44

BY WILLIAM P. SPRATLING, M. D., MEDICAL SUPERINTENDENT OF THE CRAIG COLONY FOR EPILEPTICS AT SONYEA, N. Y.; SECRETARY OF THE NATIONAL ASSOCIATION FOR THE STUDY OF EPILEPSY AND THE CARE AND TREATMENT OF EPILEPTICS; MEMBER NEW YORK ACADEMY OF MEDICINE, ETC.

Mr. President, and Members of the Elerenth Minnesota State Conference of Charities and Correction:

I am greatly indebted to your distinguished president, who was good enough to ask me to prepare a brief paper for this occasion on the epileptic, his disease, and the modern methods of his care. I incline to the belief that it would be better to speak more at this time on the epileptic and the forms of his public care than of the disease from which he suffers. The latter, while of surpassing interest always, is, I take it, hardly calculated to incite the broadest interest of a body of charity folks and philanthropists like this, whose work is not so much the use of diagnostic methods, the differentiation of the various forms of the disease of epilepsy, the searching for pathologic conditions, and the use of medicines in curing the disease, as it is to seek to establish proper places of care at the expense of the state or of the community for this fearfully afflicted class. And feeling all this to be true. I will speak more of the epileptic, his personality, peculiarities, and forms of care, and less of his disease.

The paltry space of fifteen years is enough for measuring the length of time in the United States the epileptic has been the object of concerted public interest and public care, a remarkable fact when we recall that the disease is as old as medical history itself; for it was clearly described by that excellent physician, Hippocrates, more than 2,000 years ago.

The year 1849 saw the first effort made in Europe, at Bordeau in France, for the relief of epileptics. Then came Germany, with the great colony at Bielefeld, followed later by other institutions in the same progressive empire; but it was not until 1890 that the movement crystalized sufficiently in this country to start the construction of the Ohio Hospital for Epileptics at Gallipolis, which cares for all epileptics, including the insane. Then followed New York with the Craig Colony at Sonyea, the only institution of its class in this country; Massachusetts, with a hospital at Palmer: New Jersey, with a village at Skillman near Princeton; Texas, with a separate institution at Abilene; while many other states, including Virginia, Illinois, Indiana, California, Missouri, and Minnesota have shown most commendable zeal in furthering the welfare of the dependent epileptic.

The problem of devising and pushing forward a more widespread interest in the public care of epileptics in the United States is a serious one in which physicians and charity workers generally should labor together

# MODERN METHODS IN THE TREATMENT OF EPILEPSY. 45

in perfect harmony and with untiring zeal. No other class so strongly demands public aid, and no class had been subjected to such hurtful neglect. Of the forty-five states in the United States, five only have made state provisions for epileptics, and these five at the present time are caring for less than 2,000 patients—2,000 out of at least 150,000 scattered throughout the land; hundreds of them unjustly confined in hospitals for the insane, thousands still kept in utter neglect in county poor and almshouses, the victims of constant suffering and despair, while by far the larger number remain in poverty-stricken homes, objects of solicitous and painful care on the part of those who refuse to send a human being, sick in this way, to a poorhouse intended only as aid to paupers.

To further stimulate the work in this country, the National Association for the Study of Epilepsy and the Care and Treatment of Epileptics was organized in 1898 for these purposes:

To promote the general welfare of sufferers from epilepsy.

To stimulate the study of the causes and methods of cure of this disease. To assist the various states in America in establishing a uniform system of care for epileptics.

To advocate the care of epilepties in institutions designed for their especial needs.

And at the second annual meeting of this association, held in the Academy of Medicine in New York, November 5th last, at which meeting many very valuable and scientific papers were presented, a resolution was adopted empowering the Executive Committee of the association to take up with boards of public charity, philanthropists, physicians, and scientists generally in all the states, the question of making some provision in every state possible for the dependent epileptic.

Before an architect can plan a house that will be a success, he must know what it is to be used for, and since the epileptic stands so supremely alone in the form of his affliction and its results, his proper care demands special homes of many kinds. He represents marked differences in age, character and frequency of attack, race, social status, habits, and what is most important of all, in forms and degrees of unsoundness of mind, and after all it is his mental condition in the main that fixes the manner in which he should live.

Fully eighty out of every one hundred epileptics acquire the disease before they reach the age of twenty years, and affecting the brain as essential epilepsy in time always does, we must expect some impairment of the mind, either fixed or temporary, slight or profound, in every case in which the disease is genuine. To build institutions, therefore, for the epileptic without remembering that his disease is psychic as well as physical is to invite grave disaster.

To get the best results, epileptics should be cared for in institutions of three kinds: First: Hospitals for those that are insune. Second: Colonies for selected cases, only. Third: Colonies for all cases save the insune. (It is entirely feasible to merge the two kinds of colonies into one, but the results are then less satisfactory than if they are separate and distinct.)

46

The leading features of hospitals for insane epileptics need not differ much from those observed in buildings for the ordinary insane, although there are some things we ought especially to take into account, and of these classification comes first. No matter if the epileptic is insane, he is an epileptic still, his convulsions do not cease and he is most apt to make trouble during his seizure periods. Already violent to a marked degree, his violence is apt to increase at these times and efficient means are required for his safe keeping until his excessive frenzy passes away. It has been my experience that more durable forms of construction are demanded in the care of some insane epilepties than for the ordinary insane; and while hundreds of cases may be cared for in one building, or in a compact group of buildings, living apartments should be planned to admit of necessary classification.

Congregate dining rooms for epileptics will not do. I have known a single fit in a dining room that scated 100, to lead to disastrous results through sympathetic shock in causing five or six other seizures in the room in rapid succession. Some special features, such as broad, rounded corners on all woodwork, the breaking of stairways with two or more landings, and the protection of all heating pipes and radiators should be provided for. Two-story buildings are infinitely to be preferred to those that are higher, and there is no objection to having some bed rooms on the first floor.

The problem of night supervision is as important as its solution is difficult, and this applies to epileptics of all kinds. I once saw the experiment made, through necessity, of having 28 epileptics sleep in one large room. This made it easy for the night nurse to detect anything wrong, but in all other ways it could not possibly have been worse. Fits occurred almost hourly, and the noise incident to each seizure wakened all the sleepers, and after this had been done six or eight times in a night, the frame of mind the next morning of those who had to endure it can better be imagined than described. In our opinion, it is not possible to devise any sort of night supervision that will entirely do away with the epileptic's liability to accident while he sleeps, unless every room is provided with a nurse in charge. I recall two patients during the past year who died in bed as the result of fits that occurred between the half-hourly visits of the nurse, and we have come to believe that it is much better not to put more than five or six to sleep in one room and run the risk of an occasional accident, than to make vast numbers habitually uncomfortable by herding them in huge dormitories in which repeated attacks destroy the comfort of all the rest.

There are no colonies for selected cases only in this country at present, and because such institutions might seem to be too discriminative in the work they do, the state might hesitate to build them. Such colonies have a high value, a value which they can, perhaps, best reach under the stimulus of private benevolence, and there is a splendid opportunity for people of means to take up such work in the United States at this time. There should be such a colony in easy reach of every city in this country having a population of half a million or more. They should not be large-big enough only for 100 to 200 patients-the one great valuable feature about them being individual attention to a class that promises most, under proper care, in the way of improvement or cure; a class that is now submerged in institutions that care for hundreds of cases to whom we can promise but little or nothing for tomorrow.

Colonies like these would bear the same relationship to other colonies or institutions for epileptics that psychopathic hospitals bear to other institutions for the insane. A type of such an institution is to be found in the English Colony at Chalfont St. Peter, founded by the National Society for Employment of Epileptics. It has now about 135 patients, and Dr. William Aldren Turner has this to say about the manner of selecting cases: "It has been found advisable to carefully select the colonists from amongst a large number of applicants. The points to which attention is especially directed by the medical committee are: Has the applicant been unable to obtain employment, or has he been discharged from one or more situations by reason of his fits? Is he capable of work under direction? It has been found necessary to regard as ineligible those who from physical causes are not strong enough to undertake some kind of active work; those who from habitual irritability of temper and eccentricity of disposition would not live in harmony with their fellow inmates or be amenable to the rules and regulations of the institution, and especially those who are imbecile, demented, or liable to dangerous impulses. Mere frequency or severity offits, however, does not disqualify the applicant, provided the mental condition is satisfactory."

This process of exclusion, we are told by Dr. Turner, shuts out about 60 per cent of all who apply, and the work at Chalfont St. Peter has been entirely satisfactory. It seems to me that no finer plan can be devised for the care of epilepties who can do some work under proper supervision, than this, and of the plan and probable cost of building and maintaining such colonies we will speak later on.

The word "epileptie" conveys to one unfamiliar with the many types, causes and results of the disease, but little information we ought to have before we can successfully plan for the epileptic's best care; and the epileptic who voluntarily seeks help of the physician at his office is seldom representative of the class most apt to come under state care, and in taking all epileptics save the insane into one colony, many problems will engage our attention. The majority who apply will be mentally defective in some degree, either feeble minded, or imbeciles, or idiots, while some will be demented and a few will have sound minds, and while we cannot sharply separate them into like groups, because the lines of separation are so vague and so constantly shifting, we can approximate the groups fairly well. In studying how we might best classify 1,200 mixed cases that have been admitted to the Craig Colony to this time, we have found it feasible to put them in houses of three kinds.

Houses in Class One hold from twelve to sixteen or eighteen patients whose condition is good enough in every respect to enable them to assume the care of the household in all its details, under the general supervision of one competent nurse or employe, the chief duties of the latter being to look after sick patients and to make observations of seizures to be reported to the physician in charge.

Houses in Class Two should be large enough to accommodate from 25 to 35 persons of the great middle class, and each house should be in charge of two employes, nurse and cook, and the bulk of the colony would be made up of houses of this type.

Houses in Class Three should consist of infirmaries; buildings combining home and hospital, for the use of perpetually bed-ridden, paralytic, or otherwise helpless cases. These buildings need not be large at the outset if care is exercised in selection of cases, but they should be so constructed that they might be enlarged in future.

In such a colony about 50 per cent of all admitted can do work of a remunerative kind; about 25 per cent will be able to do light housework only; and the remainder nothing at all; while the labors of 7 per cent to 10 per cent of the entire number will have a value equal to, or greater, than the cost of their support. We have come to believe that under the best conditions colonies for mixed cases may be able to earn from 25 per cent to 30 per cent of the cost of their maintenance, while colonies for selected cases only may reasonably aspire to do about twice as well.

Epileptics can work at almost anything, though some can be employed at occupations that are hazardous with greater safety than others. In seven years at the Craig Colony we have never known a serious accident to follow a risk in occupation, and our patients do everything from needle work to house painting and engine driving, though special cases are selected for special work.

Colonies for epileptics should therefore provide the fullest equipment of all industries common to normal communities and should employ skilled artisans to train and supervise epileptic labor, both for economic and therapeutic reasons, but especially for the latter. The epileptic who is idle is badly handicapped in the race for improvement in comparison with the epileptic who is kept at work; and colonies should be kept free from the atmosphere of invalidism.

In looking for a site, it should be announced that gifts of land will not be considered, for when the state accepts such gifts, embarrassments are apt to always follow, and in choosing a site two things should be prominently borne in mind: First-The natural advantages of the place, including water, climate, fertility of soil, and drainage. Second-Reasonable proximity to centers of population. If it is a question as to which should determine the matter, those named first have the greatest weight.

It is impossible for a colony to meet with success unless its water supply is pure and abundant, its climate such as to insure the greatest number of pleasant days in which outdoor life is possible with comfort; in which the fertility of the soil under cultivation by epileptic labor insures the largest yield; and in which diseases due to faulty sanitation are lessened by perfect drainage.

Size: It is difficult to say how large a colony should be, but as a rule an acre to each individual will be none too much. The epileptics food should come almost exclusively from the farm, dairy and garden, which makes a large amount of fertile land a prime necessity.

Cost: The cost of a colony equipped for use can now be pretty definitely ascertained before the work of its construction is begun, if the cost of the land only is known. Durable brick and stone houses for patients will cost about \$500 per bed, while the cost of furnishing will vary from \$30 to \$50 per person. About one half the cost of the colony will be in the houses; the balance in plants to supply heat, light and water, in administrative offices and hospitals, in furnishing, in industrial shops, farm stock and implements, sewerage system, roads, walks, grading and homes for officers and employes. There is no valid objection to building some houses of wood, if they can be made small, properly located and protected against fire, and they can be made ready for occupancy at one-half the cost of brick and stone buildings.

Plan of Development: So far as possible, a definite plan of development should be followed by making a complete topographical map of the land at the outset, always remembering the value of approximating the main features, and we may illustrate the method of doing this by drawing a circle of sufficient diameter and putting in it the office building, the hospital, the power plant, store house, laundry, schools, industries and other common necessities; then draw another circle and let that embrace homes for the better classes, and then a third, beyond which homes for the poorer types of colonists should not go. By doing this it will be easy to heat, light, furnish with supplies, and supervise the entire colony from a central point at less cost than if the essential features were scattered indiscriminately over the entire place. Local conditions may call for some modifications of this, but in the main the principle will be found correct.

The exterior design and color of cottages for patients may be all alike, or no two may be the same, the determination of the point resting on individual preference. At Bielefeld and Chalfout St. Peter the buildings all differ; at the Craig Colony the two main groups of fifteen to twenty buildings each are almost identical in form and entirely so in color.

The cost of maintenance for mixed classes after the population reaches 600 to 700 will be less than for the insane, while colonies for selected cases only should not require more than \$75 to \$80 a patient a year, and under ideal conditions, even less.

Young epilepties, whose minds admit of it, require some education, which needs to be simple, for as a rule they are unable to grasp and retain complicated ideas, and it has been our experience that purely intellectual knowledge acquired by them today is apt to be lost through the destructive effects of a fit tomorrow; but that when tissue grosser than the brain, like muscle, learns a thing well, that knowledge is not destroyed with each fit; therefore we have come to believe that the combined use of muscle and brain should be the favored method of educating this class; the value of the former compared with the latter being fully as great as ten to one.

In conclusion, allow me a personal word in stating that every additional year's experience in the care and treatment of epilepties under the colony plan at Sonyea serves to strengthen my conviction that the colony system is by far the best for this sorely afflicted class, and that it is destined under newer, better methods along the same line, under the same principles, to produce results of greater value now unobtainable; and I will only a logic of the real pain and his disease at Source.

First: It effects cures in a larger proportion of cases than can be effected under any other form of treatment, not withstanding the fact that few cases are sent to the colony before the disease is essentially chronic

Second: It brings about a reduction in the frequency and severity of attacks in the uniority of all cases, a large per cent being sufficiently improved to permit them to go into the outside world recent a living.

Third: If provides special education for a class in the special names shey require it to make them self helpful, this being something they cannot get outsills of the relow.

Fourth Ar promotes individual Lappiness in a barne proportion of eases, do not the patients living in an atmospher. If congeniality, an atmosphere saturated with a fellow feeling and desire to help each other.

Finish 4 provides skilled thems of treatment by these which he work burstins and the appearancy for scientific research that can newlete else the bound and that should be here above for the benefit of all who suffer it alignoriths way.

Sixth and lastly: Segregating epilepties in this way has a decided economic value, for so long as they are kept in proper sechasion, that sechasion being at the same time most beneficial to the epileptie, it shots off also lately the probability of that epileptic handing drawn a defeative or an epileptic property, something that all epilepties are much too prome to do. The presence of an epileptic in the nurriageable world is like a bank assume at contaminal meroes, that there increasing its kind.

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Dr. Killingersker. I would like to large for Spratting her her one intent to could promid promise an interest winer wend in hosting and which would bend on the

establishment of some sort of an institution in this state. It is only a question of time when we will have it. Or Rogers of Faribault is doing good work in that attraction, and we will probably get to it in time.

TROS RANKIN. I would like to ask what we shall do in the public schools when we find cases of epileusy?

The Rosens. My personal experience and observation is such that I do not believe the culcute should be pushed in school. That same idea was brought out in Dr. Spratling's paper. It is the education of the innseles that is needed much more than the education of the brain cells, and the stimulation of the brain from study in school yeary often results disastrously.

#### AND THE RESIDENCE OF

## EVENING SESSION - THURSDAY, NOVEMBER 20, 1002.

### SECULAR TEACHING

BY PROFESSOR A. W. BANKIN, STATE SUPERINTENDENT OF GRADED SCHOOLS.

Mr. President Ladies and Gentlemen.

The public school takes the child out of his home environment and makes of him a matter of public concern. If he has a home among the vicious and nuclean he must, for six hours a day at least, be reasonably next in person and dress. He must also, while in school he outwardly fairly free from acts of crime. The little child of poverty and witness of vice sits amid neat surroundings and sees things done which have no archicious purpose in them. He must be regular in attendance, prompt in the performance of his tasks, respectful to his teachers, obedient to rule, regardful of the rights of others. Unconsciously he is colluenced by the personal character of his teacher and the good example of his associates who have better homes than he has. The songs, the direct groral teaching, the memory genus, the formal routine of the school, all influence bin. The consciousness that he is part of the great American citizenship gradually grows up in him. This gives him pride and steadies him. He emphasizes the first word of our national fixon, "My Country," and with pride comes ambition and effort and hope. The fact that he is in the public school gives him opportunity to show others what he is made of. Opportunity for work comes to him. Many and many a poor boy gets a fair chance because of his teacher's recommendation.

There is a more or less general feeling that the public school gives the child an apportunity for vicious habits. If those who feel in this way would consider what happens when buys do not go to school, or if they would compare public school children with private or other school children, it would soon dawn on their mads that crime is in spite of the public school and not because of it. However, loyal as, no doubt, we all are to our public school system, we should not hesitate to seek for defects in it and to be merciless in our criticism. Too often the general public speak minteligently of our schools. There is a senseless praise for, and a thought-less trust in the efficacy of free and universal education. It is fair to say

that the greatest barrier to progress in public schools is the too great satisfaction with them. Efforts at reform are met with foolish cries of "fads" and the three R's are popularly held to be a sort of sacred tranta to doubt the saving power of which, is sin. In the old days when a family owned a foom for weaving cloth, a good rip-saw for getting our lumber, and a big two wheeledcarttocarry grain to the mill it was considered fortunate above its neighbors. Such things are now relies of a past uninstrial age. Just so ought the old reading, writing and arithmetic to be superceded by a new and larger curriculum. In the older time there wasn't much to read I began with the Bible Primer, and read that "Sampson was the strongest man," etc. The next reading book for beginners was infinitely worse than that. It began: "It is an ox. Do we go up? Up we go," etc. We spelled out the words in this way: 1-t it, i-s is, a n an, o-x ox. When we got on to the fourth reader, we read left or miss pieces. One day about a "Storm at Sea." The next about "Consolations of Religion for the Young." (which is all right enough, only the reading of it somehow didn't console us then.) The readers were veritable scrap books, without beginning, contimity or end. A generation ago it was thought a great accomplishment if a boy could by dint of inking up his fingers, booking cross-eved at the paper and thrusting out his tongue at the work be able to write legibly, though painfully.

In spite of statements to the contrary there is every reason to believe that children read, write, compute and even spell better than they ever did. In fact work in the so-called common branches demand and is given too much time. Findoultedly it would be better if only the foreneous session of the school were given to the teaching of the common branches as now outlined. One half the present time would be ample. Present methods being superior to the old memoriter plan the axide awake teacher is obliged to waste a great deal of the time of the pupils by insisting upon a useless over-elaboration of the common branches. Unnecessary time is given to an over-refinement of form in arithmetic to the teaching of grammer, before the child's mind is ready for it, to memorizing names in geography, which for the child have no meaning in them, to reading material which has no value in it, and in general to the vain attempt to make a young child grasp generalizations before he has the mental power to do it

While the possibility of the prevention of crime by the school is limited, owing to the fact that home environments are powerful. I believe the school may and ought to be much more efficient than it is. I shall, in the brief time allowed me, be able only to hint at two or three ways in which this may be done.

First: The almost purely academic or bookish school as we now have it should be enlarged to an institutional school. The age limit should be removed. The public school building, under the management of the Board of Education, should be the center of activity along the lines designed for the betterment of the community. It should be surrounded by neres of ground. It should have club rooms for all, clubs of a proper sort, reading rooms for all classes of people. An audience room should be fitted up for the accommodation of lecturers on topics of general interest. This should