The "essentials" for programs in inhalation therapy were studied by the American Society of Anesthesiologists and the American College of Chest Physicians and adopted by several pilot schools between 1957 and 1962. Recommended with minor modifications, they were approved by the American Medical Association Council on Medical Education and the House of Delegates in 1962. Revised in 1967, the "essentials" are organized into the areas of administration, faculty, facilities, requirements for admission, health, curriculum, ethics, and admission to the list of approved schools. A program may be established in a medical school or a hospital and didactic and laboratory work may be conducted in these types of institutions or in community colleges or nursing schools. Clinical training must be offered in accredited hospitals. The program director must be a physician who has had specific training or experience in inhalation therapy and instructors should be registered inhalation therapists who have had at least three years experience. Enrollment should not exceed five students to each instructor for clinical practice and at least four students should be enrolled in each class. At least 18 months in length, the program should include a minimum of 1,800 clock hours of instruction in theory and practice. (JK)
BOARD OF SCHOOLS OF INHALATION THERAPY

VINCENT J. COLLINS, M.D. (ASA)
CHAIRMAN
Cook County Hospital
Chicago, Illinois

PAUL R. DUMKE, M.D. (ASA)
Henry Ford Hospital
Detroit, Michigan

BERNARD M. KEW, R.T. (AAIT)
Westlake, Ohio

VINCENT KRACUM, R.T. (AAIT)
Good Samaritan Hospital
Phoenix, Arizona

EDWIN R. LEVINE, M.D. (ACCP)
Edgewater Hospital
Chicago, Illinois

H. FREDERIC HELMHOLZ JR., M.D. (ACCP)
Mayo Clinic
Rochester, Minnesota

EASTON R. SMITH, R.T. (AAIT)
Orange Memorial Hospital
Orlando, Florida

4/ AMERICAN SOCIETY OF ANESTHESIOLOGISTS (ASA)
315 Busse Highway, Park Ridge, Illinois

5/ AMERICAN COLLEGE OF CHEST PHYSICIANS (ACCP)
712 East Chestnut Street, Chicago, Illinois

6/ AMERICAN ASSOCIATION FOR INHALATION THERAPY (AAIT)
4075 Main Street, Riverside, California 92501
FOREWORD

The Board of Schools of Inhalation Therapy is organized under the auspices of the Council on Medical Education of the American Medical Association and sponsored by the following organizations:

1. American Society of Anesthesiologists
2. American College of Chest Physicians
3. American Association for Inhalation Therapy,

Its primary purpose is to maintain a high standard of education among schools of inhalation therapy, and to encourage further development of these schools.

HISTORY. In June, 1956, the House of Delegates of the AMA considered a resolution introduced by the New York State Medical Society regarding the field of inhalation therapy and recommending the establishment of "Essentials" to stimulate the development of schools. This was adopted in principle and referred to the Council on Medical Education for study. After preliminary study, an exploratory conference was held in Chicago in September, 1957, of all organizations interested in inhalation therapy. It was unanimously agreed that minimal standards for training should be developed. The "Essentials" proposed by the New York State Society of Anesthesiologists in May, 1956, were approved as a basic document for study and exploration. The American Society of Anesthesiologists and the American College of Chest Physicians were delegated to evaluate the proposed curriculum and to obtain experience in inhalation therapy education.

From September, 1957, to January, 1962, several pilot schools adopted the proposed curriculum to varying degrees and found that the minimal standards represented a realistic approach in training. Thereupon, a report was made to the Council on Medical Education in February, 1962, recommending the earlier "Essentials" with minor modification, and the establishment of a mechanism for approving schools. In March, 1962, the Council approved the "Essentials" as submitted. These were subsequently approved by the AMA House of Delegates in December, 1962, in Los Angeles.

A revision of the "ESSENTIALS" was prepared in 1967 and endorsed by the Council on Medical Education. On December 1, 1967, the revision was approved by the House of Delegates of The American Medical Association at Houston, Texas.

COMPOSITION OF BOARD. The Board consists of 7 members representing the sponsoring organizations. Two
physicians each are nominated by the American Society of Anesthesiologists and American College of Chest Physicians, and three technicians are nominated by the American Association for Inhalation Therapy. This Board, responsible for the evaluation of schools of Inhalation Therapy, held its first meeting in January, 1963, at AMA headquarters.

BASIC CONCEPTS

An approved school for training inhalation therapy technicians must have the following:

1. A medical director, active in the field of inhalation therapy and concerned with the proper education of therapy technicians. Ordinarily, this physician will be a board certified anesthesiologist or a board certified chest physician.

2. A Technician Supervisor, experienced in the field of inhalation therapy and interested in training technicians. This supervisor should be certified as a registered therapist. He should have an adequate number of assistants.

3. A hospital facility with an active, well-organized inhalation therapy service and an administration sympathetic to the needs of inhalation therapy.

4. A program to provide or to integrate the knowledge essential to practice in the field of Inhalation therapy and to provide the practical skills needed by competent technicians.

ESSENTIALS OF AN APPROVED SCHOOL FOR INHALATION THERAPY TECHNICIANS

The "Essentials", as indicated by the heavier type, represent the minimal requirements for an AMA approved school of inhalation therapy. These "Essentials" have been established by the House of Delegates of the AMA. In addition, this booklet contains under each item of the "Essentials" certain suggestions and guides designed to assist educators and administrators in the organization of a training program for inhalation therapists. Such suggestions only supplement the "Essentials" and do not in any way supplant them.
I. ADMINISTRATION

1. Acceptable schools for training inhalation therapy technicians may be established only in medical schools approved by the Council on Medical Education of the American Medical Association or in accredited hospitals. An acceptable hospital may affiliate with a college or university accredited by their respective regional association of colleges and secondary schools.

a. Didactic teaching and laboratory work may be conducted in a medical school, a university, a nursing school, a community college, or a hospital accredited by its respective accrediting agency. Clinical training must be offered in a hospital accredited by the Joint Commission on Accreditation of Hospitals.

b. If a community college wishes to establish a program or course in inhalation therapy, it must be affiliated with a hospital which has an Inhalation Therapy Department that meets all the requirements of the Board of Schools and of the "Essentials".

2. All training of technicians shall be under competent medical control. Though the basic sciences may be taught in a college setting, it should be recognized that such is preliminary or preclinical in nature and that Inhalation Therapy itself is a clinical discipline.

All training and determination of content of curriculum courses for student inhalation therapy technicians must be under the supervision of a physician, licensed to practice medicine in the state where the school is located. This physician should possess special competence in the field of inhalation therapy.

3. Resources for continued operation of the school should be ensured through regular budgets, gifts, or endowments; but not entirely through students’ tuition fees.

The acquisition of gifts or endowments shall not influence the acceptance of students for admission to the school, nor shall such gift or endowment be a determining factor in the selection of equipment used for the training of students.

4. There must be available records of high school or college work or other credentials of students. Attendance and grades of students together with a detailed analysis of their clinical experience shall be recorded systematically.
a. Transcripts of previous education must be on file in each student's folder in possession of the school director. 'Previous Education' is described under Section IV REQUIREMENTS FOR ADMISSION.

b. Attendance Record: An Attendance Record should be kept for each student showing daily hours, sick time, holiday time, and vacation, leave of absence, and absence without leave.

c. Records of classes and grades earned should be kept for each student and compiled in transcript form on completion of the course.

d. Each student should keep a notebook and record daily his or her clinical experiences and the time utilized in performing each experience.

e. The director or instructor should keep a record patterned after the suggested curriculum which shows a weekly and monthly composite of the student's experience. This will facilitate preparation of a transcript of his work.

5. At least four students should be enrolled in each class. Approval may be withdrawn if a school does not have any students for a period of 2 years.

a. The student capacity for which a school is approved shall not be exceeded without obtaining approval from the Council on Medical Education.

b. A request to increase student capacity should include the following supporting data in duplicate:

1. The last annual statistical report of clinical procedures performed by the department of inhalation therapy.

2. A complete list of all faculty and technical personnel working in inhalation therapy with qualifications and years of experience of each.

II. FACULTY

6. The school should have a competent teaching staff. The director must be a licensed physician who has had specific training or experience in inhalation therapy acceptable to the council. He shall take regular part
in and be responsible for the actual conduct of the training program. Basic Science Instructors must be competent in their respective fields and be properly qualified or certified.

a. Physicians who have been certified by American College of Chest Physicians or who have been certified by the American Board of Anesthesiology may be considered to have acceptable experience in inhalation therapy.

b. If the director is not so certified or eligible for such certification, he must submit to the Council, as a part of the school’s application for approval, his curriculum vitae emphasizing his training and experience in clinical physiology.

7. In clinical practice, the enrollment shall not exceed 5 students to each instructor. In order to be considered an instructor, a technician should be a registered inhalation therapist and to have not less than 3 years experience.

a. The teaching supervisor and the instructors must be well qualified to instruct students and must have a keen interest in teaching and producing well-trained technicians. They should be registered inhalation therapy technicians (ARIT) in order that the student may become familiar with the advantage of registration and to instill in the student high ideals and ethics of his profession.

b. Besides listing the instructors, a complete list of the inhalation therapy personnel employed by the department providing the clinical training should accompany the application form for an approved school. This should include their education, training and duties in inhalation therapy.

c. There should be a sufficient staff of therapists to insure that the work of the department is carried out without help from the students.

III. FACILITIES

8. Provision should be made for each student enrolled to receive a foundation in the basic sciences and adequate clinical experience in kind and amount under the supervision of the teaching staff.
a. Experience should be gained with a sufficient number of patients in all of the major hospital departments, namely, medicine, surgery, obstetrics, and pediatrics. In these patients, a wide variety of clinical problems should be represented requiring different forms of inhalation therapy.

b. If the variety of clinical material is such that experience in some procedures is limited, then arrangement should be made to provide these experiences in other institutions. For example, a hospital without pediatrics or obstetrics may not be able to furnish training in inhalation therapy utilizing incubators and pediatric resuscitation devices.

c. Generally speaking, a hospital with 100 beds or less cannot be expected to provide the complete range of clinical experiences required for this school.

9. Affiliation of the Clinical Program with a community college or educational program beyond the high school level for the purpose of providing the basic science courses is encouraged. The number of students in the collegiate basic science program should not exceed the number of students that can be clinically supervised and trained. The hospital primarily responsible for the Training Program shall make the affiliation. The affiliated school or college must be accredited by the regional association of secondary schools or colleges.

10. Adequate equipment should be available for demonstration and clinical use. This should include all types of modalities in current accepted use.

Types of equipment are listed under "Procedures" in the "Suggested Basic Curriculum" on page 1.

11. Where affiliation with other hospitals is deemed necessary or important, it should be permitted only if adequate supervision is possible. Such affiliations must be approved by the Council.

a. Affiliation should be for the purpose of providing experience not obtainable in the parent hospital. The education should not be more of the same.

b. Where one hospital affiliates with another. The experience and training in one hospital should
not duplicate that of the other. The affiliated hospital should provide experience not obtained in the parent institution.

c. Recommended affiliations should be in the specialties such as: maternity hospitals; special pulmonary laboratories; chest hospitals.

12. A library of adequate space and availability and containing references, texts, and scientific periodicals pertaining to inhalation therapy should be maintained.

a. Reference and text materials should be in the departmental quarters readily available to the student.

b. Reference materials should include standard textbooks in anatomy, physiology, physics, chemistry, pharmacology, psychology, microbiology, and basic nursing arts.

c. In addition to library facilities, adequate classroom space with regular classroom appointments and facilities for storing and using visual aids should be available to the school.

IV. REQUIREMENTS FOR ADMISSION

13. Candidates for admission must have completed 4 years of high school or the passing of a standard equivalency test. Courses in biology, physics, chemistry, algebra, and geometry are recommended. Education beyond high school, at the vocational, nursing, or collegiate level is desirable. A pre-entrance examination of candidate is also recommended.

a. Where a high school certificate has been granted for a commercial or vocational program of instruction a standard equivalency test must be given.

b. Passing of a college entrance examination for admission to an accredited college or university is desirable.

c. Graduation from a school of nursing recognized by a state board of nurse examiners.

Nurse-applicants may be awarded advance credit for didactic course-work in accordance with provisions described under Section VI CURRICULUM.
GENERAL COMMENTS ON ADMISSION REQUIREMENTS:

Date from which to determine that a prospective student has satisfied at least one of the requirements for admission to an approved school should be available from the school's application form filled in and submitted by the prospect.

An application form for prospective students should contain the following minimum information:

1. Personal History
   a. Name, permanent address, present address, telephone number, parent or guardian, or next of kin with the address and phone number of the named person.
   b. Birth date, birth place, citizenship status, marital status, number and kind of dependents as children or parents or others.
   c. A general statement as to how the applicant rates his own health.

2. Scholastic Record
   a. Name and address of secondary school, high school, academy, or other attended; number of years attended, diploma or certificate granted, and the last year school was attended or date of diploma or certificate.
   b. Query about college entrance exams.
   c. Name and address of university, college, nursing school, junior college, trade school, other attended; dates of attendance, degree, diploma, certificate, or credits earned.
   d. The prospective student should be instructed to forward a copy of a transcript of his prior academic record to the director of the school of inhalation therapy.

3. Employment
   A list of positions held since high school including type of work, length of time employed, name of the employer, reason for leaving.

4. Statement of military service status or record.

5. The names and addresses of two adults, not relatives, knowing applicant well enough to give an
appraisal of candidate in connection with application to school. One of these should be a former teacher.

6. A brief statement describing the applicant's interest in inhalation therapy in the applicant's own handwriting.

7. Space should be clearly indicated on the application form for a recent photograph, not a snapshot.

V. HEALTH

14. Applicants shall be required to submit evidence of good health and successful vaccination. All students shall be given a medical examination, as soon as practicable after admission, by a physician designated by the school. This examination shall include a roentgen examination of the chest. There shall be periodic medical examination of the student.

a. Every precaution should be taken to prevent any health hazard in the department or during clinical practice.

b. The personnel health service of the hospital should be available to the student.

c. Any injuries on duty should be taken care of at once as an emergency.

d. Hospitalization for a limited time should be made available by the hospital either directly, or through hospitalization insurance.

VI. CURRICULUM

15. Length of course should include not less than 18 months of theoretical instruction and practical hospital experience.

a. The minimal teaching time may be divided into two periods of 9 months of consecutive education.

b. Interruptions in attendance for valid health reasons shall be evaluated on an individual basis.

c. Credit for courses completed should not be lost by interruption of the program.

d. Time cannot be made up or the course shortened by evening or weekend attendance.
e. It is recommended that with a course of 18 months duration that a vacation of 2 weeks be granted at the end of the first academic year. Recognized legal holidays or official institution holidays should be allowed.

16. The basic curriculum should include no less than the subjects and clock hours presented in the accompanying table. These applied sciences may be taught in affiliated university, medical center, or accredited college. The sciences should be oriented to make clinical application smooth. All subjects under Practice must be taught in the hospital environment as should the subjects under Clinical Application.

a. The instruction should follow a planned outline and include text assignments, lectures, discussions, demonstrations, supervised practice, seminars, practice examinations and quizzes, both oral and written.

b. The suggested basic curriculum is intended as a guide to a suitable teaching program. Each school should prepare a formal course outline and schedule following the recommendations set forth in the basic curriculum. The course outline for each subject should list in each category suggested:

1. Topics to be presented
2. The outlines, syllabi, texts, visual aids, and equipment needed to supplement lectures or demonstrations
3. Instructor scheduled to conduct the class
4. The amount of time allotted for the class

c. Each student should have a check list of procedures he is expected to perform with spaces provided to show each day's work in each listed category and the amount of time spent on each. The student's check list should make provision for entering the area of work, character of ward assignment, i.e., Pediatrics, Obstetrics, etc.

d. An evaluation record should be maintained on each student.

e. Registered nurses who have graduated from accredited schools of nursing may be granted credit for basic science subjects which are common to the curriculum of the School of Nursing and the School of Inhalation Therapy.
Graduate nurses (R.N.) may be expected to have had a broad education in anatomy, microbiology, chemistry, pathology, physiology, physics, psychology, nursing arts and ethics. This education amounts to about 600 hours.

In approved schools of inhalation therapy, registered nurses need to be taught the theoretical aspects of inhalation therapy methods and trained in the practical application of inhalation therapy. For nurse-students such education should cover a minimum of 1200 hours.

### Basic Curriculum for Inhalation Therapy Technicians

<table>
<thead>
<tr>
<th>Subject</th>
<th>Clock Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Applied Sciences</td>
<td></td>
</tr>
<tr>
<td>Anatomy</td>
<td>50</td>
</tr>
<tr>
<td>Microbiology</td>
<td>25</td>
</tr>
<tr>
<td>Chemistry</td>
<td>50</td>
</tr>
<tr>
<td>Pathology</td>
<td>25</td>
</tr>
<tr>
<td>Pharmacology</td>
<td>35</td>
</tr>
<tr>
<td>Physiology</td>
<td>50</td>
</tr>
<tr>
<td>Psychology</td>
<td>15</td>
</tr>
<tr>
<td>Physics</td>
<td>50</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>300</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B. Procedures</th>
<th>Theory</th>
<th>Practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analysis, Gas</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Airway Management</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>Administration, Oxygen</td>
<td>30</td>
<td>50</td>
</tr>
<tr>
<td>Administration, Other Gases</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Humidification</td>
<td>30</td>
<td>25</td>
</tr>
<tr>
<td>Humidification, Aerosols</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Ventilation, Assisted Breathing</td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td>Ventilation, Control</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Resuscitation</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Lung Physiotherapy</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>Spirometry</td>
<td>30</td>
<td>50</td>
</tr>
<tr>
<td>Equipment, Maintenance</td>
<td>200</td>
<td>300</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>C. Clinical Application</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency</td>
<td>10</td>
</tr>
<tr>
<td>Medicine</td>
<td>30</td>
</tr>
<tr>
<td>Obstetrics</td>
<td>5</td>
</tr>
<tr>
<td>Pediatrics</td>
<td>20</td>
</tr>
<tr>
<td>Surgery, General</td>
<td>10</td>
</tr>
<tr>
<td>Surgery, Thoracic</td>
<td></td>
</tr>
<tr>
<td>Neurosurgery</td>
<td>5</td>
</tr>
<tr>
<td>Pulmonary Function</td>
<td>80</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>600</strong></td>
</tr>
</tbody>
</table>

| D. Ethics & Administration | 100* |
| E. Nursing Arts | |
| F. Clinical Practice | 500* |
| **Total** | **600** |

**Grand Total:** 1800 clock hours of instruction

* Theory and practice.
VII. ETHICS

17. Excessive Tuition or other student fees and commercial advertising shall be considered unethical.

18. Schools substituting students for paid technicians to meet the work-load of a department will not be considered for approval.
   a. Students should not take the responsibility or the place of qualified inhalation therapy technicians.
   b. The staff of inhalation therapy should be adequate to perform the work of the department without the students being present.
   c. Any indication of exploitation of students will result in disapproval of a school.

VIII. ADMISSION TO THE APPROVED LIST

19. Admission for approval of a school for inhalation therapy technicians should be made to the Council on Medical Education, Dept. of Allied Medical Professions and Services, of the American Medical Association, 535 North Dearborn Street, Chicago, Illinois 60610. Forms will be supplied for this purpose on request. They should be completed by the administrator of the institution requesting approval and signed by the physician-director of the program.

20. Approval may be withdrawn whenever in the opinion of the Council a school does not maintain an educational program in accordance with the above standards.

21. Approved schools should notify the Council whenever a change occurs in the directorship or teaching supervisor of the school.
   a. When there is a change in the director, information concerning the qualifications of the new medical director must be submitted in duplicate to the Council as soon as possible. If the new director’s credentials are in order, the school’s approval will be continued.
   b. If there is an extended interval during which there is no director, the students already enrolled will be permitted to complete the course but no new students may be enrolled until a medical director is appointed and approved.
REGISTRATION OF TECHNICIANS

22. Inquiries regarding registration of qualified inhalation therapists should be addressed to the American Registry of Inhalation Therapists, 122 South Michigan Avenue, Chicago, Illinois 60603.

DEFINITIONS

As an applied science, inhalation therapy is clinical. It involves and requires critically ill patients. In this health field the technical assistants are responsible to the physician. Two types of assistants may be defined - (Joint Inhalation Therapy Committee, ASA - ACCP 1967):

a. The Inhalation Therapy Technician. - "All technicians (who have completed an approved course of education), engaged in the administration of inhalation therapy who have not been registered shall be called technicians."

b. The Inhalation Therapist. - "All technicians engaged in the administration of inhalation therapy who have successfully passed the examination of the American Registry of Inhalation Therapists and are certified, shall be designated Inhalation Therapists." Only such persons may use the initials A.R.I.T. after their names.

CERTIFICATE

Each school should present to a successful student, on completion of the educational program, a suitable certificate. This should show the name of the school, the location, the name of the student, and the date of graduation. It should be suitably endorsed by the director of the school, the administrator of the institution, and the supervisor technician.

IMPORTANT NOTICE TO ALL DIRECTORS OF AMA APPROVED SCHOOLS OF INHALATION THERAPY

The published list of Approved Schools becomes inaccurate and all statistical evaluation of our schools become invalid if the AMA Council on Medical Education fails to receive promptly the required Annual Report from each school. Consequently, failure to submit an Annual Report after a Second Notice, which will be a registered return signature-type of notice, will result in removal of the school from the Approved List.