is going to be taken out of the hands of the doctors.

Hon. W. J. Harris, Washington, D. C. (closing).—This has been a most interesting and instructive discussion, and will be of great assistance to me in the vital statistics work of the Census Bureau. I will appreciate suggestions from you at any time looking to the improvement of this work.

Chairman: I understand the Attorney-General of Virginia is present. We should be glad to hear from him.

Hon. John Garland Pollard, Attorney-General of Virginia.—I have been very much interested in the discussions to which I have just listened. In being called upon to speak I am taken greatly by surprise because I never for a moment thought that any body would think that I could throw any light upon the discussion of vital statistics. I feel, however, as a public official I have been greatly benefited by my attendance upon this meeting, because I have been more deeply impressed with the importance of the collection of vital statistics. A man whose attention has not been particularly drawn to the subject can hardly realize what the collection and publication of such statistics means in solving the vexed problems arising from our efforts to protect public health.

PREPARATION NECESSARY FOR PUTTING INTO OPERATION A VITAL STATISTICS LAW.*

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The success or failure of the "Model Vital Statistics Law" in any state will depend very

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largely upon the location and personnel of the local registrars, for the reason that if it be a convenient matter to comply with the provisions of the law, and if the person in charge of its enforcement in a given area be diplomatic, it will be obeyed. If the area in charge of a local registrar be large, or if the local registrar is so located in a given district as to render compliance with the provisions of the law a difficult matter, it will not appeal to the sense of liberty and independence possessed by the average Southern man, and the law will be rebelled against. So the first matter to be considered by one charged with the duty of preparing for the installation of the "Model System of Registration" is to acquaint himself with the units of area created by the law in all their individual relationships, and determine carefully the point in each unit of area at which a local registrar should be located.

The selection of a point at which a registrar should be located is often a difficult matter, for the reason that a unit of area already created for other purposes is usually adopted by the "Model Law" as the unit of area for its operation (the primary registration district). These districts are often poorly adapted to their new purpose; at least, this was found to be true in Tennessee. The boundaries of the district will often bear no logical relationship to the topography of the country, the small centers of trade, the principal highways, etc., of the district. One is, therefore, put to a disadvantage at the beginning, and but for the provisions in the law permitting the combination of primary units into one registration district and the appointment of sub-registrars, the difficulties would be insurmountable. And with these provisions every aid possible should be resorted to in selecting the proper point at which a local registrar should be located in each unit. A county map should be procured (and when this is not possible a pencil sketch of the county), on which is marked the boundary lines, the chief centers of trade, the incorporated towns, the chief highways, the location of the