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Publisher: Routledge

Informa Ltd Registered in England and Wales Registered Number: 1072954

Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK

The Pedagogical Seminary

Publication details, including instructions for authors and subscription information:

<http://www.tandfonline.com/loi/vzps20>

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Published online: 30 Aug 2012.

To cite this article: Caroline A. Osborne M. D. (1902) Evolution of Hospitals and Training Schools for Nurses, The Pedagogical Seminary, 9:1, 28-42, DOI: [10.1080/08919402.1902.10534165](https://doi.org/10.1080/08919402.1902.10534165)

To link to this article: <http://dx.doi.org/10.1080/08919402.1902.10534165>

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EVOLUTION OF HOSPITALS AND TRAINING SCHOOLS FOR NURSES.

By CAROLINE A. OSBORNE, M. D.

In the arrangement of a modern hospital, the absence of a training school for its nurses would be regarded as an anomaly. The character of its service is such, that nurses trained especially for its execution are necessary to carry on the lines of treatment deemed essential to the well being of its patients. It is only twenty-five or thirty years, however, that the necessity for trained assistance has been appreciated and the training school evolved from the chaos which used to surround patients in hospitals. The development of a modern training school for nurses is most interesting, as its history is traced from the efforts of philanthropic workers to surround those disabled by sickness or injury from the discomforts and privations that fell even to the wealthy—while the sick poor were in such surroundings that even a description of their state is often too harrowing to read.

In tracing the history of the hospital and its training school for nursing service, one is led naturally, to the evolution, first of the physician, since to his efforts are the hospitals dependent on the success of their work.

Very early in the race history, gatherings of the sick at some central place, are spoken of. The friends of the sick as well as the sick themselves, would be interested in getting similar cases together, and notes on comparative treatment exchanged. The more observing of the people brought in contact with the sick would soon begin to notice similarity in diseases, and differences in different diseases. They also would observe that certain remedies produced certain results, and an empirical *materia medica* and therapeutics would come into existence. Soon, from an interest either scientific or humane, or both, a class of these observers would be formed for mutual exchange of ideas, and a system of the practice of medicine be evolved.

Early in the race history, gatherings of the sick are spoken of in connection with the temples of Hygeia and Æsculapius in Greece, and at Bethesda, at Jerusalem. In the temple of Æsculapius, Hippocrates, born 460 B. C., carried on his observations and investigations that give him pre-eminence among the physicians of his time, and honor even at this present day.

The first physicians were from the priest class, naturally adding to their religious instruction, rules of correct living that possessed more weight from such sources. In Egyptian history writings on medical subjects exist as early as the 14th century B. C. In Berlin there is a papyrus of this date treating of inflammation and kindred subjects. The Egyptians had as early as the 11th century B. C. a class of physicians of the sacerdotal order, who were paid by the State, and who, required by the State to treat the sick poor, practiced their art very carefully. It was impossible for them to always go to the patients needing treatment, and thus it came about that dispensaries were established where those needing treatment could come for relief. The dispensary may be regarded as the forerunner of the hospital and Egypt given credit for thus suggesting the solution of dealing with disease in the most effectual way, with least expenditure of energy on the part of those concerned in the relief of sickness.

Greece seems to have gone to Egypt for suggestion and method in the treatment of her sick. The priests were there also the physicians, and the religious teaching was given hand in hand with the medicinal treatment. In the fifth century, B. C., the Athenians built hospitals and dispensaries, and had well trained physicians long before this. One hospital was located at Piræus. Hippocrates did much before this, to separate the physician's calling from that of the priest.

The Romans, while behind Greece in culture, yet had their hospitals and physicians between four and five hundred B. C. They utilized private houses as hospitals in which to treat their sick and wounded soldiers. In the time of Hadrian, government institutions for these purposes are supposed to have existed.

Going back still to other races, we find India rich in its methods of care for the sick, and in institutions where proper care and appliances were ready for use.

In the third century B. C., King Asoka established hospitals along the frequented travel routes. His edict, cut into a rock at Guzerat, may still be seen. This edict required that these places "shall be provided with instruments and medicines, consisting of mineral and vegetable drugs, with roots and fruit; and that skillful physicians be appointed to administer them at the expense of the State." These hospitals lasted over 800 years, doing their good work long after the founder died. In Wise's Review of the History of Medicine, a quotation is given from Tounour's translation of the Mahawaso, to the effect that, "Budda had appointed a physician for every ten villages on the high road, and built asylums for the crippled, the deformed, and the destitute. His son, Upatiso, built hospitals

for cripples, for pregnant women, and for the blind and diseased, and Dhatusend built hospitals for the cripples and the sick." In our own country, dating back into remoteness, Prescott tells us there were hospitals in Mexico for the governmental care of the sick and the disabled soldiers. Their date is unknown.

We naturally look to the Jews for their methods of treatment of the sick, and care of contagious and infectious diseases, so common in the East. Very early in their history surgical operations are spoken of. Their minute and careful methods in dealing with infection, and methods of hygiene, both for camp and house purposes, may be studied to advantage, even at the present day. We find treatments for certain diseases given, the priest's calling early separated from the physician's, and the apothecary in existence.

Later, in the parable of the good Samaritan, the modern antiseptic care of wounds is anticipated, in the wine and oil poured into the wounds, alcohol being one of the most used modern antiseptics. We do not find any references to hospitals, or the care of the poor at the expense of the government, yet, from our knowledge of the people, it may be assumed that such places existed. Returning to the Romans, we find a hospital built by them at the Acilian Crossway (219 B. C.) for the use of a Greek physician, who came to exhibit the superiority of Grecian methods. As years passed, these hospitals multiplied. At the great eruption of Vesuvius, 79 A. D., when Pompeii was lost, a hospital was buried in the ashes. This was, after centuries of oblivion, uncovered—and found to consist of one large room,—a hallway, through the entire center, while on each side, there were openings into smaller rooms. In these rooms surgical instruments were found which are now in Naples, and may be seen there. These instruments consisted of "scalpels, scrapers, elevators, forceps, drills, and a well made vaginal speculum."

Xenophon, about 400 B. C., alludes to physicians and surgeons in connection with the Greek army.

In an Aurelian order 270 A. D. it is required that "the soldiers be cured gratuitously by the physicians, and conduct themselves quietly in the hospitia, and he who would raise strife let him be lashed."

In England and Rome, tombstones are found which were erected to the memory of the medical staff of the 2nd century.

In accordance with the teachings of Christianity, hospitals and places of refuges began early to be established by its followers.

In the 2nd century the idea of hospitals took definite shape in the Christian mind, and soon, under the care of St. Jerome,

hospitals came into existence. The first were near Bethlehem, then in other places. Some of these hospitals were for the lepers, the most needy, perhaps, of all invalids. Others were used for hospital purposes in the care of any disease, while others seem to be merely inns at which pilgrims could find suitable refreshments and rest.

Under St. Jerome's influence, we find Fabula, a Roman lady of wealth, building a hospital in Rome in 379 A. D. This is supposed to have been for the joint purposes of caring for the needy as well as the sick.

The Council of Nice, in the 4th century, set its seal of approval on hospitals, as representing a very necessary, as well as desirable part of church work.

The hospital at Cæsarea was built 370 A. D., and the Hotel Dieu, in Paris, in 600 A. D. The latter has been famous through the centuries. This hospital has a most interesting history, its years of usefulness extending into the 18th century, and its immense size adding to its renown.

Through the middle ages monasteries were established in various parts of Europe. These set apart a place for the care of the sick among them. It was but a step farther to receive the sick from outside the monastery, and then to build the place for the sick in a separate building from the other; thus our hospital is evolved. In all this history, no hint is given of systematic care of the sick by trained attendants. Very little was known of the value of cleanliness, and the necessity for abundance of fresh air, pure water and light was not even dreamed of.

Infectious diseases were crowded together, sexes cared for in the same beds, without regard to disease or condition until the death rate became so great, and the condition of the sick so desperate that the words, "who enters here leaves hope behind" might well have been inscribed over every hospital entrance and ward.

As Christianity spread in Europe, hospitals increased in number, but medical science was not keeping pace with the needs of the inmates, and terrible abuses crept into hospital management. Diseases spread more rapidly because the sick, aggregated in the hospitals, and exposed while in a condition to contract disease, succumbed to the ravages of infections until the death rate rivaled that of the plague.

The modern dread of hospitals very likely came from this state of affairs, and the history of these abuses handed down from those worse than "Dark Ages." The modern four-posted bedstead is a survival of the boxbed that was used in the Middle Ages for purposes of warmth. The bed being really a box with sides that closed at night. When we read that men and women

were crowded promiscuously, without regard to disease or sex into these beds, we only wonder that any one survived. The beds of the "Hotel Dieu," in the 16th century, were said to have from 8 to 10 patients each. In the 17th century it contained several thousand beds containing from 2 to 6 patients in each. During the prevalence of the Plague, 68,000 patients died in this hospital within one year.

The medical authorities protested against such hospital management, and the clergy became alive to the terrible conditions of affairs until, gradually, the principles of sanitation have taken their proper place, and fresh air, sunshine, pure water, and perfect cleanliness are the primary essentials demanded in any hospital.

Among the Mohammedans, hospitals are said to have been managed, and the medical science of the day better developed, than among the Christians. In this connection it is interesting to note that the Mosque of St. Sophia, in Constantinople, was originally built as a training school for nurses.

Among the first definite attempts to directly train women for nurses, was that made in Germany by a Lutheran minister, Theodore Fleidner, in 1822. Fleidner's attention was drawn to the forlorn, hopeless condition of the women prisoners of his little town, Kaiserwerth, on their discharge from prison. Casting his thoughts about for ways and means to better their condition, and that of the sick poor at the same time, he finally solved the difficulty by starting a little hospital, first in a small house near his. Then in an unused velvet factory, with these women for nurses. From this tiny beginning, the order of "Deaconesses" thus established has spread over the globe, until his homes for training nurses are found from Jerusalem to the western United States. The vows of the Deaconesses pledged them to the "care of the sick, the poor and the young;" unquestioning obedience to the superior nurse, was insisted on. These vows might be taken for a time only. Thus making the training desirable for any one who wished to follow that line of work for a time, but did not care to devote life to it. At Fleidner's death, in 1864, over 100 establishments existed, and 430 Deaconesses were carrying on their work.

Nursing in England was mainly done by the pauper or the criminal class. Hospitals as such only existed as infirmaries connected with almshouses, and the nursing was done by the inmates. No trained nurses existed, even for the wealthy class. They had to depend on some kind relative or be left to the cruel neglect of some "Sairy Gamp."

The files of the British Medical Journals of the early '60's are full of tales of neglect and mismanagement of the sick in institutions.

The vital question was that of nursing. One report from the London workhouse, in 1866, says that of thirteen nurses only one could read, and how medicines had been given was startling to think of.

Another physician said his nurses were good, but they were always drunk, and one was found to be imbecile.

Florence Nightingale is the connecting link between the old untrained nurse, and the modern well trained, intelligent graduate nurse. Born in Florence, reared in a comfortable English home, of sympathetic and unselfish disposition, her attention was early called to the condition of the sick poor around her, and then to the condition of the sick poor in the almshouses and infirmary hospitals. She visited hospitals in England first, studying their needs, then went to the continent. She entered Fleidner's school at Kaiserwerth, although discouraged by Fleidner himself, who did not understand why this slender English girl should care to study with his released prisoners. Miss Nightingale spent several months, at two different times, in Fleidner's school. The second time she carefully studied hospital management and sanitation.

The opportunity for Miss Nightingale's demonstration of the value and efficiency of trained women nurses in sickness came with the Crimean war. Before the medical authorities realized the danger threatening the soldiers, the pestilence had broken out among the wounded, and the dead and dying were without care or treatment. The newspapers appealed to the people, the people and the war office appealed to Miss Nightingale, and in six days from her call from the war office she was on her way to the seat of the war with thirty-eight partially trained nurses.

When they arrived they found 600 more freshly wounded soldiers from the battle of Inkerman waiting for treatment. So bad was the condition of things in the hospital that in the first twenty-four hours Miss Nightingale only succeeded in getting the dead removed from the hospital. She had to encounter the opposition from the medical authorities, who were jealous lest their province be trampled on. So well did she conduct her work, co-ordinating the care of the patient with the surgical and medical treatment, and so tactful was she with her management, that all opposition speedily vanished, and she was given control of the whole nursing part of the work. This gave her the opportunity to demonstrate to the world the value and absolute necessity of trained service in supplementing the physician's care of the patient and in gaining best results from that care.

Her training in Fleidner's little hospital, with scarcely a dozen beds, was utilized by her with her 10,000 patients, thus

doing away with the modern dangerous idea, that because a hospital is small, a nurse cannot be properly trained in it, or that a graduate from a large hospital is twice as capable as one from a small hospital.

A second contingent of forty-seven nurses came out to help Miss Nightingale; even with these, there was more than enough work to keep all busy, for fever and cholera broke out in the camp.

Miss Nightingale won the victory for trained nursing here so signally that the only question the hospital world has troubled itself with since is how best to train nurses for its service. When Miss Nightingale returned to England, the gratitude of the English showed itself substantially by the gift of a large sum of money. With this she established a fund, which was used to start a training school in connection with St. Thomas Hospital. This is one of the model training schools, and from it our own Bellevue Hospital training school was modelled.

HISTORY OF NURSING IN THE UNITED STATES.

The first hospital mentioned in history in the United States was one on Manhattan Island, in 1658, which was established for sick soldiers. Early in the 18th century pesthouses were built in New York, Charleston, and Salem, Mass. In 1751 The Pennsylvania Hospital received its charter. Private buildings were used for hospital purposes until it was finally built in 1755. The charter of the New York Hospital was obtained in 1771. This hospital was barely completed when it was totally destroyed by fire in 1775 and not rebuilt until 1791. In this hospital Dr. Valentine Seaman gave the first systematic instruction to a class of twenty-four nurses. His course consisted of twenty-six lectures, mostly upon midwifery, but also including anatomy, physiology and pædiatrics. In 1838 the Society of Friends in Philadelphia started a "Nurse's Society," having for its object the elevation of the standard of nursing, and the relief of the overworked Catholic sisters. The Philadelphia Lying-in Charity has given instruction in that line of work for about sixty years.

The Woman's Hospital in Philadelphia has given systematic instruction to its nurses since 1861. The New England Hospital in Boston began its training in 1872. In 1873, training schools were established in the Massachusetts General Hospital in Boston, in Bellevue in New York, and in New Haven the Connecticut Training School for Nurses was established.

In 1875, the training school on Blackwell's Island was established in connection with the department of Charities and Correction. This school was very much needed, as a glance

at the report of the hospital in 1874 will show. This report states that in a fever ward of 40 beds, the only nurse was under six months sentence for drunkenness, and who told the patients a story of a most shameful life with no sense of shame at all. There were no chairs with backs in the hospital, round wooden benches were the only seats, and the only pillow one of chopped straw. In the fever ward the only bathing facilities consisted of one tin basin, a bit of soap and a ragged bit of cloth passed from bed to bed. The committee thought a large number of these patients were hungry every night. Butter was only occasionally used, and the sugar supply had been exhausted two months before. These patients are cared for now by trained nurses, and order and cleanliness are the rule everywhere.

The New York Hospital Training School was organized in 1876, and in 1877 the Buffalo General Hospital Training School. From this time on, training schools have multiplied all over the country, until each little hospital has its tiny training school to care for its patients. The old idea that nurses are born, has disappeared in the later fact, that, no matter what gifts nature starts a nurse with, those gifts must be educated by continual doing and observing until the doing becomes second nature.

In Worcester, the Worcester Training School for Nurses was started in 1883 for a two years' course of instruction. This course has been extended within a year or so to three years. This hospital, the City Hospital, has 150 beds, and the school does the nursing required for its service. Treating annually, as it does, between four and five thousand patients, having a maternity ward, it offers great inducements to nurses who wish a good, all round training. Until recently, it has also supplied nurses for the service at the Isolation Hospital of the city. It has given diplomas to a few male graduates.

Memorial Hospital, of this city, was opened in 1888. It has, at the present time, thirty beds for women, and thirty for children. It is largely a surgical hospital, not of design, but because those cases come to it, and coming, get the treatment needed. The training school consists of twenty-one pupil nurses, and a two years' course of instruction.

The plan of organization of all training schools is practically the same. Nurses are admitted at any time in the year when vacancies occur. This keeps down the undesirable complications which arise when a number of new nurses are admitted at once.

Class work in a training school usually extends from September until June. One to three weekly recitations in nursing, anatomy and physiology, materia medica and therapeutics,

obstetrics and surgery are required. One or two weekly lectures by members of the staff are given on subjects connected with nursing.

The instruction, of necessity, is largely of a practical nature. The art of nursing is taught by doing it, and theory is brought in only as much as is necessary for successful, intelligent appreciation of the how and why of the doing.

Yearly or semi-yearly examinations are given the nurses by a board of examiners, selected by the trustees for that purpose. The questions are mainly of a practical nature. The class instruction is given mainly by the superintendent of nurses. Older nurses also aid in the instruction of the younger ones. As the small hospitals and training schools multiply, the charge of them is often given to a successful graduate nurse, who is matron, superintendent, and superintendent of nurses all in one.

She often has had no experience in hospital management, knows very little of the management of an institution, and may not be used to teaching. This state of affairs is much open to criticism, as nurses trained in that way are not as well trained as the need of the patients demands. To meet this need, and to raise the standard of nursing, a department has been established in The Teacher's College, New York, for instruction in Hospital Economics.

This course requires the Elements of Psychology, Application of Psychology in Teaching, Hospital Economics, Methods and Practice, Hospital and Training School Organization and Supervision, Elective Courses in Biology, Physiology and Hygiene, Domestic Science, Foods—or Food Productions and Manufacture, Home Sanitation and Management, Bacteriology and Household Chemistry.

REQUIREMENTS FOR ADMISSION INTO HOSPITALS.

Unimpaired health and power of endurance are primary essentials. The applicant should start free from any taint of pulmonary disease. The long hours and confinement indoors tend to lower resistance to disease, and thus open the way for infection with the tubercle bacillus.

The age of admission in a training school is between twenty-one and thirty-five years. Blanks are sent to applicants for training. These application blanks are practically the same in the fundamental requirements. Name, date and place of birth, height and weight, civil condition, defects, physical or mental, are all to be noted. Tendencies, especially toward pulmonary disease, rheumatism or uterine disease are especially important. Other abnormal conditions are to be reported. The

sight must be perfect, or corrected by glasses. Hearing and smell must be perfect.

A common school education is essential. A high school education ought to be insisted upon, but at the present time it is impossible to require this. The general knowledge possessed should be of such a character that the applicant can easily and tactfully adapt herself to any surroundings.

Letters of recommendation are required from a clergyman, and from a physician stating the applicant to be physically able to do the work required.

The aim in all schools is to eliminate the servant girl type, and to introduce the better educated "home girl," who works with a more intelligent interest and sympathetic enthusiasm than her humbler sister is capable of, be she ever so willing. After admission, the reading of things expected of a nurse might well appal even the bravest. Quoting from a text-book in use in many schools, "Unimpaired health and power of endurance, intelligence and common sense, are *primary* essentials. She must be of even, cheerful temperament, not easily irritated or confused."

"She must have acute perceptions, habits of correct observation and accurate statement, and some manual dexterity." She needs to be quiet, neat, and capable of eternal vigilance; always in a state of "vigilant repose."

All culture and refinement, all talents and virtues are needed by her in caring for her patients. The broader her outlook, the more content will she be to do her best in the one lonely room she is in, knowing that to her is given a part of the great battle going on between health and disease, and that by her faithfulness, disease may more speedily be done away with.

The nurse's attitude toward her patient must be one of unobtrusive care and thoughtfulness, watchfulness and sympathy. The sympathy must manifest itself in deeds, rather than words. Her whole attitude, expression and atmosphere must be one of cheerfulness and encouragement. She must efface her own affairs, and have no interest but the patient's while she is caring for him.

Nursing properly includes the execution of the physician's orders, in giving what medicine or treatment he prescribes. It also includes the entire care of the patient, hygienic and dietetic. The sick room is also to be kept clean, tidy, and in perfect order. She must accurately observe the patient at all times, note the effect of medicine and treatment, all symptoms that arise, and report in writing each day what has taken place during the physician's absence. This report must be a truthful, uncolored account of what has been done and seen, and no

comment that would bias the physician in any way should be allowed.

A nurse in a hospital ward in training begins her day's work at 6.30 or 7 A. M., and is "on duty" until 7 or 8 P. M. She is allowed $\frac{1}{2}$ hour off for each meal. Besides this she has two hours "off duty" during the day, one afternoon after two for the rest of the day, weekly. Sunday, four or six hours "off duty."

During class time, from September until June, nurses have one to three recitations weekly besides the time off. Lectures, by the hospital staff, are also given once or twice weekly for the nurses. Examinations by a Board of Examiners appointed by the trustees of a hospital, are given the nurses once or twice yearly. The greater part of the instruction, and all the class work, is given by the superintendent of nurses, and in larger schools, by her assistants as well.

Nurses in training do all the nursing in hospitals, caring for all the needs of the patients under the direction of older nurses, medical internes and the hospital staff of doctors.

The nurses are responsible for the good order of the ward, are expected to carefully disinfect all that would be sources of danger to others. In a surgical ward, all the sterilizing and aseptic and antiseptic work is done by them, under careful supervision. This requires a wide knowledge on their part of how infection spreads, and thus how it may be prevented.

The tremendous energy there is in a few pathogenic bacteria when they gain access to a patient with lowered vitality is almost incredible. One of the hospital proverbs, that "a dirty finger nail may cause a person's death," may be literally true. Thus it is necessary that all care be taken honestly and conscientiously, not merely to go through the form of disinfecting, but the spirit of aseptic cleanliness must be alive in each individual nurse.

On entering the hospital, a nurse begins her work rather gradually. She assists the older nurses with their work, aids in serving food, cleansing utensils, keeping order in the ward and rooms connected with it. The dusting in the hospital ward is a large item, being done each day with a damp cloth, and some disinfectant being often used. The new nurse thus gradually becomes accustomed to the atmosphere of sickness, takes in details almost unconsciously, and if she shows herself apt to comprehend, quick to grasp a new situation and not afraid of work, she is given gradually more responsible work to do under competent oversight, until it is seen that she can be trusted to do the proper thing at the proper time. In English training schools, nurses on entering have a much greater proportion of "menial" work to do than in American schools.

They are allowed, however, with the consent of the older nurses, to wash the patients' heads and feet twice a week.

At the end of the month or two of probation, if the nurse has worked satisfactorily, she is accepted as a regular pupil nurse, and is allowed to wear the uniform of the school. A girl often develops wonderfully as she realizes the responsibility and care that she is expected to meet, and that on her quick appreciation of a situation depends often the treatment ordered by the physician, and that the life of the patient often depends on this quick recognition of affairs. The instruction in a training school is necessarily largely of a practical nature. Nurses are taught to do by doing, and repeatedly doing, until the repetition becomes second nature.

Each school also requires a certain amount of class work, depending somewhat on the number of patients, and the relative number of nurses to patients.

The rather long hours, and the depressing effects of being with sick people constantly, makes mental work very hard for the nurse. Add to this the fact that a large proportion of nurses have been out of school for a long time, and that even when in school, their attainments were not sufficient to enable them to do much independent thinking, the difficulty of insisting on a high standard of class work is better appreciated. It is repeatedly noticed that nurses who do superior work in the wards are often deficient in their class work. Thus the perplexing question comes up with each recitation how much to excuse and how much to insist on as a standard. Class work is given in the principles and practice of nursing: Anatomy, physiology, hygiene, obstetrics, materia medica and therapeutics and children's diseases, all have some time devoted to them.

The principles of modern surgery are taught by the actual daily work in surgery. Nurses gain a knowledge of the principles of bacteriology in a general way. Massage is also taught by practical exercises in most schools.

Probationers are given written examinations in which their spelling, penmanship, arithmetic, and English grammar knowledge is scrutinized. Questions are also asked that bear directly on what they have seen and learned in the ward, and in this way the quickness of observation and comprehension is ascertained.

The class of applicants consists of girls who have been teachers, bookkeepers, stenographers, clerks, saleswomen, servants and shop-girls. The teaching has often to be of a very simple character, to be understood. Much time is lost in this way in teaching the fundamental things that might much better be spent in technical teaching.

The power of close attention and of continued attention has to be acquired by these girls, and there is necessarily much repetition. The ability to observe accurately, to describe intelligently, to give an unbiased, uncolored statement of what is observed is very hard to acquire, and some never do it.

Unvarying kindness, courtesy, and thoughtfulness is required from each nurse both to the patients and to each other.

The ideal nurse needs to be neat and attractive in appearance, and of pleasing personality. A great deal of tact is necessary to care for her patient without antagonizing. She must be firm without being obstinate, know when to yield gracefully to her patient's wishes, and when to gently, but unyieldingly insist on compliance with the prescribed treatment.

She must be a good housekeeper; for her especial kingdom, the sickroom, needs neatness as its keynote of management. She must be acquainted with the principles of sanitary and domestic science, and realize that on the abundance of fresh air, sunshine, pure water and cleanliness depends more the well being of her patient than on all the drugs in the Pharmacopœa without these.

She must be able to use her hands skillfully, yet gently and firmly, giving her patient at once the impression of gentleness, strength and support. She must know the diet used in different diseases, and in different stages of the same disease. She must know the food value of different articles of diet, and when a cheaper, but equally nutritious article can be replaced for one more expensive.

Her knowledge of materia medica and therapeutics must cover the commonly used drugs and their preparations. She must be acquainted with their range of doses, their physiological and therapeutic action. If poisonous, she must know the symptoms expected from overdoses—also the principles of treatment of poisoning of all kinds. She must quickly decide whether emergencies are of sufficient importance to call a physician, or if she can deal with the point at issue herself. A well trained nurse never prescribes, yet she must know the common household remedies and be able to use them while the physician is on the way.

Her knowledge of anatomy must be sufficient to know the location of organs, blood vessels and nerves. Her knowledge of physiology should cover the normal processes of respiration, circulation, digestion, assimilation, secretion, excretion and reproduction. With this knowledge of normal processes, she can easily decide whether pathological processes are impending or actually in existence.

Her knowledge of the physiology of the central nervous system should be broad enough to recognize the effect of disease

at once on the mental outlook of the patient, and carefully weigh the effect of disease on the person's individuality. Her knowledge of general diseases must be broad enough to cover the general course of each disease, know its ordinary complications, and the special emergencies needed to be guarded against. Her knowledge of the infectious and contagious diseases must cover the way in which these diseases are spread through the community. Thus she can prevent contagion to a great extent. Her knowledge of bacteriology must be sufficient for her to know the common avenues of infection both of wounds and of people generally when resistance is temporarily lowered from fatigue, sickness or injury. The principles and practice of our modern aseptic surgery must literally be in her finger tips, for on her avoidance of sources of infection the success of all surgical operations depends.

THE IDEAL TRAINING SCHOOL.

It is too soon in the history of nursing to expect an ideal training school. Each school and each hospital has its own ideal toward which it is struggling, now faster and now slower. There are many things to criticise in the training school as it now exists.

The school has been called into existence by the hospital as the cheapest and most efficient way in which its nursing can be done. The long hours of duty, with the resulting fatigue, make much study by the pupil nurses out of the question. The problem each hospital is working out for itself is how to increase its number of nurses, and decrease the hours of practical work, thus giving more time for class work. Class work also needs to be of a more varied character.

Beside the technical training necessary, elementary physics and chemistry should be added to the regular course. Instruction in domestic science and sanitation should be thorough. The chemistry of foods, as well as methods of preparations, ought to be carefully taught. History, English literature, psychology (elementary), biography, political economy, and sociology might well be added to the curriculum. Nature study of some kind should form part of the course, both for the nurse's own benefit, and as a therapeutic resource for the benefit of the patient. When a course on this line can be given nurses, when instead of the hospital giving nurses, as it does now, \$6-\$14 monthly for personal expenses, nurses pay a small amount for their instruction, while the hospital takes the money used to defray nurse's personal expenses, to employ more and better equipped instructors, we shall at once see our ideal training school near at hand, and suffering humanity much better cared for. The nurses will have more individuality,

and be freer to enjoy what now is almost grudgingly given them in return for service rendered.

MARRIAGE STATISTICS.

Buffalo Training School for Nurses.

231 graduates.

27% married.

Bellevue Training School, New York.

604 graduates.

18 + % married.

Presbyterian Hospital, New York.

124 graduates.

19 $\frac{1}{3}$ % married.

City Hospital, Worcester.

144 graduates.

19 $\frac{1}{2}$ % married.

Memorial Hospital, Worcester.

61 graduates.

Nearly 23% married.

Waltham Training School for Nurses.

144 graduated.

13 + % married.

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