

FUNDAMENTAL PRINCIPLES
INVOLVED IN THE ORGANIZATION
AND CONSTRUCTION OF AN
INSTITUTION FOR THE
FEEBLEMINDED

J. M. MURDOCH, M. D.

Superintendent
Minnesota School for Feeble-minded

*Reprinted from the Proceedings of the Fifty-Fourth Annual
Session of the American Association for the
Study of the Feeble-minded*

held at

WASHINGTON, D. C.
May 5-7, 1930

FUNDAMENTAL PRINCIPLES INVOLVED IN THE ORGANIZATION AND CONSTRUCTION OF AN INSTITUTION FOR THE FEEBLEMINDED

By J. M. MURDOCH, M. D.,

Superintendent, Minnesota School for Feeble-minded.

Before we organize or construct our institution we should first have a clear conception of its purpose.

The whole question of the control of the feeble-minded has become a State responsibility, under the auspices of a State department, with a State wide organization.

Institutions are an essential part of the State's equipment for the control of the feeble-minded, but are only a part. No State has as yet developed an organization that is sufficient in scope, but a number of States have made beginnings, which are functioning well, and expanding rapidly.

In some of the larger States the supervision of the feeble-minded is placed in a Department of Mental Hygiene, or Department of Mental Diseases. In others, as in Pennsylvania, in a Department of Welfare, or as in Minnesota, in a Board of Control.

It would be beyond the scope of this paper to review the various systems of organization and administration of all public welfare work.

A noticeable development is the close relationship evolving between the Central State Agency, and the Institutions. The doing away with the local Boards of Managers or Trustees, or reducing these to Boards of Visitors, placing the chief executive officer of the institution in direct line with, and under the exclusive control of the Central Agency.

The Minnesota State Board of Control consists of three members appointed by the Governor, with the consent of the

Senate. At least one member must be a woman, and not more than two of the same political party. The appointment is for a period of six years.

Among its many responsibilities, the Board has supervision of the feeble-minded, directing this function through the Department for the Feeble-minded in the Children's Bureau. The superintendents of all institutions are appointed by the Board of Control.

Under the Minnesota commitment law, the Probate Courts commit feeble-minded persons to the guardianship of the State Board of Control, and not to the Institution.

The Board of Control determines what form of guardianship shall be exercised in each case. Three forms of guardianship are provided, Private Home Guardianship, Boarding Home Guardianship, and Institution Guardianship.

The Board of Control determines who is to be sent to the institution, and who shall be paroled, or released from guardianship.

The cases sent to the institutional school are of all ages, and of all degrees of feeble-mindedness. Nevertheless they are a selected group.

Most of the lower grades are sent to the institutional school, a relatively smaller per cent of the higher grades. Those of the higher grades who are sent, are largely children without homes, or with improper or inadequate homes, and adult delinquents.

Among the adults there is a preponderance of women over men. Every effort is made within the institution to train the higher grade imbeciles and morons, for outside guardianship.

The State maintains a number of club houses, to which those trained in the institutional school are sent, and where they have opportunities for outside employment under supervision.

This is removing from the institution many individuals of the type who formerly rendered valuable aid in various occupations that the running of the institution calls for. It has also taught the potential possibility for service of a lower grade, who obviously cannot cope with conditions outside.

Sterilization is making parole possible, where it would not

otherwise be considered. However, as Fernald stated, "It is possible that a majority of the lower grades will be better off in every way if cared for in the institution", and a large proportion of the higher grades will require special training within the institution before they will be able to cope with conditions outside. The task may not be so formidable as it appeared even ten years ago, but more and larger institutions are inevitable.

Despite the progress that has been and is being made in providing Mental Clinics, Special classes in the Public Schools, and after care in the Community, the most urgent need is still greater institutional provision.

It is safe to say that institutional space should be provided for one feeble-minded person, to every one thousand of the population served.

How large should an institution for the feeble-minded be?

The question is analogous to that of the size of a hospital for the mentally ill, which was the subject considered by a group of distinguished experts, recently called together by the Charities Aid Association of New York, to secure enlightenment as to the most advantageous size of a State Hospital.

The published report of this Conference should be of great interest to all interested in the care of the feeble-minded as well as those interested in the care of the mentally ill.

While there was no complete agreement, there was a marked preponderance of opinion in favor of the smaller hospital. Dr. Haviland stated, "other conditions being equal, the best results are obtained in the smaller institution. A single patient in a huge hospital becomes a tiny cog in a great machine, which renders most difficult the task of reconstructing the personality. In a relatively small hospital it is far easier to approximate home conditions, and to develop the individual patient as an independent personality in a social group."

On the other hand the institution should be large enough to permit of classification, to command the service of trained personnel, and afford essential equipment. This is as true of the Institution for the Feeble-minded as it is for the State Hospital.

Built upon the village plan, fortunately a comparatively large institution combines many advantages of both the small and the large institution, and such an institution to accommodate 1,000 to 1,200 seems to offer the most advantages, both for the welfare of the individual, and in the interest of economy.

To meet the need of large Metropolitan Districts, such as New York, there would seem to be no serious objection to caring for 2,500, or even 3,000 in a single institution, if plans are made in advance for subdivision into a number of separate groups—as at Letchworth Village.

Selection of Site

Even before the selection of a site for a new institution, the responsible individual, or board should obtain the counsel of some one who has had institutional experience with the feeble-minded. A picturesque, or commanding view, though desirable, should not be given precedence over good soil, adequate water supply, and transportation facilities.

It is a mistake to think that any poor rough land will answer because it is cheap, with the idea that clearing up and improving the land will provide employment for the boys. While this is true, they can be employed to far better advantage on good fertile soil, and farming is one of the things the feeble-minded boy does best. The requirement of one acre for each pupil, as stated by Dr. Kerlin years ago, still holds.

Water Supply

An abundance of good water is essential. There should be assurance of a permanent year round daily per capita supply of at least 200 gallons. A suitable site for a reservoir on ground high enough to provide water pressure for fire protection is most desirable.

A water supply that would be adequate for a given number of normal persons is not sufficient for the same number of feeble-minded. The untidy habits of the low grades make necessary an abnormal amount of water for bathing, laundry, and scrubbing.

The control of an abundant quantity of uncontaminated soft water for drinking purposes and boiler use and the possibility of obtaining this supply by gravity, avoiding the use of water treatment, and pumps, is one of the most important factors in selecting a site for any institution, especially for the feeble-minded.

Sewage

Sewage should flow by gravity to a disposal plant, located where it is least objectionable. This plant may be built in units, to be added to as the institution grows.

Location

With modern transportation facilities, the location is not so important as formerly. However, it should not be too isolated, and should be near enough to a village where employees may do their shopping, find social interest and entertainment.

The building site should be near enough to a railroad so that a spur track to the power house, and store house can be constructed, and should be near a hard surfaced road leading to a trunk highway.

Plan

With site selected, a topographical map should be prepared.

Existing trees should be protected, to provide shady groves.

A complete comprehensive plan of development should be carefully worked out before the first building is erected. We are all so well agreed upon the cottage type of buildings that no other need be considered.

The Pennsylvania Department of Welfare presents the essential elements for a plant for the Feeble-minded as follows:

A. Accommodation for patients.

1. Admission Building
2. Hospital Building
3. Isolation Cottage
4. Tuberculosis Cottages
5. Ward Buildings of various types, e.g. single rooms, dormitories, etc.
6. Colony Building

- B. Accommodations for Officers and Employes.
 - 1. Superintendents' Residence
 - 2. Officers' Cottages
 - 3. Home for Teachers, Nurses, etc.
 - 4. Attendants' Home
 - 5. Home for outside Employes
 - 6. Employes' Cottage
- C. Administration Building.
- D. School Buildings, including Industrial Art Buildings.
- E. Morgue.
- F. Assembly Hall and Chapel.
- H. Service Group.
 - 1. Kitchen and dining-room
 - 2. Cold storage
 - 3. Butcher shop
 - 4. Bakery
 - 5. Cannery
 - 6. Stores
- I. Garage.
- J. Laundry.
- K. Power Plant.
- L. Sewage Disposal Plant.
- M. Shops.
 - 1. Carpentry
 - 2. Machine
 - 3. Paint
- N. Water System.
- O. Farm Group.
 - 1. Dairy
 - 2. Hennery
 - 3. Horse stable
 - 4. Piggery
 - 5. Propagating Greenhouse

For the Accommodation of Patients

An admission building with facilities for observation, including mental and physical examinations, makes possible

special attention and study of children on admission, and may prevent the spread of contagious diseases, and aids in seeing that the child is later assigned to the appropriate group.

Children should be separated into groups of not more than fifty.

A cottage for one-hundred, containing two such groups is an economical, and very satisfactory unit. For the higher grades two story buildings, with dormitories on the second floor are most desirable. For the lower grades, and infirm, one story buildings have many advantages, and have proved to be the most satisfactory.

The use of basements for dining rooms, school rooms, or living rooms may meet an emergency, but should not be considered in plans for new construction.

Accommodations of Officers and Employes

Houses similar to quarters provided at Military Posts should be constructed for officers and physicians, whose duties necessitate their living on the institution grounds.

For the housing of other employes, unless a revolutionary change makes it possible for employes to live in homes of their own off the institution property, and such a change becomes more desirable with the coming of the eight hour day, we would do well to profit by a study of some of the attractive dormitory buildings being erected for students at some of our state Universities.

Administration Building

This building should contain offices for the superintendent and steward, and be for business purposes only.

School Building

Facilities for kindergarten, grade work, musical instruction, physical and manual training should be ample and modeled after the splendid public school buildings we see in all of our cities, with adaptation to provide for small classes in the grade school, and ample facilities for manual training.

A model kitchen, dining room, pantry, and bed room in the

school department for the teaching of all branches of housework should not be overlooked.

All girls, and possibly all boys should be taught how to cook and make a bed. Additional provision for manual training should be provided in, or near, the cottages for the lower grades.

Assembly Hall and Gymnasium

No institution is complete without an Assembly Hall, and Gymnasium, preferably separate, although they may be combined in one structure. These should be centrally located, and near the educational buildings.

The Assembly Hall should have seating capacity for at least seventy-five per cent of the population, with ample stage, dressing rooms, booth for vitaphone, a pipe organ, and all the facilities of a modern theatre. The stage should be so constructed as to permit the curtain and scenery being elevated out of sight without being rolled up, and ample provision made for lighting effects.

The Gymnasium should be large enough for basketball and other indoor sports, and provided with apparatus for correctional gymnastics. There is difference of opinion as to the advisability of the installation of a swimming pool.

Entertainment and recreation play an important role in the training of the feeble-minded, and add greatly to the pleasure and contentment of all within the institution, and aid in social adjustment outside of the institution.

Service Group

A central kitchen with separate dining rooms in each cottage, or small group of cottages, has a distinct advantage over kitchens in every cottage, or over large congregate dining rooms.

An underground tunnel system, connecting all buildings should be provided for steam, hot water, and electric lines, and at little additional cost this tunnel can be made large enough to provide a passage way for food conveyors, preferably hung from an over head track. There is no difficulty in

keeping the food hot as has been demonstrated at Waverly, Wrentham, Faribault, and many other institutions.

A cannery convenient to the kitchen, but preferably in a separate building is a profitable investment for any institution having a truck farm. An abundance of canned vegetables for winter use makes unnecessary the feeding of the preponderance of starchy foods, so difficult to avoid in institution dietaries.

Garage

With the increasing use of motor equipment, a garage for all institution cars and trucks should be conveniently located, preferably near the machine shop.

For the use of cars of officers and employes at Faribault, a large garage with individual stalls is located near the employes building. These stalls are rented for \$1.00 per month.

Laundry

This may be a one or two story building. If two story, the washers, extractors, and dryers operated by boys are located on the first floor. The clothing being carried by conveyors to the second floor, where mangles and ironing boards are operated by girls.

This arrangement separates the sexes and provides an abundance of light and ventilation for mangle and ironing rooms.

Power Plant

To provide heat, light, and power, the best engineering skill available should be employed. The type of boilers, stokers, and accessories will depend upon the most available fuel.

For heating, the steam vacuum system is most flexible and satisfactory, and I believe the system most generally installed at the present time.

In all parts of the institution to which the children have access, steam radiators and all steam pipes should be carefully guarded. Where possible radiators should be incased in the wall below the windows.

The rapid expansion of Public Utility Light and Heating Plants, may eventually make it possible to purchase electric

current for less than it can be generated at the institution. However, as yet in an institution caring for one thousand, or over, electric generating equipment in connection with the heating plant is still more economical. The three phase alternating system seems to be the best suited for the light and electric motor power requirements of an institution.

Propagating Green House

This is a minor structure which should not be overlooked.

Material and Equipment

In general, the construction of institutional buildings should be fire proof throughout, and of durable materials,—stone, brick, iron and concrete. Simplicity in design, both exterior and interior, avoiding materials requiring expensive maintenance.

Plumbing

Bath and toilet rooms should be directly accessible to dormitories and day rooms, avoiding dark halls and hiding places, toilet enclosures should be avoided. Supervision is important at all times. Experience has taught that the best type of toilet is the wall hung toilet arranged in batteries, with valves and cleanout openings, located in rear utility closets. Each closet should be separately controlled by a shut-off valve, so that it can be repaired without interfering with the use of other closets in the same battery. The seats should be integral.

Shower baths have proved to be the most satisfactory. The stalls should be large and protected on three sides by slate or terrazzo, with an impervious floor. The shower head should be placed on the wall at an angle of about 30 degrees, and controlled by loose key valve. These valves should be placed on the wall about five feet above the floor at a remote point, so that the attendant can control the flow of water, and watch the temperature which is controlled by thermostatic valve. In addition, there should be a hose connection under the control of the attendant for perennial douche.

Laboratories should be very securely attached to the wall. China handles and accessories that can be easily broken or

screwed off should be avoided. Patent wastes should be avoided as unhygienic. By all means, plumbing pipes should be accessible and not built into the walls or floors. Experience has taught that wrought iron pipe is best for cold water and brass for hot water.

Floors

The time for the use of wood as a flooring material in an institution has passed. I agree with Dr. Wallace that terrazzo has no equal, and advise its general use, for both floors and stairs. Heavy quarry tile and granolithic are satisfactory for service buildings, where rough usage cannot be avoided. Rubber flooring is very satisfactory for hospitals and assembly halls, but is expensive.

Buildings for Defective Delinquents

It is most desirable that provision be made for defective delinquents in a separate institution as in New York, Massachusetts, and the institution now being built in Pennsylvania. Such an institution should be built of the prison type of construction, as at Napanoch, New York.

It is difficult for one who has not had actual experience with this type of individual to realize how destructive the defective delinquent can be. The construction should be such that there is no temptation to tear out window guards, lights and plumbing fixtures, or to batter down doors.

Layout of Buildings

We have stated that the Village Plan of Individual Cottages is the only type of an institution worthy of consideration. The buildings in this village may be variously arranged. This necessarily depends upon the topography of the site. The points of the compass should be taken into consideration that living quarters may have the maximum amount of sunlight.

Where the site is level, buildings may be symmetrically arranged as at Polk, and Wrentham—where the site is rolling, buildings will be placed with a pleasing irregularity to conform to the contour of the grounds, as at Waverly and at Letchworth Village.

At Polk, groups of cottages are joined by corridors. In the high grade children's group sixteen cottages are connected by corridors with the schools, assembly hall, gymnasium and congregate dining rooms.

At Waverly and Wrentham the cottages are independent units—each having its own dining room supplied from a central kitchen.

The latter type is more flexible in development and can be expanded more readily to meet increasing demand which has been the experience of all of our institutions.

The arrangements of buildings can be best considered by reviewing plot plans of some of our existing institutions.

In respect to measurements upon which to calculate capacity, the Pennsylvania Department of Welfare has adopted per capita standards as follows:

Single Rooms	80	Square Feet
Dormitories	50	" "
Day Rooms	50	" "
Dining Rooms	15	" "

These are regarded as approximate, and are modified under certain conditions as where patients are only in day rooms for short periods at a time. Dormitories should be proportioned to permit of the most satisfactory arrangement of beds, and dining rooms with due regard to the arrangement of tables.

Clothes rooms should be of ample size, and have outdoor light and ventilation—avoid dark corners.

Organization

The human element, the personnel, is the real institution, rather than the structures made of brick, mortar and cement. The results obtained depend primarily upon the human element.

Dr. Little, than whom there is no higher authority on institution management, states, "The simplest organization you can have is the best, place responsibility upon few people, and make them carry it."

The chief executive officer commonly designated the superintendent, should be a physician with executive ability and

previous institution experience. His appointment should not be limited as to time, that he may have a real personal interest, and devote his life to the up-building of the institution. He should be the administrative head of all departments, and responsible for their administration,—having the sole right to the appointment of all his assistants, he should prescribe their duties and accordingly all officers and employees should be responsible to him directly or through the line of delegated authority.

Every activity pertaining to the welfare of the children, including the school department, should be under the direction of a physician.

The business management should be in charge of a steward.

All mechanical work in charge of a chief engineer.

Repairs and building operations in charge of a superintendent of grounds and buildings.

Farm, garden, and dairy in charge of a farm manager.

With these heads of departments responsible to the superintendent, few rules are required. Every officer and employee should receive his instructions and orders from his superior officer, and should know to whom he is directly responsible. Hold heads of departments responsible for their department; and talk over mistakes and short comings in private; be considerate of the other fellow's point of view; avoid favoritism; pick your heads of departments with care, preferably by advancement in the service.

Obedience to authority and co-operation between those of equal rank are the key notes to esprit de corps, and success.