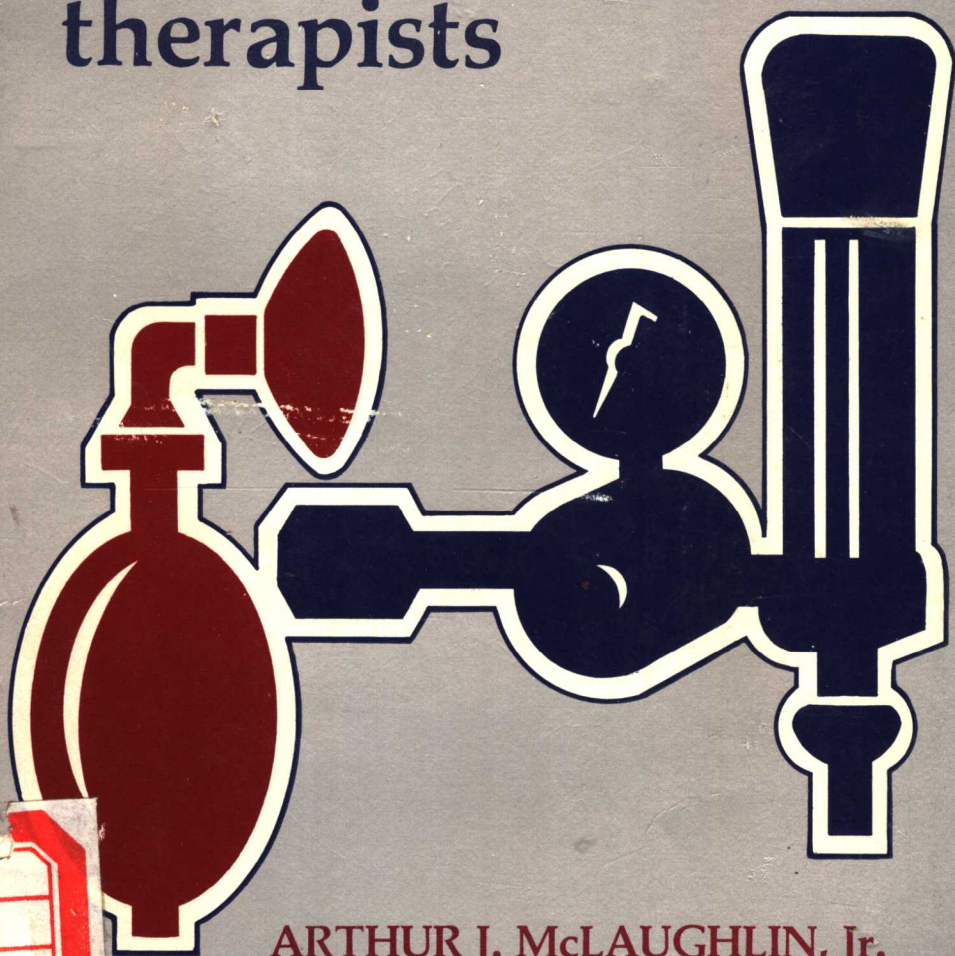


# Organization and management for respiratory therapists



ARTHUR J. McLAUGHLIN, Jr.

# **Organization and management for respiratory therapists**

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*with 39 illustrations*

**The C. V. Mosby Company**

ST. LOUIS • TORONTO • LONDON 1979

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Printed in the United States of America

The C. V. Mosby Company  
11830 Westline Industrial Drive, St. Louis, Missouri 63141

**Library of Congress Cataloging in Publication Data**

McLaughlin, Arthur J., 1947-  
Organization and management for respiratory  
therapists.

Includes bibliographical references and index.

1. Hospitals—Inhalation therapy services—  
Administration. I. Title. [DNLM: 1. Hospital  
departments—Organization and administration.  
2. Respiratory tract diseases—Therapy. WF27.1  
M161o]

RA975.5.I5M32                      361.1                      78-15771

ISBN 0-8016-3311-7

C/M/M 9 8 7 6 5 4 3 2 1

## PREFACE

Nearly everyone is familiar with the importance of technology in modern medicine. Respiratory therapists are perhaps more aware than most, since technological innovations directly affect our ability to provide life support. But the economics of health care are also intimately involved in modern medicine. The quality of care and the cost of care are always related. Sometimes that relationship is direct; in other cases it is tangential, but it is always a factor.

Efficient and effective management is part of good patient care because, although the demand for health care is unlimited, the funds available to provide it are not. It is the responsibility of all modern health care workers to have some familiarity with the cost of the care they provide.

Health care professionals in management positions are directly responsible for provision of the best possible care at the lowest possible cost. Respiratory therapy is the first health profession to recognize this to the extent of requiring all therapist programs to incorporate a course in organization and management in their curriculum. The American Association for Respiratory Therapy and the American Medical Association should be proud of this requirement.

This book was developed from several years' experience in teaching organization and management to respiratory therapy students; thus it is aimed at their level. Information appropriate for individuals already in management positions has been included, although some of my examples may seem oversimplified to the experienced manager. Those who seek more advanced works in management will find the bibliographies useful.

I must express gratitude to the many people who helped with this book, primarily to my good friends Richard A. Matarese and Robert M. Lang. Louis Bieda once again has aided me with his excellent artwork, and Ann Niles has cheerfully typed and retyped the manuscript. I also thank James R. Lennon and Thomas F. Weymouth, who patiently taught me a great deal about the management process and so helped me provide better respiratory therapy. Finally, I thank my brother Gregory, who has been an invaluable help throughout my career.

**Arthur J. McLaughlin, Jr.**

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## Chapter 1

# History of hospitals and health care

Since a majority of respiratory therapists work in hospitals today, it is important to look at the history of hospitals in order to understand the background for the rules and traditions now found in hospitals.

### ANCIENT HOSPITALS

The history of hospitals begins before the time of Christ. In India, Buddha appointed physicians and built hospitals, and by 226 BC a system of hospitals was established. These hospitals had some modern characteristics, including the provision of fresh food to the patients. Attendants who cleaned the hospitals were required to take baths periodically and to keep their hair short. The attendants gave patients massages and may be seen as precursors of today's physical therapists; they were also required to wear white clothes, which easily showed dirt.

The Greeks and Romans used their temples as hospitals. Probably the most famous of these is the Parthenon, located on the Athenian Acropolis (Fig. 1-1). Although their architecture was based on reason, their medical practice was based on mysticism and superstition. For example, they used pulverized snake tongues as medication, and the patients presented gifts at the altars in the hope that the gods would heal them. Patients of the Greeks and Romans relied on prayer and not on surgery or rationally based medication for cures (Fig. 1-2).

Later, some rudimentary natural medications, such as salt, were introduced, and patients were given baths as part of medical therapy. Physical therapy and gymnasiums and sunshine and sea air were also highly recommended for the patients. The so-called hospitals provided libraries from which the patients could borrow books with which to occupy themselves while ill.

The first clinical records were introduced during this period



Fig. 1-1. Greek temple. (Courtesy The Bettmann Archive.)

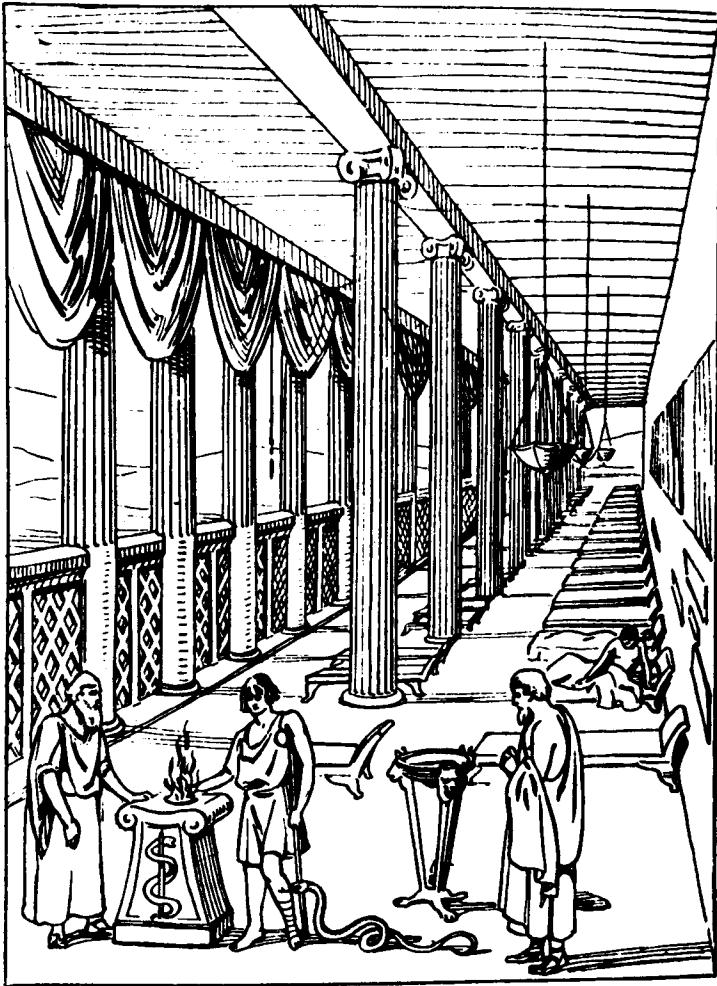
at the Temple of Kos. Hippocrates, about 460 BC, began to describe various diseases with some precision (for example, malaria, stomach ulcers, and skin diseases). This rational, clinical approach was very important because it represented a move away from mysticism and superstition and toward reason in the treatment of diseases. The keeping of documents containing descriptions of diseases was essential for the development of medicine on a rational basis.

On the African continent, the Muslims were also concerned with the care of the ill and were familiar with inhalation anesthesia and a variety of drugs. The Muslims had the first insane asylums, a thousand years before they were developed in Europe.

## THE MIDDLE AGES

With Christianity, medicine again turned toward mysticism; patients and their intercessors believed that healing could be achieved by appealing to God and the saints. The Christian hospitals were at first largely reserved for the rich patrons of the Church.





**Fig. 1-2.** Early Greek patients seeking cures. (Courtesy The Bettmann Archive.)

In Europe, religious institutions continued to care for the sick throughout the Middle Ages, but it was considered sacrilege to cut or open the body in any way, thus making any curative measures by surgery impossible. This belief was a major deterrent to the development of medicine. Nevertheless,

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the Christians did open many hospitals, and some of the founders of these hospitals later became famous, for example, St. Bernard. Since the Catholic Church in the Middle Ages was not only a religious institution but a political one as well, the Church was able to levy taxes in order to pay for maintaining the hospitals.

### Hospitals

A particular need for hospitals developed among the Christians because of the Crusades, especially during the twelfth and thirteenth centuries. Since Christian soldiers ranged throughout much of the world known to Europeans, fighting for the Christian cause, one might expect that hospitals were needed for the treatment of wounded soldiers. However, the need for the hospitals really developed as a result of diseases acquired by soldiers in foreign lands (Africa and the Near East) to which the Europeans had no resistance. Many of these hospitals were very large even by modern standards. One hospital in the Holy Land could care for 2,000 inpatients at one time.

Nevertheless, Hippocrates' statement that war is the only proper school for the surgeon is certainly true; throughout the centuries, wounds of battle have necessitated the development of methods for caring for traumatized patients.

The modern word "hospital" is derived from the Latin *hospita*. Travelers' rests established by the Catholic Church for pilgrims traveling to and from the Holy Land were called hospices. An example of such a retreat was St. Bernard's, established in 962 AD.

Although most hospitals in the Middle Ages were founded

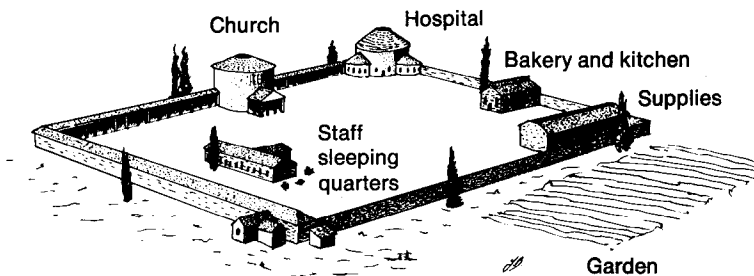


Fig. 1-3. Example of medieval hospital complex.

by religious orders, the first municipal institutions also made their appearance in western Europe during this time. A concentration of wealth existed in the area, and from this source developed the first endowed hospitals. An "endowed" hospital is one that is at least partially established with a gift of money, land, or a building, usually from a wealthy individual.

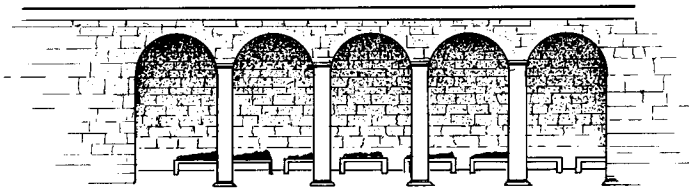
### **Other facilities**

Additional health care facilities were developed to care for patients with leprosy, which was widespread at the time; these were called Lazar houses, after St. Lazar. In France alone, there were hundreds of these houses. One of the first European institutions for the insane was founded in England—the Bethlehem Royal Hospital, London. "Bedlam" was the popular name for the institution; from that came the modern use of the word to indicate confusion and uproar.

During the Middle Ages in France, the first inspections of hospitals began. Hospitals were required to have gardens, bakeries, and laundries, in addition to the basic patient care areas. Many of the services provided by modern hospitals stem from these original requirements, although produce and bakery goods are now purchased from retailers. Indigent patients often worked in the gardens or bakeries after they were cured as payment for their care.

### **The conditions in "hospitals"**

By modern standards, the conditions in hospitals up to the very recent past were inconceivable. For example, often several patients were put in the same bed. A serious problem was the lack of ventilation. In the Middle Ages, no ventilation systems existed. Fans were not available, and even cross-ventilation was often impossible because of the absence of windows. The idea that hospitals should be laid out so that the wind could blow through them occurred to no one, although the Greeks and Romans had used it. Hospitals were usually brick or masonry structures several stories high; they were built in cities, which made the possibility that fresh air would blow through them very remote. This was particularly troublesome in an age when tuberculosis was not under control; it rapidly spread throughout these institutions (Fig. 1-4).



Ward

Fig. 1-4. Early hospital facilities.

The odor in the institutions was considered at the time to be one of the prime disadvantages for patients entering them. Hospital workers carried perfumed pieces of cloth to cover their faces, so that they could stand the stench. After a period of time, the combination of the hospital smells and the strong perfumes that the staff used became so overpowering that the institution could no longer be used. It must be remembered that, in this period, patients with wounds and diseases that might cause sickening odors were not treated by means of surgery. Therefore, open wounds were the rule.

In the Middle Ages, the Church prevented individuals from performing operations that necessitated the shedding of blood. This kept the clergy from treating illness with surgery; barbers gradually took over the practice of surgery, since they were skilled in the use of cutting implements. Instead of using surgery and rationally based medications to treat diseases, the Christians followed the doctrine of *similia similibus curantur*, that is, "likes are cured by likes." For example, for patients with jaundice, ingestion of yellow flowers would be prescribed; if a blood disease were suspected, the patient would be treated with red berry juice. Of course, when such a treatment was not successful, the patient was encouraged to continue prayer as the major method of obtaining relief; various saints were invoked for particular diseases.

## THE RENAISSANCE

"Renaissance" means rebirth; throughout Europe there was a rebirth of knowledge, particularly in the arts and intellectual

activities, beginning in the fourteenth century in Italy. With the end of the Middle Ages, also called the Dark Ages, knowledge was communicated more easily throughout Europe. During the Renaissance years, the Church did not control knowledge as it did in the Middle Ages through its monastery system; thus, many individuals were able to develop new thoughts on and approaches to almost every aspect of life, from architecture to medicine.

During this historical period, many new hospitals were built, more attractive than those of the Middle Ages but no better constructed in regard to ventilation or overall suitability as health care facilities. In addition, many leper houses were converted to hospitals during the Renaissance; thus, there was an increase in the number of hospitals in Europe.

As an outgrowth of the new attitudes toward knowledge, the training of doctors in clinical situations was begun. In Italy, new students followed practicing physicians through hospital wards and were lectured at the bedsides; this was instituted as the basic method of medical instruction. This change in education marks the beginning of true medical schools. However, it should be remembered that, at this time, medicine was considered to be separate from surgery. Barbers continued to do surgery, while the physicians practiced only medicine. This was a strictly academic, hands-off medicine, with assistants performing curative procedures while the physicians read instructions to them.

At this time, an important change in the concept of the hospital's role developed. Hospitals were no longer seen merely as places to house the sick until they miraculously recovered or died, but as places to treat the sick. Hospitals began to cure the sick rather than merely shelter them during their illnesses.

One of the new developments in the practice of medicine was the improvement in surgical practice. Leonardo da Vinci, the classic Renaissance man, performed revolutionary anatomical studies. These were done in violation of the Church's law, and he was harshly criticized for his dissections. Leonardo, however, by performing the dissections and making drawings of the internal organs of humans and of fetuses, gave surgeons a more scientific basis on which to perform surgery.

Some other major developments in medicine that occurred

in Europe between 1350 and 1750 include: the founding of the World College of Surgeons in Scotland, the invention of the microscope by Leeuwenhoek, and the development of a machine for ventilating hospitals designed by Desaguliers.

It is ironic to note that even in these early days there were problems with malpractice. Free clinics, which had been established in England, were very successful until they were closed by lawsuits in which the patients sued the hospitals for malpractice.

### **EARLY HOSPITALS IN AMERICA**

The first hospital in North America was built by Cortés in Mexico City in 1524 AD to care for the soldiers and others who accompanied him on his forays into North America. The first hospital in the United States was built in 1663 on Manhattan Island for the care of sick soldiers. The first almshouse, an "institution for the care of the poor," was founded by William Penn and eventually was converted into a hospital, the Philadelphia General. The Philadelphia General was the oldest hospital still operating in the United States until it closed in 1978.

The first hospital that was planned and built as a hospital for the care of people in a United States community was the Pennsylvania Hospital, built in 1755. This hospital was somewhat modern in design, utilizing a central administration building with wings that housed patients radiating from it. This basic design developed along the lines of military hospitals, which were designed so that the patients were spread out in a sunny atmosphere with good cross-ventilation.

Although hospitals were beginning to improve physically, surgery in the United States and in the rest of the world at this time was actually not as good as it had been in earlier times. The ancient and medieval surgeons believed in cleaning wounds with water or wine; in the 1700's, however, suppuration, that is, allowing the wounds to become infected and to seep pus, was considered good medical practice. The appearance of pus was considered to be a sign that the body was fighting infection successfully, and it was encouraged. As long as the patient's wound continued to produce pus, he was considered to be recovering.

This approach, combined with the lack of sanitation, created

an atmosphere almost unimaginable today. No gloves were used in surgery, and physicians used the same operating coats for one procedure after another. In fact, it was considered to be a sort of status symbol to have more blood on your coat than the other fellow. Regrettably, this tradition has been retained unofficially by some hospital workers today.

## THE NINETEENTH CENTURY

In the nineteenth century many new inventions and procedures were developed in the field of medicine. These transformed the field from the haphazard, superstitious, and largely ineffective treatment of patients into a modern medicine that is more humane while based on reason and the scientific method. One humane development was the introduction of anesthesia, with either chloroform or ether. As incredible as it may seem today, no real anesthesia was available before the nineteenth century; this was the case even in battlefield surgery, which was dominated by amputation since there was no known method of controlling infection. Without the benefit of anesthesia, amputation of the leg was a particularly difficult procedure to perform—and perhaps even more difficult for the patient to undergo.

Practices that led to dramatically improved rates of recovery, especially for surgical patients, were developed by Louis Pasteur, including a process for disinfecting instruments between patients. This particular development greatly reduced the incidence of infection in the patients that were operated on. Bergmann developed the steam sterilizer; the availability of sterile instruments dramatically increased the chances of survival for surgical patients. Lister was responsible for introducing disinfectants into the operating room, both on instruments and as a spray. Today, the process of disinfection and sterilization of equipment for respiratory therapy procedures continues to be one of prime interest for respiratory therapists in the proper delivery of patient care.

During the 1800's, hospital design that allowed patients access to fresh air and sunshine became almost standard. As mentioned earlier, this development derived from military hospitals. During the U.S. Civil War, a standard hospital was developed for the Northern troops in which the idea that the pa-



Fig. 1-5. Typical ward in U.S. Civil War hospital. (Courtesy The Bettmann Archive.)

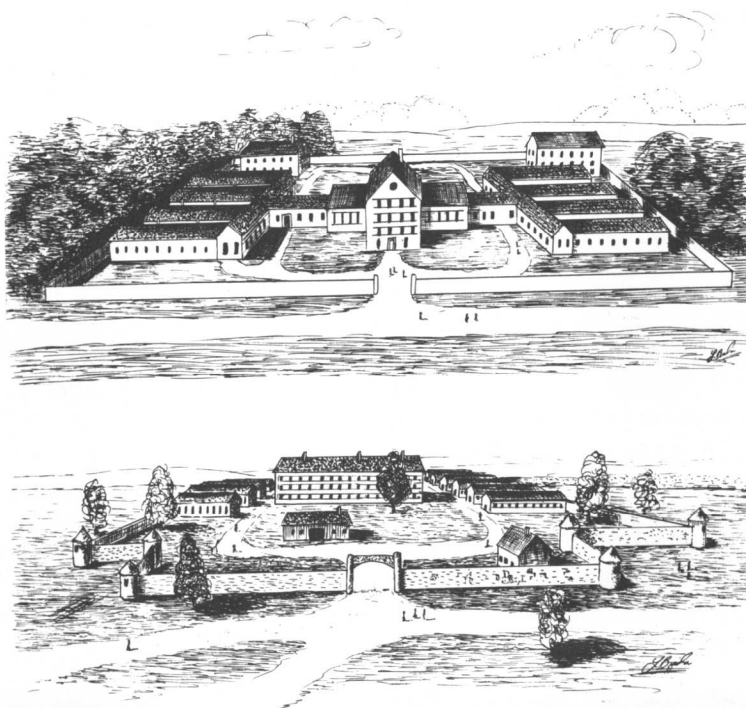


Fig. 1-6. Artist's conception of military hospitals ca. 1850-1900.



tients should be spread out in wards or wings was used (Fig. 1-6).

Interestingly, in the twentieth century this idea began to fade, and hospitals were built as square or rectangular edifices. Even though the patients were physically separated by general classifications, easy accessibility to sunshine and fresh air was limited to the sun room, or solarium. The decision to place patients close together once again had an economic basis, that is, the efficiency of having the patients close to the working staff, nurses, and physicians. Of course, fresh air gave way to internal climate control and air conditioning. Indeed, in many modern hospitals today, the windows are sealed; frequently, respiratory therapists provide localized controlled environments.

## **A BRIEF HISTORY OF NURSING**

Until recently, the history of health care has largely been the history of nursing care. Even today, although different kinds of professionals and semiprofessionals, such as phlebotomists, x-ray technicians, electrocardiogram (EKG) technicians, work in the hospital, there are really very few people who spend much time giving actual bedside care. Respiratory therapists probably make up the largest nonnursing group that gives bedside care today, since most physical therapy takes place in physical therapy departments to which the patients are transported. Most respiratory care today is given at the bedside and, especially in the last five or ten years, in intensive care units. Nevertheless, for most of the time that hospitals have been in existence, nursing care has been identical with patient care.

Originally, nursing care was inspired by religious ideals, as in Greece; later, mystical and theological considerations represented by the Christian approach to health care became dominant. It is important to note that the original bases for nursing care are not humanitarian. For centuries, many of the individuals involved in nursing were either required to do the work or considered it a part of a religious duty. In this tradition can be found the origin of "long hours and little pay" for health care workers in general and nurses in particular. When religious orders provided nursing care, of course, no direct payment was made to the workers at all.