COLLEGIATE EDUCATION FOR NURSING

BRIDGMAN

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COLLEGIATE EDUCATION FOR NURSING

By MARGARET BRIDGMAN

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Contents

Foreword by Esther Lucile Brown 7

1. The Critical Deficiency in Nursing Services . . . 11
   - The Need for Coordinated Action 12
   - Quantitative Supply and Demand 19
   - The Qualitative Demand 24

2. The Hospital School 39
   - Educational Status 39
   - Origin of the Traditional Pattern 40
   - Improvement Despite Obstacles. 43
   - Recent Appraisal of the Dilemma 45
   - Nursing Schools at Midcentury 47
   - Curriculum of a Typical Hospital School 52
   - Faculty and Level of Instruction 63

3. Relation of Education to Supply 70
   - Adaptation of Education to Potential Personnel . . 71
   - Adaptation of Education to Nursing Functions . . 75
   - Maximum Supply Dependent on Successful Adaptation 84
   - Financial Policies 86

4. Baccalaureate Curricula and the Qualitative Demand 96
   - General Policies in Higher Education 97
   - Patterns of Degree Curricula 101
   - Approved Types of Baccalaureate Curricula . . . 106
   - The Unapproved Affiliation Type 113

5. Supplementary and Graduate Programs 123
Senior College Education for Hospital School Graduates 123
Graduate Work in Special Fields 129

6. Content of the Baccalaureate Curriculum . . . 136
Policies and Problems 137
Suggested Contributory Sequences 141
The Major in Nursing 164

7. The Problems Reviewed 178
Functional Areas of Nursing Service 178
Effectiveness of Current Means of Supply 181
Integration of Nursing in the Educational System . 190
The Potential Role of Junior Colleges 192
Conditions for Establishing a Baccalaureate Program . 193
The Challenge to Higher Education 195

Index 199

Tables and Charts

TABLE

1. Classification of Schools of Nursing in 1949 by the National Committee for the Improvement of Nursing Services 49
2. Some Evidences of Progress in Nursing Education, 1929 to 1949 50
3. Measurements for Median School of Nursing in 1929 and 1949, Compared with Present Recommended Standards. 51
4. Estimated Representative Distribution of Class and Practice Hours in Better Hospital Schools, 1949 54
5. Distribution of Nursing Experience in the Median Group I and Group II Hospital School Curricula, 1949 59
6. Comparison of Admission and Curriculum Requirements for Diploma and Degree Students in the Affiliation Type of Program 116
7. Suggestions for Content of a Baccalaureate Curriculum in Nursing 142
8. Present Employment Compared with Present Output of Educational Programs, by Functional Levels of Nursing . 189
9. Outline of Education for the Nursing Services . . . 191

CHART

1. Estimated Distribution of Hours in Better Hospital School Curricula 57
2. Baccalaureate Degree Programs in Nursing 102
3. Personnel Employed in Civilian Nursing Services in 1950 179

Foreword

PROBABLY no other profession is undergoing so dynamic a reconsideration of itself and its social role as nursing. In hundreds of hospitals, public health nursing agencies, and schools of nursing, as well as in local, state, regional, and national planning bodies, attention is being concentrated on the question of how nursing service can be made quantitatively and qualitatively adequate to meet ever-increasing demands, and how education can be used more largely and constructively to prepare personnel for such service. No better proof exists of the profession's commitment to this task than the recent agreement of its members to a five-year assessment, the proceeds of which are being used for functional analyses of nursing. Simultaneously the profession is seeking advice and financial help from universities, government agencies, foundations, representatives of other health services, educators, social scientists, and interested laity in solving a variety of problems.

The importance of the nurse not only in the care of the sick but also in the prevention of disease and in giving health instruction to the public has now attained general recognition. It is less widely recognized, however, that these social functions cannot be realized in anything like the fullness of their potentialities until society makes far more ample and considered provision than heretofore for the professional education of those nurses who are expected to assume responsibility for development of the clinical and community nursing specialties, for supervision, administration, teaching, research, writing, and planning of health services. The very fact that preparation for nursing evolved within the hospital rather than the university and was consequently limited

in most part to the training of general bedside nurses, has resulted in misunderstanding both on the part of institutions of higher learning and of nursing faculties as to what constitutes adequate professional education.

Russell Sage Foundation instituted in September, 1949, a temporary counseling service, available upon request to colleges and universities that wished to improve existing schools of nursing or to introduce new nursing curricula. Dr. Margaret Bridgman, at that time academic dean of Skidmore College, was asked to give this service. She has visited some eighty colleges in all parts of the United States, and has spoken or acted as consultant at many meetings of nurse educators and other planning groups. A large number of additional institutions have requested consultation that could not be provided. So highly did the National League of Nursing Education regard Dr. Bridgman's counseling that it invited her to continue the work under the auspices of the new National League for Nursing beginning September 1, 1952.

Many years in the deanship of a college which has emphasized the development of undergraduate curricula, including nursing, that combine both academic and vocational preparation, gave Dr. Bridgman unique experience to bring to the counseling service. Visits to campus after campus, moreover, have furnished her with information about the bewildering diversity of current patterns of collegiate nursing education, and have sharpened her perception of what can and cannot wisely be done if specialization in nursing is to be achieved. In order that this information might be made available to administrators of higher education, to deans and faculties of schools of nursing, and to members of the nursing profession, the health services, and the laity who wish to concern themselves with the advancement of nursing, Dr. Bridgman has written this report for Foundation publication.

A glance at the Contents pages will indicate that the presentation is not limited to collegiate schools of nursing. The book has been prepared for persons who directly or indirectly are now, or will be, engaged in planning for the extension of higher education to nursing. No planning that is basically sound or designed to meet the comprehensive needs of the public for service can be

hoped for unless those engaged in this task have a broad understanding of the many and complex issues involved. There is perhaps no more conspicuous administrative failure among institutions of higher education than the practice of certain colleges and universities in permitting students in hospital schools of nursing who have not met truly baccalaureate requirements to obtain degrees. These institutions have thought they were rendering a service to the community, with too little conception of the highly skilled nursing functions which graduates of collegiate programs are or should be expected to perform. As a result they have renounced some of the hard-won standards of higher education, the educational interests of prospective nurses have been sacrificed, and society at large has suffered. In a score of other important but less conspicuous ways some colleges and universities have failed to demonstrate wisdom in their policies with regard to nursing education.

There has been an unfortunate lack of studies to provide the basic data from which to build a philosophy of the nature and purpose of collegiate nursing education. The principles set forth by Dr. Bridgman in this study should do much to inform now perplexed educators; to strengthen conviction among those collegiate administrators who initiated well-considered programs of nursing education and have found themselves threatened by unsound practices in neighboring colleges or universities; and to convince lay persons that preparation for nurses who carry professional responsibilities belongs completely within the system of higher education.

ESTHER LUCILE BROWN
Russell Sage Foundation

1

The Critical Deficiency in Nursing Services

THE critical deficiency in supply of nursing personnel for the health services is widely recognized as a major social problem in the United States today. It is a local and immediate problem in thousands of hospitals and communities where nursing care must be provided for patients by any means available, but it is also an extensive and persistent problem demanding action that will be generally and continuously effective. It is an intensely personal problem to the patient requiring nursing care, his family, his physician, and the short-handed nursing staff directly responsible for his safety and welfare, but in the large it is a national problem of quantitative, qualitative, and distributive supply for an indispensable service to society.

The impact of the shortages upon individual citizens takes varying forms. Almost every patient in a hospital experiences the effects of understaffing, the overloading of existing staff, and the limited competence of many workers who are employed only because the need is desperate. The cartoon picturing a patient in a motorized hospital bed speeding down a corridor to seek a nurse illustrates the general awareness that a call button no longer brings prompt attention. A shocking case, reported by a patient in the room adjoining that of an elderly man who was in an oxygen tent, indicates what can result from such conditions. Although gravely ill, he was dependent at night on an overworked floor nurse because no special service was available. Extremely fearful and restless, he called the nurse repeatedly and when no one responded got out of bed and could be heard

fumbling about the room. This happened several times. Finally the nurse, who lacked understanding of his psychological need, told him she had too much to do to be answering unnecessary calls, admonished him to lie still, and disconnected the call button. The patient's death shortly afterward seemed to the witness of this tragedy to be a direct result of understaffing and a nurse's inadequacy for her responsibility. Certainly much of the old man's agony during his last hours was due to deficiencies in nursing service. In this instance the family never knew the circumstances, but many patients who have recovered from a hospitalized illness have related enough unhappy and injurious experiences to make the public acutely conscious of how grave this problem is.

In the private home the situation is also deplorable. Not uncommon are occurrences such as that recently reported by a young mother who lives in a populous area where in the past ample nursing resources have been available. With another child, eighteen months old, to care for at home, she and her new baby had just arrived from the hospital when her husband was stricken with severe influenza. Not until she had put in 85 telephone calls to registries, employment agencies, and individuals was she able to secure the services of a woman who had only minimum qualifications. Under present circumstances, this young mother considered herself lucky to have found anyone at all.

These are extreme though factual examples. In spite of the shortages, necessary care for patients is usually provided by some means. Nevertheless, there is no question that the present and prospective situation is alarming and measures must be taken to assure more and better nursing service.

The Need for Coordinated Action

Adequate provisions for this essential service are rightly considered the concern not only of nurses themselves but also of allied health professions; of boards and administrators of hospitals and agencies employing nurses; of local, state, and federal governments in their responsibilities for health, education, and social welfare, and for staffing public institutions and agencies

and civil and military services; of the general public as consumers dependent upon available nursing resources and as citizens sharing in the responsibility for effective social measures; and of educational institutions that have generally accepted the trust of providing opportunities for youth and qualified personnel for occupational areas as needs become apparent.

This widespread interest and sense of responsibility should lead to positive results. As in all other problems of supply, intelligent planning must be based on careful consideration of demand, of procurable personnel, of methods and costs of preparing them, and of means of distribution geographically and according to type. In a situation where potential supply is shared with many other fields offering attractive educational and career opportunities; where changing conditions have tremendously increased demand in quantity, diversity, and quality; and where existing methods of recruitment, preparation, and distributive utilization have proved more and more unsatisfactory in meeting current and imminent needs, common sense dictates thorough investigation and reorganization.

Reorganization is always more difficult than initial planning. Resistance to change is inevitable. Individual and group interests often conflict with each other and with emerging conceptions of comprehensive benefits. However, it would be a denial of faith in the power of democratic processes to produce favorable results if such difficulties were considered insurmountable obstacles. The fact that the extent and nature of the problem call for representation of many diverse interests and of all geographical areas in the nation merely accentuates the necessity for organized effort.

The first requirement is obviously that of recognition by all groups concerned of a shared obligation to agree upon sound policies for united action. The second is effective organization on a national scale to operate with continuity so long as the need exists and to pursue systematic methods of objective fact-finding, analysis, discussion, compromise, and authoritative agreement upon coherent policies. The third, which is most difficult but indispensable, is developing means for securing cooperation of groups and institutions in implementing such policies through

voluntary action. The initiative and responsibility for seeking consultation and relating any proposed project to others and to the general good rest with independent units. Therefore, only through informed understanding can sporadic, uncoordinated efforts be avoided, which may be wasteful or damaging.

Notable progress has already been made in these directions. Various representative groups are currently studying the nursing situation in connection with total health needs and services. The nursing profession is extensively engaged in constructive planning, within its own membership and in conferences with allied professions, educators, and citizen-consumers, in determined efforts on national, state, and local levels, to find solutions to the complex problems of deficient supply and lamentably deficient educational facilities.

The urgency of the present situation has led to unprecedented expansion and intensification of these activities but they are far from new. For at least thirty years committees, commissions, and conferences have made surveys, discussed the problems, and issued reports and recommendations. The principal measure advocated by all for the improvement of nursing services has been the same: the improvement of nursing education, particularly the provision of higher education for potential candidates for teaching and administrative positions. However, recommendations can be made forever without appreciable result if they fall on closed or indifferent ears and fail to produce the will to action. As will be seen later, the nursing profession through continuous effort has effected improvements in standards in hospital schools that have been very beneficial, but the development of other educational facilities has been so slow as to leave the total picture substantially unchanged. General public understanding of the problems is still slight, and the issues are constantly confused by the expression of conflicting diagnoses and prescriptions with apparently equal authority and certainly with equal vigor. Yet, without that understanding and active, widespread support for an expansion and improvement of educational means to supply the quantity and quality of nursing service needed, the task of achieving practical and effective action is impossible.

The informed cooperation of educational institutions is particularly crucial in the development of the kinds and standards of education required to meet the need. A few forward-looking colleges and universities have made early and distinguished contributions to the movement, in several instances with endowments or other assistance from philanthropic foundations. In recent years many others have recognized their social obligation to participate. However, it is significant that at this stage in the unparalleled expansion of educational opportunities for American young people in many fields, the Department of Higher Education of the National Education Association, during a general session of its annual conference, should have felt obliged to adopt the following resolution:

> *Resolution XI. Education of Nurses.* WHEREAS, health needs of the civilian population and military personnel are making increasing demands for the services of professionally and technically prepared nurses, and
>
> WHEREAS, education for nursing is now predominantly outside higher education, with emphasis on apprenticeship training,
>
> BE IT RESOLVED: That institutions of higher learning recognize their responsibility for establishing programs providing for the professional and technical education of nurses.[1]

This official statement points to two notable differences between nursing education as it now exists and other types of post-high-school education. One is that it is not located in the main in educational institutions organized and supported for that purpose and providing preparation for a great variety of other fields. The second is that students serve apprenticeship during the basic program, in the sense of rendering service in return for instruction and learning through such experience. Apprenticeship exists in most other fields in the different sense of acquiring experience in beginning positions *after* preliminary education, but work is combined with *initial* training only for the simplest jobs.

The minor role of institutions of higher learning in nursing education is indicated by statistics of the National League of

[1] *College and University Bulletin*, vol. 3, April, 1951, p. 2.

Nursing Education.[1] In January, 1951, there were 102,509 students enrolled in schools of nursing but only 9,184 of these were in basic programs leading to a college degree.[2] Moreover, even of the 9,184 students in degree programs, about half were taking the major curriculum in nursing, not in the degree-granting institution with teaching by members of its faculty, but in hospital schools with instruction by hospital school teachers in classes usually shared with diploma students. Thus, only about 4,500 students, or less than 5 per cent of the total enrollment, were in basic programs in nursing for which higher education accepted direct and complete responsibility.

Colleges and universities have also established programs for graduates of hospital schools in response to the demand for means by which registered nurses inadequately prepared by their diploma courses for present or prospective functions might supplement that education and qualify for baccalaureate degrees. In 1950 about 12,000 students were enrolled in such programs. However, many of the degree-granting institutions, in these, as in the basic courses, took little or no responsibility for the major in nursing. The prevalent practice has been to grant "blanket credit" for the diploma course in the noncollegiate hospital school, often to the extent of 60 semester credits, without evaluating the student's knowledge and skills in nursing. Comparatively few programs are conducted by well-established departments of nursing with adequate faculties and clinical facilities and a substantial curriculum of upper-division college courses in nursing.

An erroneous impression has probably been created by the great amount of discussion concerning collegiate education for nurses. The fact is, however, that in many instances the college or university provides only academic courses. Education in nursing itself is still largely proprietary, under the control of hospitals whose primary function is not education. The extension of collegiate opportunities is more apparent than real.

[1] Now part of the National League for Nursing. This newly formed organization coordinates and adds to the functions of four former national associations: the Association of Collegiate Schools of Nursing, National Organization for Public Health Nursing, National Association of Colored Graduate Nurses, and National League of Nursing Education. It has two major divisions: the Division of Nursing Education and the Division of Nursing Service.

[2] *1951 Facts About Nursing*. American Nurses' Association, New York, pp. 40–41.

The spreading interest and sense of responsibility among educators with regard to the preparation of nurses, the establishment of some excellent new programs in collegiate institutions, and the strengthening of others are extremely encouraging developments. However, the need for more thorough and general knowledge about existing conditions and requirements is manifest. A prevalent attitude among college and university faculties and administrators, as expressed innumerable times to the writer, is one of recognition of an urgent social demand, of sincere concern and desire to contribute to an important cause, but of frankly knowing nothing about nursing education. This is the natural result of the almost total exclusion of nursing from the higher educational system of the country and the consequent lack of communication between students and faculties in schools of nursing and those in other fields. These limitations and the absence of generally accepted and clearly understood policies to guide good will have led to some unfortunate results, as will be demonstrated in subsequent chapters.

The present attempt is to contribute to better understanding of some aspects of a complex situation from the particular standpoint of educational responsibility and policy. It is offered as a basis for discussion in the hope that, with other current studies by many groups and individuals who are working on the problem, it may help to clarify issues and bring about a consensus on principles leading to satisfactory long-range plans for action. The writer believes that, in a comprehensive view of the situation, apparently irreconcilable extremes of opinion will be recognized as complementary rather than antithetical, and measures advocated by different groups may become parts of a total plan acceptable to all. For example, the contention of some that nursing personnel need only limited training to work under supervision does not preclude the validity of the equally insistent argument of others that nurses need higher education for many exacting functions essential to the health services.

The crux of the difficulty seems to lie not in reaching agreement upon what education and qualifications "a nurse" needs but in changing the traditional but outworn conception, held by

some nurses as well as by others, that the group is a homogeneous one with approximately the same preparation, the same skills, and the same functions for all members. How can it be a question of one type of education versus another when one considers the range of functions? There are common elements but certainly also very diverse ones in the work of an aide or attendant, a practical nurse, staff or private duty nurse, head nurse, instructor, supervisor, clinical specialist, consultant, research worker, college professor, director of nursing service, or head of a school or college of nursing; and similarly in different branches of the occupation —hospital (general, chronic disease, mental), public health agency, school, industry, doctor's office, private duty in homes. The basic controversy evaporates and differentiation becomes a necessity from the point of view of available human resources as well as prospective work if nursing is regarded as what it has actually become through force of circumstances, namely, a broad occupational field requiring large numbers of different types of personnel with varying kinds and amounts of preparation for a wide range and variety of essential functions. The question becomes one of proportionate numbers in various categories, with equal emphasis upon preparation for competence at every level and of every kind.

In nursing, the change has been exceptionally rapid from predominantly private practice to predominantly institutional employment, with the demand for numbers of registered nurses alone more than doubled in twenty-five years, because of medical and hospital developments. Educational facilities have, however, continued to be limited largely to one level and kind of program, paid for almost entirely by student service and by hospitals with practically no funds for educational as distinguished from service purposes. The need for radical adjustments is not lessened by the difficulty of making them while under the constant necessity of maintaining maximum service. In spite of the urgency for improvements, however, soundness is more important than haste if permanent benefits are to result.

The ensuing discussion is concerned primarily with higher education in nursing and is particularly addressed to those responsible for such education in colleges and universities. This emphasis, however, reflects the purpose of the special project in which the writer was engaged, not any lack of appreciation of the importance of other types of preparation for a large proportion of nursing personnel. Furthermore, any one aspect of the problem must be viewed in its relation to all others. For this reason the reader is offered a picture of the current situation: the deficiencies in the nursing services, both in the total number of workers and in the proportion of those qualified for various types of functions; the extent and nature of present and prospective demand; and the adequacy of existing educational facilities. Finally, after detailed discussion of policies, problems, and trends in college and university programs, an attempt is made to view the total need and to suggest possible directions for future developments.

Quantitative Supply and Demand

Realization of the shortages but insufficient knowledge of the facts sometimes has led to the conclusion that the number of nurses has decreased. A tendency to blame "someone" is perhaps natural, and this may take the form of deploring the lack of altruism in the younger generation for not "going into" nursing or criticizing the nursing profession itself with the same illogical reasoning that occasionally prompts a clergyman to scold the faithful members of his congregation for the absence of others. Actually, there are more graduate nurses in active practice now than at any time in our history. Approximately 332,500 were employed in 1950 as compared with about 150,000 in 1920.[1] In this period the population of the United States increased from about 105 to 150 million, and the opportunities for women in other fields of employment expanded incalculably. The enrollment in schools of nursing also is higher than ever before except during the recent war, when the United States Cadet Nurse Corps was providing generous subsidies for nursing students. The enrollment of 102,509 (January, 1951), without the stimulus of federal subsidies, shows a 20 per cent increase over that of 85,156

[1] See chart on p. 179.

in 1940[1] in comparison with a population increase of 14.5 per cent. The common impression that there are fewer nurses is clearly erroneous.

The tremendous increase in demand, which has so far outstripped the increase in supply as to create this false impression, is due to several causes. The primary one is probably the rapidly developing awareness on the part of the American people that expanded health services are vital to their welfare. Advances in medical science and development of technological procedures dependent on hospital facilities, as well as changing public attitudes toward hospitals, lack of facilities for home care, and prepayment plans, have made hospitalization the rule in most cases of serious illness. In 1950 hospital care was given to over 17,000,000 persons as compared with 7,000,000 only fifteen years ago.[2]

In 1951 the deficit of registered nurses needed for minimum care of civilians without allowance for military requirements was estimated by the Joint Committee on Nursing in National Security to be 65,000.[3] The demand for the immediate future was analyzed in a report by Dr. Ruth P. Kuehn, the nurse member of the Health Resources Advisory Committee of the National Security Resources Board. Only the most salient points can be summarized here.

The Committee made three basic assumptions as to the need for nurses:

1. The 1949 nurse-population ratio and service must be maintained. The year 1949 was considered the most normal year since World War II, and was made the basis of the estimate without any implication that civilian nursing needs were then being adequately served.

2. Additional requirements of civil defense, in industry, in public health nursing services, and for the staffing of new hospitals and of schools of nursing should be met.

3. The needs of the armed services must also be met.

[1] *1951 Facts About Nursing*, p. 40.

[2] *Journal of the American Medical Association*, vol. 146, May 12, 1951, p. 116.

[3] "Mobilization of Nurses for National Security," *American Journal of Nursing*, vol. 51, February, 1951, p. 79.

The Committee's estimates, made in 1950, of the minimum demand and the expected supply of registered nurses by 1954 are as follows:

Estimated need:		
Civilian requirements at the 1949 ratio of nurses to population		330,000
Additional civilian requirements		
Civil defense and emergency reserve	6,300	
Industry	5,000	
Public health services and health departments	15,700	
Nursing schools	2,500	
Staffing new hospitals	20,000	49,500
Military requirements		25,000
Total		404,500
Estimated supply of active nurses at present level of training		355,000
Deficit		49,500

At the present level of training this deficit will grow. An increase of as many as 50,000 admissions yearly to nursing schools would produce no increase of graduates for three years, and with normal attrition rates would reduce the deficit in 1960 by only 13,200 nurses.

The most serious shortages exist in the administrative, teaching, and supervisory positions, which require collegiate education—both general and professional. As the needs for nursing service have increased and larger numbers of auxiliary workers have been utilized, the number of professional nurses required for both administrative and teaching positions has increased rapidly. These needs will become serious, as well as more apparent, as shortages become more acute and personnel adjustments more complicated. Strengthening and expanding the educational programs for preparation of administrators, teachers, and supervisors will produce large dividends through more effective utilization of all levels of nursing service personnel.[1]

Hospital beds are unavailable for use in wards closed for lack of nurses. Yet, the building of new hospitals and the expansion of others are steadily going forward. The comment of a nursing

[1] Kuehn, Ruth P., "Nurse Power in Mobilization," *American Journal of Nursing*, vol. 51, June, 1951, pp. 395–398.

administrator from another country is interesting in this connection. "I had always supposed," she said, "that a hospital bed meant by definition one that was adequately staffed. We should not count one unless it were. Assurance of nursing personnel is always a preliminary consideration in adding facilities." Here, however, on the contrary, a supply of nurses often seems to be taken for granted or to be a frantic afterthought. Situations such as that recently reported at Bellevue Hospital in New York City are not unusual. Not all new facilities there can be utilized because not enough nurses are available, though old buildings are extremely overcrowded. Furthermore, the graduate nurse staff constitutes only 28 per cent of the nursing personnel in buildings that are being used, as compared with the former standard of 75 per cent.

Unprecedented numbers of practical nurses and auxiliary workers are similarly employed everywhere because of the limited registered nurse supply. Very few in these groups have had more than perhaps brief in-service training, and they are therefore supposed to carry only simple nursing functions under supervision. However, when the proportion becomes unbalanced, this policy is clearly inoperable. The problems inherent in these conditions, with particular reference to the educational adaptations needed to qualify personnel for their respective functions, will be discussed in the pages that follow. The foregoing estimates of demand for graduate nurse-power are based on the expectation of continuing and increased auxiliary services, with the hope, however, of better provision for training, supervision, and utilization of personnel in accordance with varying competencies and efficient organization.

It is difficult to distinguish demand, in terms of specific positions now unfilled, from need, in terms not of desirable health care, which is entirely out of reach, but of the actual number of registered nurses who would be employed if a supply were obtainable. Staffs are organized and budgets apportioned on the reasonable expectation of filling positions, and under present conditions it is generally recognized as futile to list positions and appropriate funds for nonexistent personnel.

The situation is most grave in mental hospitals. In 1950 there were only 9,314 graduate nurses for 604,286 patients in the hospitals that replied to a questionnaire of the Mental Hospital Service, American Psychiatric Association—a ratio of one to 65.[1] A comparison of the totals, however, does not reveal true conditions, because of the uneven distribution. A large proportion of the relatively few graduate nurses working in mental hospitals are employed in voluntary hospitals and private sanatoria, with the result that there may be only one nurse to 2,000 patients in a large state institution. On the other hand, in one institute for neuropsychiatric research, for example, there were recently 65 graduate nurses for 100 patients. If personnel in administrative and supervisory positions are not counted, the average ratio is only one staff nurse to 141 patients.

It is understandable that nurses interested in therapeutic care should prefer positions where it is possible to participate in treatments with the specific purpose of patient recovery. However, the deplorable conditions for the majority of the mentally ill are crying for relief. Only minimum custodial care by untrained personnel is available for nearly half a million patients in state mental hospitals, and there is no immediate hope of increasing the number of professional psychiatric nurses appreciably for the staffing of these institutions. Too many other demands exist. But the need is urgent for sufficient numbers to help with systematic in-service programs for the training of attendants. Only by this means do those deeply concerned about the problem hope to improve the caliber and competence of the workers with the mentally ill.

Other shortages are almost equally serious. In 1950, 715 counties having an aggregate population of more than 7,000,000 persons, as well as 18 cities, each with a population of at least 10,000, were reported to be without a public health nurse. Against the conservative estimate of 12,500 full-time nurse instructors required in schools of nursing, only 5,533 were employed. More than 75,000 nurses are needed as directors of nursing services, supervisors, and head nurses in hospitals, but only 64,000 held such positions.[2]

[1] *1951 Facts About Nursing*, p. 85.

[2] *Ibid.*, Table 2, p. 16.

The present understaffing of visiting nurses' associations and public health agencies is cause for concern because of the short supply of private-duty nurses, many of whom are accepting hospital appointments or joining the armed forces, and also because of the prohibitive costs of private nursing for most people. Adequate numbers of qualified public health nurses could provide much home care through visits and through the direction of home nursing by relatives or nonprofessional workers. A growing recognition of the value of these services for the middle-income group, as well as for patients in lower economic brackets, is creating an insistent demand.

Other areas in which there are critical shortages are the hospitals for tuberculosis and other chronic diseases. Administrators of these hospitals report the deficiencies of registered nurses to be so great that they are using many new measures in order to provide safe care by nonprofessional personnel. However, none of these measures obviates the acute need for more well-prepared professional nurses for teaching and administrative functions. The number of nurses employed in industry quadrupled during World War II and has increased since. In this group also many have administrative responsibilities for the organization and management of health services as well as for direct care of patients.

The Qualitative Demand

The foregoing statements emphasize not only the quantitative but also the qualitative deficiency in the supply of nurses. In this sense the term "qualitative" has been used to designate the demand for the most highly qualified personnel for the most exacting functions. However, it is equally applicable to the demand for competence based on adequate preparation for every group of workers throughout the nursing services, from those who need brief but thorough in-service training for simple tasks to those whose education should encompass inclusive learning in professional nursing and allied fields, which only higher education can provide.

Inadequacies in the preparation of many nurses for their responsibilities are even more critical than the numerical shortages. Personnel for important functions lack both the foundation and the specialized training requisite for competence. Among nurses giving psychiatric care, including those in a supervisory capacity, 24 per cent have had no preparation in their basic programs; 80 per cent have had no education in psychiatric nursing beyond the basic course. Only 34 per cent of public health nurses have had preparation in an approved program of study for public health nursing. There are now approximately 70,000 administrators, teachers, supervisors, and head nurses in hospitals and schools of nursing[1]; and it has been estimated that about half of them have had no special training for their highly specialized functions. In every phase of nursing service there is an urgent demand for more and better teachers, more efficient administrators, and more supervisors, head nurses, and clinical specialists properly equipped for their work.

The fact that more than one-fifth of all registered nurses are employed in administrative, supervisory, and teaching positions is significant evidence of the need for appropriate preparation for these functions. This proportion seems excessive until one considers that these nurses administer and supervise the services of 270,000 other nursing personnel and the care of 17,000,000 patients in hospitals, as well as nursing services to the public in public health agencies and industry. The general consensus is that the hospital diploma course is inadequate for such a purpose, but the small enrollment of students in true collegiate programs in nursing can hardly begin to meet the demand in these areas alone.[2] There will be a still greater shortage in the fields of psychiatric and public health nursing for which also a broad foundation, particularly in the social sciences and their application in patient care, is increasingly recognized as a necessity.

The importance of providing nursing education on the college level to prepare sufficient potential candidates for such specialized functions has been repeatedly emphasized. Three recent studies

[1] *Ibid.*, p. 17.
[2] See p. 16.

of the nursing situation agreed on this need: the report of the American Medical Association on nursing problems[1]; *Nursing for the Future*,[2] by Esther Lucile Brown, which resulted from a nation-wide survey sponsored by the National Nursing Council; and the report of the Committee on the Function of Nursing, commonly referred to as the Ginzberg Report.[3]

The first requirement is the establishment of baccalaureate curricula of sufficient breadth and strength to develop proficiency for expert staff nursing in hospitals, public health agencies, and other services and to provide a sound base for graduate study, in general and profession-related content and in nursing as the major field of concentration. Experience and competence on the staff level are essential as a foundation for the larger responsibilities of supervision, administration, teaching, clinical specialization, and research. To provide a source of supply for advanced positions, there must be considerably more students in undergraduate programs than will be ultimately needed to fill the positions. Allowance must be made for normal attrition and there should also be an opportunity for a selective process by which students with distinctive abilities and interests would be encouraged to secure advanced preparation. Some college graduates prefer the direct care of patients to administrative and teaching functions, and their choice of work should be free from pressures. Moreover, expert clinicians with a broad educational background are urgently needed for research functions in nursing to contribute to medical research, to segregate and analyze the components of good nursing care, and to contribute the specific knowledge and skills requisite for various kinds of nursing.

The reasons that sound basic collegiate education is required for the most skilled duties of the professional nurse and for advancement are little understood by the public or by educators generally. As previously noted, the isolation of nursing education from educational institutions has prevented intercommunication

[1] "Report of Committee on Nursing Problems," *Journal of the American Medical Association*, vol. 137, July 3, 1948, pp. 878–879.

[2] Published by Russell Sage Foundation, New York, 1948.

[3] *A Program for the Nursing Profession*. Macmillan Co., New York, 1948.

between teachers and students in this area with those in others—the natural means of mutual understanding and of disseminating knowledge about the purposes, methods, and needs in an educational program and the occupation for which it prepares. Few realize the changes that have taken place within recent years in the scope and nature of nursing care.

Enlarged Clinical Responsibilities. Scientific and technological advances have revolutionized medical practice and every new development in medicine creates new responsibilities for nursing. The process of turning over more and more technical procedures to nurses began in the seventies and eighties of the past century with the introduction of antiseptic and aseptic techniques. Temperature-taking was at first delegated with caution. The giving of hypodermics soon followed. The extraordinarily rapid medical developments during and since the last war have given a strong impetus to this movement. Physicians throughout the country testify to the fact that many procedures, some of them extremely complex, which previously belonged exclusively to medical practice, are now entrusted to nurses. The proportion of acutely ill patients in hospitals has very greatly increased because of the quick recoveries made possible by the use of new drugs and therapeutic measures, and also because of current policies in regard to early ambulation and discharge. The heavy demands upon doctors and the constant or frequent attention required in present diagnostic and therapeutic practices necessitate the transfer of many clinical procedures to nurses. For example, penicillin injections were first delegated to nurses at night because doctors were not regularly available. Then the absurdity of the belief that nurses were not capable of taking this responsibility in the daytime was recognized. In large medical centers some of these procedures are carried on by interns and resident doctors, but in the smaller hospitals they are routinely performed by nurses. All professional nurses must know how to administer such treatments.

There is a borderline area between medical and nursing practice in which there is at present disagreement among physicians which results in confusion and inconsistencies. Intravenous

therapy, for instance, including such procedures as saline injections and blood transfusions, is considered by some to be exclusively medical practice. Others think it can be performed by nurses under medical direction and supervision, and still others delegate it regularly to competent nurses. In an emergency nurses have to carry out these procedures to save life, as they did in World War II, and they must be prepared to do so in an atomic disaster or in any situation where the services of a physician are not available.[1] Most schools of nursing therefore teach students the methods but nurses are expected to conform to medical policies that prevail where they are working.

The kind of responsibility required of nurses is indicated by the fact that even those in first-level staff positions, that is, immediately after graduation from a school of nursing, are expected to perform a long list of duties upon order of a physician or dentist but without medical supervision, subject only to medical policies as indicated above. This list includes administration of therapeutic measures in a way appropriate to the type, amount, frequency, sequence, technique, and method approved by the medical staff. Such measures include medications by mouth, subcutaneously, intradermally, intramuscularly, intravenously, rectally, topically, by inhalation; applications of heat, cold, and pressure; therapeutic baths and exercises; surgical dressings; and irrigations of body cavities. Nurses must also keep up with new nursing techniques introduced by rapidly changing medical practice and developed in consultation with the physicians concerned.

Nursing care given to patients undergoing treatments involves complex equipment as, for example, for those in respirators or for those requiring tracheotomy or other intubation or therapy with radium or oxygen. Nurses must prevent improper or overuse of such equipment and observe the reaction of the patient during and after treatment so as to preclude shock, hemorrhage, unconsciousness, and so forth. They also administer diagnostic tests such as the Mantoux, Dick, and Schick. All these duties are in

[1] See "Should Nurses Do Venipunctures?" *American Journal of Nursing*, vol. 51, October, 1951, pp. 603–604. (Opinions of authorities in American Medical Association and American Hospital Association.)

addition to those in which they contribute to the medical evaluation of the patient's condition and progress by determining, recording, and reporting temperature, pulse, respiration, blood pressure, visual acuity, hearing and color perception, as well as by noting signs and symptoms of acute complications or deviations from the usual process of convalescence.

Nurses are required to know how to prepare patients for various types of surgery, with or without specific instructions. An error in an order does not absolve them from responsibility concerning the properties of drugs and the conditions of their safe administration. Visitors to classes in nursing are frequently impressed by the number of times instructors repeat emphatically, "This is the nurse's responsibility. You are expected to know this procedure without specific directions."

The common impression that the hospital nurse is constantly under medical supervision is far from correct. A brief visit each day from the patient's physician is usual practice, and in hospitals having no resident staff this visit constitutes the only supervision of the nurse's care of the patient. Doctors rely on nurses to summon them in an emergency and also to take immediate measures, before their arrival, if a critical situation demands them. Acutely ill postsurgical patients in "recovery rooms" are frequently not seen by a physician for eight hours after the operation unless called by a nurse. Nurses carry particularly heavy responsibilities at night.

To become able professional nurses, students need a good foundation in the biological and physical sciences, in pharmacology and therapeutics, and enough knowledge of medical science so that they will thoroughly understand what they are doing. Certainly it is necessary for teaching and directing others. Mechanical skills can be learned without this foundation, but the understanding of the reasons for, and the effects of, one's work is essential for intelligent and effective performance. A great deal of supervision becomes necessary when procedures are carried on by personnel who do not have adequate knowledge or cannot be relied on for good judgment. The stimulus to assume responsibility is also lacking in learning and practicing by rote. The satisfac-

tion a nurse derives from applying full knowledge to the solution of a patient's problem helps to keep her interest keen, aids in preventing careless mistakes, and supports her in disregarding personal fatigue.

Responsibility for Supportive Care. Current studies of the interaction of the mental, emotional, and physical aspects of health and disease, and the effects of social, economic, religious, and other cultural influences emphasize the importance of ministering to the patient's total needs. The nurse has opportunities to develop a therapeutic relationship with the patient that may be a significant and even a decisive factor in his progress, if she has learned the values and methods of the sociopsychosomatic approach through effective study and guided application of sociological and psychological principles.

The ability to give "supportive care" to patients of all kinds and ages, under varied circumstances, and with infinitely varied characteristics, is increasingly recognized as a significant qualification of a professional nurse. The realization that fear creates unpredictable hazards in a surgical operation, that emotional tensions may impede or even prevent recovery, that sometimes life itself is more dependent on the will to live than upon physical conditions, and in general the recognition that a patient is a human being with a mind, a heart, and a spirit, not just a diseased body, has given added importance to the need for as much wisdom as possible in helping him meet the crisis of illness with an attitude contributing positively to recovery and continued health of mind and body.

Students who are taught to apply psychological principles to the understanding of personality differences, the characteristics of various stages of life, emotional problems, minor deviations from the normal, and finally, in psychiatric nursing, the treatment and care of seriously maladjusted people, have a basis for understanding their patients' needs. If they acquire an insight that enables them to adjust satisfactorily themselves and to exert a positive influence on others—patients, their families, and coworkers—in the complex interpersonal relationships and emotional tensions of a hospital, they can contribute largely to

therapeutic conditions. They also gain a foundation for, and frequently an interest in, psychiatric nursing which make them potential candidates for specialization in that field and for positions in mental hospitals where, as already noted, there is so urgent a need for qualified personnel.

Responsibility in an Inclusive Health Program. Health teaching as part of the nurse's role is gaining in importance with emergent conceptions of the responsibilities of the health services for the maintenance of health, not merely for treating disease during the acute stages. The continuity previously provided by the family physician, convalescence in the hospital, and by a nurse in accompanying the patient home has been largely lost in an age of specialists, brief hospital stays, and both economic and personnel limitations on home care. The necessity for making more adequate provisions for the patient's welfare after hospitalization is very apparent.

The increased strain upon hospital facilities focuses attention upon the urgency of developing inclusive and continuous community health programs in which the functions of the hospital are closely correlated with those of other agencies for public health and welfare. Health education; immunization to control communicable disease; early discovery of serious maladies; outpatient treatment of transient or chronic illness; mental hygiene, maternal, well-baby, and other clinics; visiting nurse services; social services—all have a part in such programs. In some communities hospitals are becoming centers for coordinated health activities, as well as establishing relationships with other agencies so that there may be greater breadth and more effective continuity in the services offered the public.

The nurse has a significant function in such inclusive health programs, within the hospital, in the outpatient department, and in the public health field. Of great importance is adequate preparation, such as is being provided by integration of public health nursing in baccalaureate curricula, not only to qualify graduates for beginning positions in that area but to add competence for every type of nursing. The nurse needs to understand the social factors affecting the patient, to know community con-

ditions and resources. She often has an opportunity to discover problems and contribute to their solution either directly or by enlisting the aid of others. Frequently she has a large share in teaching patients and their families practices and attitudes that will promote recovery, rehabilitation (sometimes with difficult adjustments to physical limitations), and continued health after their return home.

A doctor recently described the success of a nurse in creating such attitudes in a young woman badly crippled by poliomyelitis. She had received a severe shock through overhearing a thoughtless reference to herself as a "hopeless case." The nurse, however, taught her ways of overcoming her disabilities and imparted such courage and confidence to her, and wisdom to her husband, that she is now able, though confined to a wheelchair, to care for her children, to perform household tasks with specially built facilities, and to be the center of an exceptionally happy family.

In one instance known to the writer the faculty of a collegiate school of nursing, which utilizes through contractual agreement the facilities of a large hospital for the instruction and supervised practice of the students, has taken the initiative in securing the approval of the medical staff in the formulation of materials that nurses are authorized to use in the instruction of patients and their families concerning posthospital care in various diseases and conditions. These teaching outlines are more inclusive than the pamphlets given to patients themselves and have proved very valuable in saving the doctor's time and in clarifying and defining the nurse's responsibilities. Consultations with the sick person enable the nurses to adapt their guidance to his actual living conditions. Often, with the physician's direction or approval, the nurse coordinates other consultation services, such as those of a dietitian and a social worker who contribute to a complete and practicable plan for the patient's convalescence, return to full or partial activity, and maintenance of maximum health. Referrals to a public health or social agency or both may be involved, in which case the nurse and the social worker, if there is one, communicate pertinent information to those who will carry on the care and guidance.

In another hospital a group of graduate nurses became concerned about the difficulties—physical, emotional, and social—experienced by patients with a colostomy. They organized a committee including a surgeon, the department head of medical and surgical nursing, graduate staff nurses, social worker, dietitian, and others to consider the problem. The task of investigation and formulation of specific recommendations was delegated to a smaller work committee of nurses, under the chairmanship of the supervisor of surgical nursing. A careful study was made of techniques, and devices and methods were evolved that are well adapted to enable a person with this distressing disability to use effective hygienic procedures, avoid embarrassment, and lead a normal, active life. The chairman of this committee is now recognized as a valuable consultant for such patients, not only by surgeons in her own hospital but by others. Instruction begins before surgery, is continued in the hospital, and later in the home by a visiting nurse who has been fully informed of the patient's individual problems and family situation. The success of this project has given marked encouragement for the development of plans for teaching patients with other types of illness to care for themselves and manage their lives more satisfactorily.[1]

Responsibility for Auxiliary Personnel. The in-service training and supervision of auxiliary workers have been mentioned as constituting other responsibilities of professional nurses that have greatly broadened in scope and importance in recent years. Clear definition of the functions of auxiliary workers and adequate preparation for their satisfactory performance are now considered essential if such employees are to be used in the safe and efficient care of patients. Instructing and directing others obviously demand precise knowledge of procedures and purposes, skill in dealing with people, and ability in organization and management. In nursing they also involve analytical judgment in the wise adaptation of varying degrees of skill and experience and of the individual capacities of workers to diverse aspects of nursing care, a thorough understanding of the changing conditions and needs of

[1] See Dericks, Virginia C., and Kathryn A. Robeson, "Problems of Colostomy Patients," *Public Health Nursing*, January, 1949.

patients, and a deep sense of responsibility for their welfare. Needless to say, the supervision of a group of workers who care for human beings is much more complex and exacting than supervision in a factory, for instance, where employees deal largely with inanimate materials. In the latter, as everywhere, the human element is variable, but the methods and the objects within a given job tend to be constant. In any nursing situation there are three variables: the workers, the methods, which need modification under changing circumstances, and the patients. Thus, there is need for unceasing vigilance and flexibility. For example, a child whose stage of convalescence warranted care entirely by aides except for medications may suddenly, because of some unfavorable physical reaction, a change of treatment, or an obscure emotional disturbance, require the attention of an expert professional nurse. The parents of that child should be assured that the supervision of his care would be such that any change would be immediately recognized and constructive measures taken.

Some employees with little or no preparation have long served as orderlies and attendants, in particularly large numbers in hospitals for the mentally ill, but not until World War II did all hospitals have to resort to untrained workers. At first considered a temporary emergency measure, this method of supplementing the inadequate numbers of graduate nurses is now accepted as permanent.

The leadership in nursing has done much to create positive and cordial attitudes among registered nurses toward the members of these auxiliary groups but further efforts are needed. In the past, especially during the depression years, a sense of threat to their own security as well as the traditional conception of the nurse's function as all-inclusive and the feeling that any part of patient care would suffer if it were delegated, led registered nurses to view the admission of others to their precincts with suspicion and reluctance. The same kind of groundless fear has surprisingly been voiced by some physicians with regard to nurses ever since systematic training for the latter was first proposed. Surely such fears are justified only if one group stands still while another

advances. Is it not true that a profession maintains a position of leadership through the qualifications of its members for progressively developing responsibilities, not through holding back other groups? Actually, the competence of associates in tangential fields can be a great source of strength to a profession if relationships are amicable and functions coordinated for common purposes.

Just as the broadened scope, increased skills, and unlimited horizons of modern medical practice have necessitated the delegation to graduate nurses of many functions once exclusively medical, so the advances in nursing necessitate turning over to assistants many tasks in the nursing area. This involves no threat to registered nurses unless they feel unequal to their enlarged responsibilities and opportunities. Even those who have been most severely handicapped by inadequacies in their education have had invaluable experience and most of them have by their own efforts kept up amazingly well with the expanding demands. Nurses who have learned to carry out techniques largely from practice without the benefit of thorough, scientific foundations or much concurrent teaching and supervision still form the bulwark of the nursing services. They will continue to do so during the long transition period in which it is hoped that education will catch up with the need for personnel equipped with the kinds of knowledge and skills required for their respective functions.

As has been seen, the number of persons employed for nursing functions outside the registered nurse group is very large, 270,819 in hospitals[1] and 100,000 in other services.[2] Only about 12,000 of these are trained practical nurses and only a small proportion of the others have had systematic in-service training. The dangers and lamentable weaknesses in this situation are obvious, but conditions vary widely. A head nurse in one hospital told the writer that the untrained employees constitute her greatest problem because, in addition to being inefficient and unreliable as workers, they understand nothing of hospital ethics and often make injudicious remarks to patients with harmful effects. On the other hand, the natural endowments and attitudes of some per-

[1] Exclusive of ward maids. *1951 Facts About Nursing*, p. 92.
[2] Estimate of the United States Public Health Service.

sons make them invaluable. In fact, the testimony of many patients indicates that a considerable number of these employees are held in the highest regard because of their kindness, gentleness, and efficiency. Also, in some hospitals, fine leadership, general cooperation and mutual respect, continuity of service, and the excellent quality of the work performed by auxiliaries have established a group morale that ensures devotion to the patient's best interests.

Good in-service programs and the recognition of those completing them as valuable members of the nursing team are the most effective means of minimizing hazards and promoting efficiency. In hospitals, as in every organization, a sense of responsibility is increased by security based on competence and the feeling that all groups, each in its appropriate sphere, are interdependent and are working for important, shared objectives.

In the opinion of some observers a prime essential for the improvement of the health services is the elimination of the common rigid hierarchical system. At times it seems as though the professional personnel, from chiefs of medical staffs to floor nurses, are less concerned with the total harmonious effort than with their own pride of place. Attitudes of superiority, on the one hand, and resentment, on the other, create needless internal and external conflict. It is human but disastrous to morale for the various groups to pass on their frustrations to those deemed lower in the scale. The only remedy seems to be a sharp reversal of traditional attitudes by which all personnel are dignified by being recognized as co-workers and co-planners, not subordinates and automata. Even if efficiency and stability were the only goals, increased human satisfactions would pay well, these observers think, in attracting and holding needed staff and getting the best they have to offer for the common cause of improved health care. The nursing profession is making a great effort to do at least its share in this direction.

Unfortunately, favorable situations for systematic in-service training and coordinated functions are exceptional. In general, the conditions are admittedly bad. They are due in some instances to the low ratio of graduate nurses to untrained workers;

to lack of time on the part of the overloaded staff; to the ineffectiveness of many who are unprepared for work as organizers, teachers, and supervisors in such training programs; and to the rapid turnover in the auxiliary group because of dissatisfaction or poor qualifications. Adequate preparation and the development of an esprit de corps that will contribute to the best environment for patients and to the workers' pride and satisfaction in their jobs are dependent on good selection, orientation, training, supervision, and pleasant working conditions, for all of which professional nurses must be largely responsible. Wage scales are, of course, also important in the problem of attracting and holding desirable personnel.

The organization of nursing teams is advocated as the most promising method of providing adequate supervision of auxiliary personnel, with improvement of patient care and, at the same time, conservation of nursing resources. However, the effectiveness of this measure depends upon the availability of well-qualified persons for team leaders.

The constituency of such a team varies with the type of worker and the degree and kind of preparation and experience. Under the general supervision of the head nurse and within the limits of generally agreed upon policies, a graduate nurse, designated as the leader, is usually responsible for the functioning of a group of nursing personnel. The team may include, besides the leader, any combination of the following: other graduate nurses; practical nurses; nurses' aides, voluntary or employed; nursing students, either in the professional or practical nursing programs and in various stages of advancement; orderlies; and attendants. It is the duty of the nurse leader to formulate and discuss with her teammates the nursing care plan and to determine with them the share of each member, to coordinate resources, to see that doctors' orders are carried out, and to give help as needed. The leader, or another graduate nurse on the team, or an advanced student under the supervision of a clinical instructor, must carry on the entire care of certain critically ill patients and, in all cases, the treatments and therapeutic measures that require expert knowledge and skills. In some instances the leader shares part of

the care with co-workers; in some she may delegate all of it. However, the over-all responsibility for patient welfare remains with her, and her relationship with all sick persons in her charge must be sustained if she is to give them confidence and keep herself fully aware of their needs.

Consideration of the responsibilities involved in such leadership of a nursing team to ensure inclusive care for a group of patients can hardly fail to result in recognition of the need for basic collegiate education for those expected to assume them, and to be prepared, after experience, for graduate specialization leading to an advanced position.

2

The Hospital School

As has been seen, approximately 95 per cent of the students preparing for licensure as registered nurses and for the whole broad spectrum of functions on the staff level and above now take their basic training in hospital schools. Knowledge of the characteristics of such training is therefore fundamental to a serious consideration of the problem of supply for the health services and the public. The place of the hospital school is a crucial question in any attempt to reorganize the educational system so that it may draw upon all available human resources and prepare personnel as thoroughly, rapidly, and economically as possible for each range of functions in nursing.

Educational Status

The hospital school program is in the anomalous position of serving three distinct and inherently contradictory purposes at one and the same time—the provision of: (1) post-high-school noncollegiate education, leading to a diploma and preparing students for registered nurse examinations and for general or private-duty nursing, which was the original objective; (2) a substitute for a college or university major sequence of courses in the professional field of concentration, which constitutes the upper-division part of a collegiate program leading to a degree; and (3) a similar substitute for a basic collegiate major in nursing, for which "blanket credit" is accorded and admission granted to supplementary programs in colleges and universities in nursing education, administration, or clinical specialization, also leading to a degree. This confusion results from the detached position of the hospital schools which has precluded general knowledge of

the content, methods, standards, and objectives of nursing education, and has led to its being regarded as something of a mystery, essentially different from other subjects in educational institutions. This mystery must be resolved if there is to be concerted and constructive planning. The emphasis in this discussion is upon the type and standard of education in hospital schools in relation to the second and third purposes.

The value of the contribution of nurses to human welfare and the respect and appreciation won by many of them have tended to create a commensurate estimate of nursing education. Only lately, as education in general has progressed and apprehension caused by the shortages and deficiencies in nursing has become vocal, has the public begun to question the adequacy of hospital schools. A leader in a rural community in the Middle West recently told a nurse educator that farmer friends of his are no longer sending their daughters to nursing schools because the education they provide does not compare favorably with that offered by vocational schools and junior colleges; sometimes the quality is not so good as that they have already had in secondary school. The majority of nursing students formerly came from rural areas. Now, however, rural education has markedly improved and there is a growing demand for higher quality in post-high-school programs. The increased ability of farmers to pay for their children's education is probably a factor, as well as the opening up of diverse occupations to women. However, there is significance in the suggestion that potential personnel are diverted to other fields because of the failure of some hospital schools to keep pace with the demand for quality and the omission of nursing curricula from institutions where these students are seeking education. Here may be a cause, not only of a loss of excellent material for nursing, but also of the ever-increasing difficulties in staffing rural hospitals.

Origin of the Traditional Pattern[1]

Hospital schools have made important contributions to the rapid expansion of hospitals, which began with the discoveries

[1] The facts in this section have been taken from: Stewart, Isabel Maitland, *The Education of Nurses:* Historical Foundations and Modern Trends. Macmillan Co., New York, 1943, chaps. 3 and 4.

relating to sanitation and antiseptic surgery during the period 1870 to 1890. As a result of these discoveries new conceptions of cleanliness were formed and new skills in nursing required. Attracting a type of young woman far superior to the servant nurses of the past and providing all-inclusive service at very low cost, schools of nursing were a bonanza to hospitals. As soon as the early training schools proved their value, the flood of demand swept away almost everywhere the educational foundations on which the Nightingale Schools[1] were built. The basic principle constituting the strength of these early schools was that of independent support and control under an autonomous board, with provisions for graduate staffing adequate for the instruction and supervision of students as well as for the excellent care of patients. Such schools entered into agreements with hospitals but were not subsidiary to them. The loss of these foundations was disastrous from the standpoint of quality of education provided, but the elimination of the expense they involved made the establishment of schools a means of staffing hospitals at low cost, which helped to increase hospital facilities.

The pattern in many so-called schools became that of one graduate nurse as director of nursing and one as a night supervisor, with student nurses doing the work under their direction. Students learned as best they could with very limited instruction from the overworked director and a few lectures by doctors. Care of patients was often by trial and error, with students praying that those in their charge would live, particularly at night when assistance was least available and responsibility felt most keenly. Errors due to ignorance are unrecorded, but the students did amazingly well under the circumstances. They were generally older than nursing students of today and they worked with an extraordinary spirit of devotion to their patients' welfare. Without texts of their own, they borrowed medical books from interns and sought knowledge from any available source in the effort to solve their urgent and perplexing problems.

[1] The three pioneers, all established in 1873, were: Bellevue in New York, Connecticut Training School in New Haven, and the Boston Training School, which became Massachusetts General Hospital School.

More instruction was gradually introduced, but the pattern set was that by which all schools were financial assets to hospitals, as well as means of eliminating a major employment problem. It is not surprising that they multiplied rapidly, increasing from 35 to 1,069 between 1890 and 1910, and to 2,200[1] in 1929. At first the training was one year in length and the students were plunged directly into the care of patients. At the instance of nursing leaders the course was lengthened to two and later to three years, in the hope of including more education and producing more competent and better-disciplined graduates. This hope was largely defeated, however, by economic and service pressures, and the longer program meant in most instances merely an increased amount of inexpensive staffing for the hospitals. The three-year period was gradually incorporated into state laws and was supported by hospital administrators and the medical profession, probably chiefly because it assured prolonged student service.

The establishment of the apprenticeship, or in-service, pattern was perhaps unavoidable at the stage of social evolution America had reached in the last quarter of the nineteenth century. Society as a whole then felt comparatively little responsibility for women's education or for vocational education of any type. The amazing progress soon to be made by medicine was unforeseeable and the popular conceptions of nursing functions made the apprentice type of training seem adequate, except to those with unusually broad vision. Dean James E. Russell of Teachers College, Columbia University, pointed out in an address to the Superintendents' Society in 1900 that truly professional status could never be reached under such a system and that educational progress is dependent on free experimentation, with emphasis on increasing knowledge and intellectual stimulation.

The continuance of the pattern, notwithstanding fifty years of marked progress in other types of education, is undoubtedly due to unremitting need of hospitals for nursing service and the lack of means for more effective education. Breadth of educational resources and financial support for educational purposes have been largely unavailable.

[1] Including nonaccredited schools.

Both the hospitals and the nursing profession have been caught in a dilemma traceable to the historical circumstances that made the rapid advances in medicine and the consequent demand for nurses coincide with the beginnings of nursing education. No one can say what would have happened if the circumstances had been different. If schools of nursing had been firmly established on an independent basis and had then been assimilated into the educational system of the country, they would probably have spread less rapidly but adaptation of types of education to meet the changing needs of the health services might have been made earlier and more easily.

The underlying conflict has been between the necessity for improving nursing education to equip personnel for increasingly exacting and diversified functions, and the necessity for maintaining and increasing current nursing services and keeping costs down in hospitals, with the full responsibility resting with the hospitals. This conflict between two equally legitimate interests has been the fundamental reason for the persistent opposition to educational improvements. The resulting lag in educational development may logically be considered a primary cause for the present deficiencies in supply. The basic difficulty has been a lack in this field of both moral and financial support for education. Such support has been forthcoming without question for preparing young people for many less clearly valuable services to the public. But here organized education has left the responsibility to hospitals.

Improvement Despite Obstacles

In spite of the difficulties inherent in this system, positive forces have long been at work to develop and maintain as sound educational policies in schools of nursing as conditions permitted. Much credit is due a few outstanding hospitals, the administrators and trustees of which have recognized their social responsibility for producing qualified graduate nurses. Fortunately, they have also had large resources to implement high standards of nursing care. As a result, programs in these institutions have provided indispensable criteria by which others could be evaluated, and im-

provements which nurse educators have been able to initiate in them have subsequently been adopted elsewhere.

One such improvement, gradually accepted by all schools, was the introduction of a preclinical period, in which students are given courses in basic scientific and nursing principles and preparation in elementary nursing techniques before being entrusted with the actual care of patients. This has been probably the most important single change in the program, benefiting both patient and student. The patient was protected from hazards that resulted from unreadiness of the student for critical responsibilities and she, in turn, was saved its traumatic effects. However, as will be seen later, this preclinical period has been so limited by pressure to begin student service that the attempt to include all the materials made necessary by increasing demands upon nurses for various kinds of knowledge has somewhat defeated its purpose.

The dynamic leadership and unflagging efforts of nurses themselves are largely responsible for the progress that has been made. As concepts of prevention of disease and preservation of health have been developed, nurse educators have contended that the two objectives of supplying the immediate needs of hospitals and those of other health agencies and of the public for competent graduate nurses are not incompatible. They have therefore striven through the years for breadth and balance of education in nursing, and have accomplished remarkable results in spite of their isolation from organized education and the opposition due to the economic situation of the schools. By dint of extremely hard work these educators have succeeded in gradually improving standards of education and nursing care, in providing more and better instruction, somewhat more adequate supervision of student practice, and at least a minimum variety of experience in the basic nursing services. It has long since become impossible for a student to spend two of her three years of training in one service, as an older nurse told the writer she had done because the physician in charge of obstetrics insisted on her continuing in his department.

Notwithstanding the great advances made, particularly in the past twenty years, hospital school programs still vary markedly

from any other type of education. They differ in basic organization, control, and support, and in the confusion of purpose between the economical servicing of hospitals and the most effective preparation of nurses for their functions as graduates. These fundamental differences affect every aspect of the program in ways difficult to understand by anyone accustomed, either as a teacher or student, to education planned and constantly adjusted to serve a single purpose, namely, the maximum benefit of the student in his preparation for his future role in society. In a college science course, for example, the proportion of laboratory work to classroom instruction is determined by the faculty on the basis of what they believe will best serve the learning process. In nursing education the proportion of clinical practice to instruction has been determined, not as a matter of educational policy, but on the basis of the amount of student service demanded by the hospital. The limitation on expenditures for instruction, and often on time for teaching by personnel whose main responsibility is care of patients, has also been a more decisive consideration than the educational need of students. Only now are studies being made to ascertain how much practice is required for proficiency in various nursing skills, and to find out how fast and how far students can progress if provided sufficient teaching and supervision throughout the clinical program.

Recent Appraisal of the Dilemma

During and immediately after World War II the energies of the nursing profession were concentrated upon meeting the demands of the emergency. Understaffing of hospitals and health agencies, acceleration of school programs, large enrollments produced by federal subsidies, and intensive recruitment for the United States Cadet Nurse Corps might have been more damaging to educational standards if previous work for improvement and stabilization had been less sound and the efforts of nurse educators to emphasize quality as well as quantity less vigorous.

Unusually fine leadership, the very challenge of the almost insoluble problems, and conviction of the social importance of

nursing have drawn the nursing profession together and enlisted the active cooperation of an exceptionally large proportion of the members. During the war, nurses joined with allied health and educational groups in establishing the National Nursing Council for War Service[1] to provide nursing services for both civilian needs and those of the armed forces. When war ended and it became clearly apparent that the demand would continue and increase, the Council and the whole nursing profession turned to the consideration of what basic and long-range measures could be taken to assure adequate provision for the future.

The first step decided upon by the National Council was an investigation of the question of who should organize, administer, and finance professional schools of nursing. Financial support for the project was granted by the Carnegie Corporation of New York, and Dr. Esther Lucile Brown of Russell Sage Foundation accepted appointment as its director. A Professional Advisory Committee, a Lay Advisory Committee and, as the report evolved, a group of hospital administrators and physicians representing various organizations, served in a consultative capacity. Three basic decisions affected the nature of the investigation: (1) that nursing service and nursing education should be viewed in terms of what is best for society—not what is best for nurses; (2) that observation should be nationwide; and (3) that an attempt should be made first to visualize how nursing might best supply the evolving demands of the health services, and then to inquire into the kinds of education needed to prepare nursing personnel for the various requisite services.

The resulting report, *Nursing for the Future*,[2] has been a powerful stimulus to thought and action. Combined with the exigencies of the times, its analysis of present conditions and its constructive

[1] Created in 1942. Constituent bodies: American Nurses' Association, National League of Nursing Education, National Organization for Public Health Nursing, Association of Collegiate Schools of Nursing, National Association of Colored Graduate Nurses, American Red Cross Nursing Service, Council of Federal Nursing Services, International Council of Nurses, Division of Nursing of United States Public Health Service, American Hospital Association, National Association for Practical Nurse Education, American Medical Association, Nursing Unit of United States Children's Bureau, American Association of Industrial Nurses.

[2] Brown, Esther Lucile, *Nursing for the Future*. Russell Sage Foundation, New York, 1948.

recommendations have produced intensified, coordinated, nationwide activity throughout the profession. The very heat of the controversy it aroused, largely because of initial misinterpretations, proved to be therapeutic in clarifying many issues for nurses.

Nursing Schools at Midcentury

The immediate effect of Dr. Brown's report was the formation of a committee composed of representatives of the national nursing organizations and allied professional groups "to analyze major problem areas in nursing, to propose solutions covering present needs and long-range goals, and to initiate action nationally, regionally, and locally." When the Joint Board of Directors of the Six National Nursing Organizations was organized in January, 1949, this committee became an organ of the Joint Board and its official title later became the National Committee for the Improvement of Nursing Services, to express the purpose toward which all its activities were to be directed.

Since the effective preparation of personnel was agreed upon in the first conferences in 1948 as the primary necessity for satisfactory nursing services, the problem of improving schools of nursing was attacked even before that of improving nursing service administration. The first step was to secure through the questionnaire method information concerning current practices in these schools in order to provide a starting point for developing policies and directing effort. The National Nursing Accrediting Service also needed the results of such a survey to provide up-to-date data before proceeding with its permanent program, as did the Joint Committee on Careers in Nursing, which sought basic facts for its work in recruitment.

This survey became the first project of the Committee for the Improvement of Nursing Services, and was assigned to its Subcommittee on School Data Analysis. The Subcommittee was made up of experienced nurse educators from all geographic areas and assisted by representatives of, and resource personnel from, the medical profession, hospital administration, education,

and the lay public. A competent staff was provided by the Division of Public Health Methods of the United States Public Health Service. Because of the remarkable cooperation of the schools, 97 per cent of which replied—a response perhaps unprecedented in the history of questionnaires—the survey had great significance.

The classification of the schools which was part of the study and the reports to individual schools explaining their status, based on the evidence they themselves had provided, had widespread influence in stimulating efforts toward improvement. Since the results of this study appeared, many directors of schools have spontaneously reported constructive changes and have indicated a desire for guidance. The National Nursing Accrediting Service is carrying on the work through a system of temporary accreditation for those schools that are nearing the goal of satisfactory standards.

The full report of the school data findings, published by the National Committee for the Improvement of Nursing Services in 1950 under the title *Nursing Schools at the Mid-Century*,[1] is a valuable compendium of information concerning current practices. By presenting a picture of the typical hospital school of nursing of today it provides a sound basis for considering the position of this institution in a broadened system of nursing education.

The Subcommittee's classification of the schools was based upon the degree to which they met the criteria set forth in two publications of the National League of Nursing Education—*A Curriculum Guide for Schools of Nursing*, published in 1937, and *Essentials of a Good School of Nursing*, which appeared in 1942. These criteria are regarded as minimal, actually below the standards that rapid developments in the demands for nursing competence have since made desirable. A rating scale was devised with 100 possible points, and with a specific share of the total score assigned to each of the areas selected for appraisal. The proportion for each area was determined according to what seemed its relative importance and the extent to which objective

[1] West, Margaret, and Christy Hawkins, *Nursing Schools at the Mid-Century*. National Committee for the Improvement of Nursing Services, New York, 1950.

measurement was possible. The areas and the maximum scores assigned to them were as follows:

Administrative policies	3
Financial organization	3
Faculty	22
Curriculum	16
Clinical field	22
Library	6
Student selection and provisions for student welfare	13
Student performance on state board examinations	15
Total score	100

The range in scores among the 1,147 schools classified was from 15 to 96 points! In light of the fact that all the schools are state accredited, this wide variation has particular significance.

TABLE 1. CLASSIFICATION OF SCHOOLS OF NURSING IN 1949 BY THE NATIONAL COMMITTEE FOR THE IMPROVEMENT OF NURSING SERVICES

Grade and type of school	Number of schools	Per cent
Group I: Scores from 60 to 96		
Collegiate schools	96[a]	
Schools of general hospitals	204	
Schools of special hospitals	4	
Subtotal	304	26.5
Group II: Scores from 40 to 59		
Collegiate schools	11[b]	
Schools of general hospitals	551	
Schools of special hospitals	18	
Subtotal	580	50.5
Group III: Scores from 15 to 39		
Schools of general hospitals	253	
Schools of special hospitals	10	
Subtotal	263	23.0
Total schools classified	1,147[c]	100.0

[a] Collegiate schools were defined in this study as schools owned and controlled by a university or college. Of these schools 54 were for degree students only.

[b] Only one for degree students only.

[c] All state-accredited schools of nursing were classified except 37 not reporting data and 9 established too recently to justify classification.

Misunderstanding of the meaning of state accreditation and its confusion with accreditation by agencies of higher education has been one of the main causes of unsound educational evaluation of schools of nursing. State accreditation of a school of nursing merely indicates that its graduates meet the minimum requirements for admission to examinations for licensure, and in some states these requirements are still very low.

Less than 10 per cent of the schools approached the fulfillment of all the standards accepted by the nursing profession as characterizing a good school, and more than 25 per cent had serious weaknesses in almost every area. It should be remembered that these standards were formulated for hospital schools, and that all the schools were measured against this standard and not against one primarily applicable to a college or university school. The result of the classification is shown in Table 1. The scores of approximately a fourth of the schools were 60 or above and they were placed in Group I. About 50 per cent had scores between 40 and 60 and they were designated Group II. The remainder, with scores below 40, constituted Group III.

TABLE 2. SOME EVIDENCES OF PROGRESS IN NURSING EDUCATION, 1929 TO 1949

Measurement	1929	1949
Number of state-accredited schools of nursing	1,885	1,193
Number of students enrolled	78,771	87,708
Number of students per 10,000 population 17 to 22 years of age	59	68
Number of students per school[a]	42	74
Number of beds per home hospital[a]	75	150
Per cent of students graduated from high school	66	100
Per cent of nurse instructors having academic degree	4	55

SOURCE: West and Hawkins, *op. cit.*, pp. 16, 17, 45, 52, 72, 78.
[a] Figures are for the median school in each year.

Although these results may be disappointing, a comparison of the situation in 1949 with that of 1929, when the last previous inventory[1] was made, shows substantial progress, as is indicated in Table 2.

[1] *Results of the First Grading Study of Nursing Schools*. Committee on the Grading of Nursing Schools, New York, 1931.

One of the most encouraging signs is the fact that the number of schools was substantially reduced in two decades, eliminating some hundreds of training units to which the term "school" could be applied by courtesy only. The trend toward larger schools is salutary, in that education can be provided more economically, while increased numbers stimulate efforts to improve the educational process. Similarly the trend toward the location of schools in large general hospitals with extensive and varied clinical facilities is favorable to better professional preparation.

TABLE 3. MEASUREMENTS FOR MEDIAN SCHOOL OF NURSING IN 1929 AND 1949, COMPARED WITH PRESENT RECOMMENDED STANDARDS

Measurement	Median school		Present recommended standards
	1929	1949	
Student work days per week	7	6	5.5
Student work hours per week	54	48	44
Weeks of night duty[a]	21[b]	14	8–12
Weeks of afternoon duty[c]	–[d]	20	8
Weeks of vacation per year	2	3	4
Class hours in biological and physical sciences	148	240	215
Class hours in social sciences	80	130	165
Class hours in medical, nursing, and allied subjects[e]	477	760	765
Professional books in school library (separate titles)	160	600	1,000[f]

SOURCE: West and Hawkins, *op. cit.*, pp. 52, 53.
[a] Hours, 11 p.m. to 7 a.m.
[b] Number for median student rather than median school.
[c] Hours, 3 p.m. to 11 p.m.
[d] Not available.
[e] Excluding planned clinical instruction, for which number is lacking for 1929; for 1949 it is approximately 110, as compared with 200 recommended.
[f] Minimum; addition of 100 titles yearly is recommended.

Other evidence of progress is to be found in a comparison of the practices of a typical school of nursing in 1949 with those prevalent twenty years earlier. At the same time, however, these practices should be compared with the criteria of a good school as defined by the profession. Table 3 makes this two-way comparison of some measurements that have significant bearing upon the quality of education and upon student welfare.

The 54-hour week in 1929 did not usually include class time, whereas in the 48-hour week of 1949 and the 44-hour week

recommended it is included. None of these schedules makes any allowance for study. A normal college program is based on a 45-hour week, with about one-third devoted to instruction and two-thirds to study. The amount of preparation expected of students has a very significant bearing upon the level of instruction and of achievement.

During both night and afternoon duty, supervision is very inadequate and class schedules are disrupted or omitted. Nurse educators are agreed that students should have around-the-clock experience with patients, but that eight weeks' service for each of these two periods, in the latter part of the program during which the student is prepared for heavy responsibilities, is adequate for educational purposes. The longer periods indicated in the table are assigned, not because of their educational value, but to utilize students when hospital staffing is difficult. In one university hospital the writer visited, for example, the director of the school, who was also director of nursing service, excused the practice of assigning students to five months of night duty on the grounds that no staff nurses were available to replace them. This is an illustration of the confusion of educational values and service needs, with the latter almost always taking precedence when education is controlled by an institution whose primary concern is service. The survey revealed variation among the schools from three months or less to eight months of afternoon duty, and from two months or less to twelve months of night duty!

A word of caution is necessary in regard to the 130 hours devoted to the teaching of social science in the median school of 1949. Such subjects as professional adjustments and the history of nursing are included in this category. Only the courses offered in sociology and psychology would generally be considered social science by college faculties, and the some 60 hours devoted to them would be thought far too brief a time to provide adequate understanding of even their elementary principles.

Curriculum of Typical Hospital School

A typical school is as mythical as an average man, but a composite picture, though admittedly oversimplified, may provide

persons outside the nursing profession with some basis for evaluating this type of program in terms of educational policies, standards, and practices as applied and understood in other types of education. Such evaluation is important in considering the suitability of these programs as substitutes for a substantial portion of a baccalaureate curriculum and for a senior college major sequence.

The division of purpose between education and service and the economic problems stemming from the use of hospital funds have been the predominant influences that have forced the concentration of foundation materials in a short preclinical period. These considerations have also demanded a decrease of teaching and an increase of service as the student advanced and became more competent and useful.

As previously noted, the ideal ratio of hours of practice to instruction and the most effective distribution of time in nursing programs are yet to be determined, but there is no doubt that in hospital schools these matters have frequently been determined by service demands. Table 4 conveys an impression of this pattern, but it does not claim statistical accuracy in details. It is based on data concerning hospital schools from *Nursing Schools at the Mid-Century* and on a study of information obtained from the bulletins of 20 hospital schools selected from Group I and Group II. The representation inclines to the favorable side, partly because specific information is published only by the better schools, whereas the others are likely to be so vague concerning the proportion of practice to instruction and other features as not to permit analysis.

"Class hours" include lectures, recitations, and laboratory hours without differentiation, since many hospital school bulletins do not indicate the proportion of each, and those providing this information reveal such diversity of practice that it is impossible to consider any policy typical. For example, in anatomy and physiology, the proportions vary from 40 class and 80 laboratory hours to 70 class and 40 laboratory. Laboratory facilities are extremely limited in many schools, and the attempt to cover a large amount of theory in a short time also tends to reduce

TABLE 4. ESTIMATED REPRESENTATIVE DISTRIBUTION OF CLASS AND PRACTICE HOURS IN BETTER HOSPITAL SCHOOLS, 1949[a]

Period	Subject	Weeks	Class hours[b]		Practice hours	
			Weekly	Per term	Weekly	Per term
Preclinical:						
First year, first term	Anatomy and physiology	–	–	120	–	–
	Microbiology	–	–	60	–	–
	Chemistry	–	–	60	–	–
	Psychology	–	–	30	–	–
	Sociology	–	–	30	–	–
	Nutrition, foods, and cookery	–	–	60	–	–
	Pharmacology	–	–	40	–	–
	Nursing arts	–	–	140	–[c]	140
	Professional adjustments	–	–	30	–	–
	History of nursing	–	–	15	–	–
	Total preclinical	20	29	585	–	140
Clinical:						
First year, second term	Medical principles; nursing principles and techniques; allied subject matter	28	9	252[d]	39	1,092
Second year	Medical principles, etc.	48	6	288[d]	42	2,016
Third year	Medical principles, etc.	48	3	144[d]	45	2,160
	Total clinical	124	–	684[d]	–	5,268
	Total	144	–	1,269	–	5,408

[a] For source of data see text, p. 53.

[b] Includes laboratory hours.

[c] Practice begins after about one month, starting with 3 to 5 hours and increasing to 8 to 12 hours weekly.

[d] Includes planned clinical instruction.

laboratory work. In one school in a university-owned hospital, the writer learned that the amount and the scheduling of laboratory work were governed by the limited and inconveniently arranged hours when the laboratories were not being used by medical students!

The lack of differentiation between class and laboratory hours makes it impossible to state accurately the equivalent in college credit with regard to science courses[1]; therefore, an estimate will be made. On the basis of one semester credit for 16 class hours (one hour per week for a semester) or 32 laboratory hours, the

[1] The practice in assigning college credit is described on p. 99.

typical courses might be evaluated as follows: anatomy and physiology, 5 credits; microbiology, 3; chemistry, 3; psychology, 2; sociology, 2. In institutions of higher education, introductory courses in chemistry, for example, are usually 8-credit courses and in psychology and sociology, 3 to 6.

Examination of the curriculum of the preclinical period in Table 4 and of the first semester, or the first year, of a college program reveals striking differences. The number of courses in the hospital school as compared with the usual five in a college student's schedule raises the question of whether assimilation of content is possible. Most educators would conclude that the preclinical fare was conducive to mental indigestion. They would also conclude that the brief time allotted each subject implied superficiality and inadequacy of the courses, both in themselves and as a foundation for a major worthy of college credit. The total load is extremely heavy, approximating the equivalent of a 22-credit program, as compared with 15 in the normal college program. Even without any ward practice, this means that the time allowed for study is considerably less than preparation for college classes would require, with inevitable depreciation of standards.

English composition, or any equivalent course in communication skills, is conspicuously lacking. Lacking also in the program as a whole are courses in history, government, or American institutions, and in the humanities, such as are often given even in terminal technical programs in junior colleges. Not having the resources of an educational institution, hospital schools do not have a variety of departments. Their programs reflect this limitation as well as that of time.

In the preclinical period the student faces not only the ordinary problems of adjustment to what is usually a first experience away from home and to new educational demands, but also to the complex and often emotionally disturbing hospital situation. On the other hand, she usually has strong motivation and her courses, for all their diversity, have a common purpose in their direct application to nursing. In this respect also they differ from college courses, probably having more value proportionately for

their specific purpose within the time limitations, but less general educational value. Even when taught in a college, classes for hospital school students are not usually shared with students in other disciplines, and therefore lack the breadth contributed by participants having varied interests and points of view, as well as the comprehensiveness of courses designed to give a general foundation.

In recent years hospital schools have increasingly sought instruction in the basic sciences in neighboring colleges, because of the shortage of nurse instructors and a realization that specialists are better qualified. However, frequently the courses are given as special "service" courses for the schools and do not conform to college standards. The instructors say that they cannot maintain the level of their regular courses because time does not permit, and the students are often tired and unprepared because of the heavy demands made upon them. Some colleges refuse to give credit for such courses, justly claiming responsibility for accrediting only work actually consistent with their standards. Other institutions, with what seems mistaken kindness, concede credit, though its value is certainly dubious if it does not represent college-level achievement. Many students have been bitterly disillusioned later when they discovered that the credit given was really counterfeit coin, not accepted when presented for transfer to another school or as a foundation for advanced courses.

In general, the preclinical period of 16 to 24 weeks contains nearly half the total amount of instruction in the three-year program. It is not surprising that there are heavy losses in enrollment at this time, losses that are very costly because the amounts expended for the instruction and maintenance of students who fail or withdraw are not later offset by service value. The loss to the students in disappointment, frustration, and a sense of failure, and to the nursing services of personnel who might have been satisfactorily trained by better methods, is incalculable.

The other half of the instruction is distributed through the remaining 120–131 weeks in decreasing proportions. The chart on the opposite page indicates its composite nature and suggests the contrast between this system and that of concurrent and proportionate learning and application, the sole purpose of which is education. It should be kept in mind, furthermore, that variation from school to school is marked. In one nationally accredited hospital school no instruction at all is offered in 4 of the 12 quarters; in another merely 30 hours are provided in the second half of the final year.

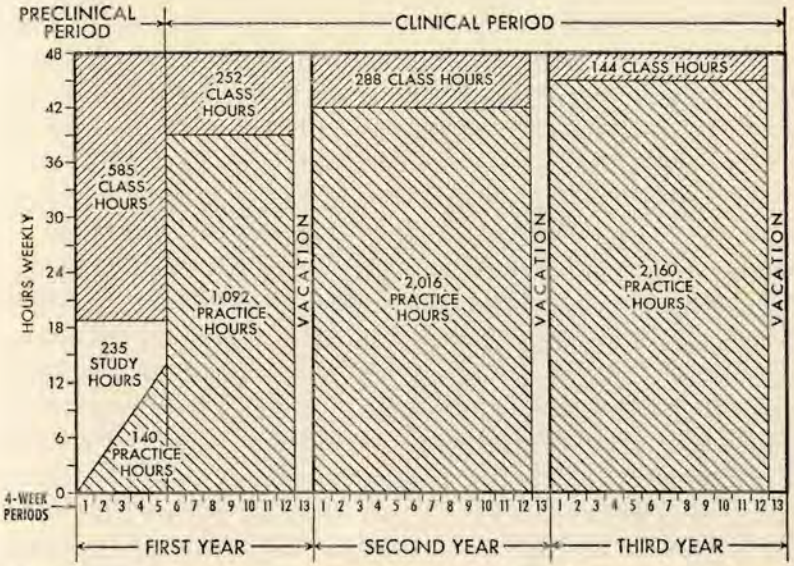

CHART 1. ESTIMATED DISTRIBUTION OF HOURS IN BETTER HOSPITAL SCHOOL CURRICULA

During the clinical period the ratio of practice hours to class hours increases as follows: first year 4.3 to 1; second year 7 to 1; third year 15 to 1.

Usually the student begins clinical practice with an assignment either to general medical or surgical nursing. When she has spent the designated number of months in one of these services, she is transferred to the other. With the frequent exception of obstetrics, these are the largest in a general hospital and include opportunities for learning about the most common diseases and conditions and the appropriate nursing procedures. Experience provided on these two services is longer than in any other and the proportion of teaching to practice is generally higher. Thereafter the student

is given training at least in obstetric and pediatric nursing and increasingly in psychiatric nursing, although the last named generally is provided in an institution for the mentally ill. Beyond preparation in these services, practice depends largely upon the size and character of the home hospital. Specialties such as gynecology, urology, orthopedics, ear, nose and throat, neurology, and communicable disease may or may not be in segregated services or available at all.

As the student progresses from medical and surgical nursing to other services she continues to use much of the knowledge she has acquired, including the techniques. In each successive service particular theoretical and technical knowledge applicable to the new area is added, but differences in the amount and quality are wide. Pediatric nursing furnishes an excellent illustration. In many schools clinical training in pediatrics still involves merely the somewhat superficial adaptation of previously acquired knowledge of the techniques of medical and surgical nursing to the care of children. In others, however, it has been developed and enriched to amazing proportions. It encompasses consideration of normal child growth and development, including patterns of behavior, emotional problems, and so on. Planned experience with well children is sought. Understanding gained from child psychology, in addition to knowledge from biological, physical, and medical science, and from nursing principles and techniques, is applied in the total care of the sick child.

The quality of the education is even more variable in clinical training than in the preclinical subjects. State laws and regulations of state boards of nurse examiners prescribe not only the length of the nursing curriculum but also the kinds of clinical services, and the amount of time to be spent in each. The purpose of these measures has been to ensure an opportunity for students to develop competence in each of the basic types of nursing. Unfortunately, time in itself is not an adequate criterion. Where and how time is used are the important considerations. Number and variety of patients are vital factors in planning clinical instruction. Longer periods in small services, still characteristic of many hospitals operating schools, do not compensate for the

richness of experience in large, well-diversified teaching institutions. Moreover, the quality of the nursing service that the student observes and participates in, as well as the amount and quality of instruction and supervision, affect her achievement more than the number of weeks spent in each service.

The distribution of time is largely determined by the variety of clinical experiences offered. Table 5 indicates how this distribution operated in the median Groups I and II schools in 1949.

TABLE 5. DISTRIBUTION OF NURSING EXPERIENCE IN THE MEDIAN GROUP I AND GROUP II HOSPITAL SCHOOL CURRICULA, 1949

Period and type of nursing experience	Number of weeks	
	Group I schools	Group II schools
Preclinical period	24[a]	20[a]
Clinical period:		
Medical nursing	20	20
Surgical nursing	30	32
Obstetric nursing	13	13
Pediatric nursing	13	13
Psychiatric nursing	13	13
Tuberculosis and communicable disease nursing	8	—[b]
Public health nursing	8	—[c]
Outpatient nursing	4	2
Diet therapy	4[d]	4[d]
Total clinical period	113	97
Vacations	12	9
Undesignated	7	30
Total (three years)	156	156

SOURCE: West and Hawkins, *op. cit.*, pp. 8, 9.

[a] Estimate.

[b] Included in medical nursing.

[c] Not offered.

[d] Minimum requirement of all state boards of nurse examiners.

Examination of these patterns reveals in both groups a surplus of time, not utilized in any designated field of clinical experience but required of the student to complete the three-year course. In schools above the median of Group I much of the time margin was used for such purposes as extended public health or outpatient experiences, or education in advanced medical and surgical specialties. On the other hand, in some schools below the

median in Group II, only the first four experiences were offered and the preclinical period included only 16 weeks; therefore, the amount of time beyond that considered adequate for learning in the specified types of nursing may have been as much as 42 weeks. Even in the typical Group II school it is 30 weeks. It is assumed that this time was used for afternoon and night duty, the limited educational value of which has been noted, and for repetitive morning practice that contributed far more to nursing service than to the education of the student.

In contrast to these practices, however, attempts are being made in some of the educationally advanced schools to measure achievements and to adjust requirements accordingly rather than basing them solely on duration. Several schools in Group I have reduced the length of their clinical periods and are still achieving results that rank them among the best. One, for example, integrates outpatient experience and diet therapy with each service, has eliminated undesignated time, and has reduced the total clinical period to 104 weeks and the total program to 128 weeks. In this case state laws do not prescribe three years. Even in this school, the pattern is affected by service demands and it is probable that further reduction through concentration could be achieved if the emphasis were wholly educational.

An experimental program in the school of nursing of Massachusetts General Hospital is described by its director, Ruth Sleeper, in the November, 1951, issue of the *American Journal of Nursing*. The plan is still under scrutiny but the results so far have been gratifying. The program consists of a 6-month preclinical period, a 22-month clinical period, and an 8-month internship; with a 3-week vacation included each year. Medical and surgical nursing with a number of specialties, obstetric, pediatric, and psychiatric nursing are included in the clinical period. Communicable disease techniques and public health nursing are incorporated in the plan, but no experience is provided in these fields, since suitable facilities are lacking and there are perhaps valid arguments for omitting such experience in a basic hospital school program. Public health principles, however, are interpolated throughout the curriculum.

Student hours of ward practice have been reduced, more instructors added, and ward instruction increased. The basic program, condensed into 28 months, with more teaching and less practice, is designed to meet educational needs. The 8-month internship permits compliance with the legal state requirements that nursing education be three years in length. Some teaching is continued on an in-service basis during the final period. The program is more expensive, because of increased costs of instruction, less return in student service, and the policy of paying a small stipend to the interns.

This experiment will be watched with great interest, especially since the high standards of the school ensure strict maintenance of quality, if not improvement, in the shortened curriculum. The greatest danger in the movement toward acceleration, resulting from the acute need for more graduates, is that the time may be reduced *without* instruction being increased, which alone makes it possible to include the same content and to achieve at least equal results in a shorter period. Most hospital schools cannot afford the added expense involved in abandoning the apprentice system. This situation emphasizes the need for educational support. If equal or superior competence for the nursing services can be produced more quickly by concentration on educational purposes, is it not to the interest of the public to provide that support? This question will be discussed in the next chapter.

Another respect in which some nursing programs differ from college education, or indeed from any education-centered curriculum, is in the separation of practice from theory. In order to maintain an even flow of students through the various services for staffing purposes, classes are divided and the groups rotated. For example, half the group has medical nursing, while the other half has surgical nursing, and in the briefer experiences and smaller departments the students are divided into smaller groups. In small hospital schools there may be no more than two or three in a given service at one time. If students are taught the principles of each type of nursing simultaneously with or immediately before their application in practice, as is obviously desirable educationally, repetition of teaching is involved with corresponding ex-

pense and time for instruction. To avoid this difficulty some schools give the theoretical material to the class as a whole, with the consequence that some students may not have the practice in which they are expected to apply the principles until months later. This system also makes impossible an orderly progression throughout the program, with the adaptation of each successive unit to the cumulative knowledge and advancing maturity and competence of the students. Some students, for example, have had obstetric and psychiatric nursing before they have had principles of pediatrics, some have had one, and some neither. Consequently, the courses have to be on about the same level of advancement unless the teaching is concurrent with practice and is adapted to include the previous learning of each group.

Adjustments to hospital administration are obviously necessary. The welfare of patients is the first consideration, but the interests of students need not be sacrificed. If the staffing of the hospital is adequate, if the school is large enough to permit each class to be of reasonable size, if the provisions for instruction are sufficient, and the size of the hospital and its various services are suitable for educational purposes, cooperative planning can assure the use of the institution as a laboratory, so that both students and patients derive maximum benefits. The interests of the students, as well as of the patients, require stability on the part of the nursing staff, and this necessitates a fairly even flow of students in the various services. Properly adapted teaching can, however, eliminate any educational loss in these rotations. The chief difficulties arise in small hospitals, which do not have adequate staffs either for good patient care or for teaching of the right caliber or amount.

Even in the best institutions the traditional attitude of treating students as subordinate workers still persists and the maximum educational results cannot be achieved until all those concerned truly regard students as students and take an active interest in forwarding their development. The importance of this change of attitude cannot be overestimated. In hospitals where the medical and nursing staffs are genuinely concerned with giving students

the best opportunities for learning, this is reflected both in the quality of patient care and in student achievement.

Faculty and Level of Instruction

The greatest value of nursing education is the direct application of theory to problems in real life, where the need for knowledge and skill acts as a constant stimulus to the desire to learn. In this and in the consequent development of a sense of responsibility nursing education has an opportunity surpassing that of many fields. However, intellectual content and interpretation are necessary to make it an educational discipline rather than mere technical training, without benefit of the insights provided by modern scientific knowledge.

The crucial determinant in assessing the status of any type of education is the quality and level of instruction. As is known, the general standards by which teaching qualifications are judged in the American educational system are based on level of preparation. Elementary teaching requires graduation from a teachers' college; secondary teaching requires at least a baccalaureate degree; while the master's is essential in order to qualify for a teaching position in a college or university, and the doctorate for more than the assistant professorship. Lesser or different preparation is sometimes accepted in individual cases, for temporary employment, or in underprivileged areas of the nation. So far as educational credentials are mere symbols, which fail to represent real personal attainment and qualification for teaching, these standards may be artificial but, in general, the principle is sound that the level and breadth of preparation for the teacher should be beyond that of the courses he is teaching. Another principle is that teachers should have had extensive and intensive preparation in the particular subjects they are teaching.

The second almost insurmountable handicap nursing has been struggling to overcome, closely related to the lack of educational and financial control of the schools, is the lack of any effective system by which teachers could be adequately prepared. The fact that 55 per cent of the nurses on the faculties of all schools of nursing had college degrees in 1949—and 45 per cent of those in

hospital schools—as compared with less than 4 per cent in all schools in 1929, indicates an achievement that can be appreciated only if one realizes the difficulty with which most of those degrees were acquired. Unfortunately, however, they frequently do not represent opportunity and attainment equivalent to that represented by baccalaureate degrees in other fields. This discrepancy will be explained more fully in the later discussion of degree programs but realization of its existence is necessary for evaluating the level of instruction in hospital schools.

A college degree with a major in home economics, for example, on which certification for high-school teaching in that subject is based, represents an integrated four-year course with progressively advanced education, including general, profession-related (biological and physical sciences, social science, education), and professional content. A large proportion, if not all, of the last named is on the upper-division college level, utilizing materials derived from other fields of learning. In many cases, however, degrees in nursing actually represent only the addition of two college years, often largely if not entirely on the lower-division level, to a hospital school diploma program of the kind described above. Colleges and universities having no department of nursing today grant degrees for such a combination, requiring only the equivalent of two years of academic courses, either preceding or following the nursing program. The diploma course may have been far inferior to that in the typical school of 1949. Even then, 50 per cent of the schools were below that standard and ten or fifteen years ago, when a large proportion of the present teaching personnel were graduated, the average standard was considerably lower.

Some nurses struggle for years to accumulate academic credits, often in a miscellany of subjects. In a recent discussion with the faculty members of a hospital school the director of nursing service and of the school told the writer that it had taken her fifteen years to get her degree, because the responsibilities of her job prevented any long absence and because of economic and other personal problems. Others testified to periods of from five to twelve years and some were still in the process. Many felt that the

general education they received was stimulating and valuable in itself and said they were able to apply part of it to their work. However, some admitted they saw little benefit in it aside from the prestige and economic advantage of having a "tag" that qualified them for better-paid positions or met a new requirement for one they already held. They complained of the lack of guidance in choosing courses, and the waste of time and money. The degree thus attained stood for no more education or competence in nursing itself than each previously had. This competence varied with the ability of the individual, but was based on a diploma program that may have been extremely weak, with much of it outdated by new methods, and on experience limited to a small hospital where the standards of nursing service and nursing education were determined by the nurse herself and others having about the same kind of preparation. The degree appearing after a name in the school bulletin does not certify college-level professional education, as one unfamiliar with this practice would naturally assume.

Degrees from collegiate schools, in which the course as a whole, including the major in nursing, is controlled by a college or university and organized according to the same policies and standards as apply in other departments of the institution, have a very different significance. This is also true of degrees for "supplementary programs" for graduate nurses offered by a few universities. In such programs, before the candidate goes on to the upper-division courses in nursing and related fields authentically leading to a degree, her knowledge and competence are assessed and added to as needed to supply deficiencies both in general education and in the field of nursing. As yet, however, only a very small proportion of the number of teachers required for nursing education come from these two excellent sources of supply, and the majority are immediately absorbed by the collegiate schools themselves.

Two-thirds of all the teaching in hospital schools was done by nurses in 1949. However, the trend toward seeking instruction in the biological and physical sciences from colleges and universities had resulted by that year in two-fifths of the instruction in these

subjects being provided by college faculty members. One-third of the teachers of these subjects were still nurses, one-tenth physicians, and the remaining one-sixth were dietitians, medical technicians, or high-school teachers.

The minimum standard of the National League of Nursing Education, applied in the school data analysis with regard to the specialization of teachers, was the extremely moderate one that "no instructor should be expected to cover more than four subjects." Thirty per cent of all schools did not meet this standard. In 231 schools all the biological and physical sciences were taught by one instructor, who in 81 per cent of these schools was a nurse. In no instance was the instructor a member of a college faculty. In one small school a nurse instructor taught psychology, sociology, microbiology, and five different nursing subjects. Such situations are startling in view of the requirements for specialized preparation for teaching not only in colleges but in high schools.

Another vitally important factor affecting the quality of the instruction in hospital schools is the division of time, interest, and responsibility of the personnel between teaching and service administration—also a manifestation of the "split personality" of nursing education. Only a few are full-time instructors, able to devote themselves to planning, preparing for, and conducting their classes, grading papers, and helping students. These are usually the teachers of the sciences and of nursing arts, but, as indicated above, many of them carry heavy and diversified teaching loads and have not had adequate preparation. Not many hospital schools employ full-time personnel for the teaching of nursing principles and for clinical instruction and supervision. The fact that in 1,151 schools in 1949–1950 there were only 5,533 full-time instructors,[1] of whom a large proportion were in the collegiate schools, indicates their scarcity in hospital schools.

In hospitals whose financial resources and administrative policies allow for ample assistance, a definite and sufficient apportionment of the supervisors' time for teaching may solve this dilemma. However, in the majority, which are understaffed, the supervisors have time and often are qualified to give only minimum instruction. There is little if any attempt made to integrate

[1] *1951 Facts About Nursing*. American Nurses' Association, New York, 1952, p. 16.

previous learning and experience, to interpret policies and objectives, or consider the larger aspects of nursing responsibilities for patients, including supportive as well as physical care. The instruction is likely to be of a technical nature concerned merely with how to do a procedure or carry out routine jobs, rather than professional education that seeks to help the student in the application of both knowledge and emotional maturity to specific practical problems. The supervision of students, if done entirely by service personnel, is similarly limited by the pressures of their own work and often by lack of preparation. In other words, it is administrative rather than educational supervision, directed toward the minimum skills required for getting the work done rather than toward the continuous intellectual and emotional growth of the student. This may be contrasted with good laboratory teaching where applications and techniques are purposefully related to the students' comprehension of the subject as a whole.

The advantages of instruction by practitioners rather than by full-time instructors are often pointed out, with medical education as taught in the clinical years cited as an illustration. Its effectiveness, however, depends upon adequate time for thoroughness, comprehensive knowledge of the subject and related fields, ability to communicate and interpret ideas as well as to demonstrate techniques, and a vital interest in teaching. The age of the students and the extent of their previous education are also important factors. Medical students are older and more broadly educated and even they often feel a lack of sufficient interpretation.

If students are to do more than learn techniques mechanically, they need continuous teaching and guidance by instructors competent to explain the relationships between principles and practice and with sufficient time to do it thoroughly. They need to have medical terminology explained if they are to use it intelligently. When the writer expressed admiration at the students' apparent knowledge of so many such terms, an instructor said ruefully, "I am afraid it is mostly parrot knowledge." And yet nurses constantly act as interpreters and teachers for patients and it is often important for them to be able to translate such terms, as well as scientific theory and processes, accurately and under-

standably. For example, a patient and his family in contrasting the attitudes of two nurses spoke of how reassuring the one was because she explained in simple words what the doctor had said, while the other merely rattled off terms she knew they did not understand, with a superior air. Ignorance and insecurity may actually have been the explanation for her attitude, as often is the case with an inexperienced teacher who discourages questions from students.

An educator who observes the actual conditions of student practice in hospitals where there are no clinical teachers wonders how the limited supervisory staff can provide adequate instruction to the students, as well as administer a unit and supervise its personnel. The director of nursing service and of a school in a large hospital said in a recent conference, "It simply cannot be done. Each is a full-time job and one or the other suffers when they are combined." On the other hand, observation of the work of clinical instructors refutes the argument that teaching by personnel without service responsibility is in danger of being theoretical. Good clinical instructors work closely with the service staff and constantly demonstrate methods as well as supervise patient care by students.

Notwithstanding the many handicaps under which hospital school faculties give instruction, some excellent teaching is unquestionably done. Obviously a degree does not ensure such teaching. In fact, some of the best teachers are those who have overcome obstacles through sheer force of purpose and native ability. Intellectual curiosity, imagination, and powers of self-education through reading, observation, and experience; keen interest in students; and a deep sense of responsibility for imparting the maximum knowledge and understanding to promote the welfare of patients have frequently made a nurse an incomparable teacher. One such supervisor of a pediatric service was cited by a physician as proof that nurses do not need higher education. However, continued conversation revealed that this nurse had actually acquired an unusually broad and thorough education through her own efforts.

Such persons are exceptional in any field, and certainly the general caliber of teaching is determined by the adequacy of

preparation of the faculty and the extent to which conditions are favorable to the accomplishment of educational purposes. There is no more conscientious group in the writer's experience than the faculty of schools of nursing, but with the limitations they now have they cannot possibly be expected to give their students professional education in the sense in which that term is understood in other fields, that is, upper-division college education legitimately leading to a degree.

Very few, even of those possessing degrees, have had that kind of education themselves. In fact, the current emphasis on degrees as such, rather than upon individual qualifications and the value of experience and maturity, is actually damaging instead of improving the quality of the teaching in some schools. As indicated above, degrees in nursing cannot be regarded as reliable credentials of competence until higher education recognizes and fully assumes its responsibility for making them so.

The foregoing evidence concerning the characteristics of a diploma program in a typical hospital school of nursing may enable administrators and faculty members in institutions of higher education to judge of its proper status among the various types and levels of education now recognized. It also may provide a basis for considering how this predominant pattern may be coordinated with other types of programs to provide a system corresponding to those in other fields, in which clearly differentiated educational opportunities lead to clearly defined objectives. Such clarification would be a significant step toward resolving the present confusion for prospective students and their advisers, for graduate nurses seeking to supplement such programs with appropriate education to equip them for advancement, and for colleges and universities attempting to help. Though these hospital schools are legally designated "professional schools," they obviously do not fit into that category as it is generally defined in higher education.

This one type of education has been the almost exclusive means of supplying personnel for the nursing services. Its limitations have become increasingly apparent in relation to the demand and in comparison with the educational means of supply for other fields.

3

Relation of Education to Supply

THE supply of qualified personnel for the various functions within any occupational area depends upon many factors. These include the nature of the work and its appeal; the opportunities it offers for economic security, personal satisfaction, social prestige, and service to society; the working conditions; the relation of the type, quality, amount, and cost of preparation to the interests, abilities, and financial resources of potential candidates; and the availability of suitable educational facilities.

These factors are inextricably interwoven in determining the supply, but one of the most decisive is the adaptation of education to the interests of future workers and the needs of the occupation. Anyone who has acted as an adviser to students knows how greatly the enthusiasm or discontent of those in a course of study affects the enrollment of others. The satisfaction manifested by workers in a particular field is also a potent influence in attracting others. Fortunately for the public, nursing itself has offered large psychological rewards but both its educational methods and the working conditions have too often acted as deterrents rather than inducements in the recruitment of nursepower.

When the welfare of society demands more and better-prepared workers in a certain field, three questions should be given consideration by those responsible for education:

1. What are the potential sources of personnel for the occupation?
2. What are the ranges of functions within the occupation for which personnel need to be prepared?
3. What educational means should be provided to attract and prepare personnel and how should their education be financed?

Adaptation of Education to Potential Personnel

The minimum age and preliminary education required for entering a field of activity obviously limit the source of supply. Except for some auxiliary workers having less than a high-school education, and some college students or graduates whose interest develops late, the graduating classes from secondary schools each year constitute the reservoir from which potential nursing personnel are drawn. Young men as well as young women are showing interest in slowly increasing numbers as educational and career opportunities are made more attractive and prejudices are broken down. The same reservoir of high-school graduates supplies many other occupations and channels of opportunity largely determine the flow. In general, the group divides itself into four main categories, determined by varying conditions and purposes and by the established educational patterns.

Some seek immediate employment. They may have no interest in further education because of lack of ability, dislike of study, expectation of early marriage (in the case of young women), desire for independence, predilection for some occupation not requiring formal preparation, or a combination of such reasons. Others would like to continue their education but cannot, because they need to support themselves and frequently must contribute to the family budget. Provision of means by which the most able among the last named may be given educational opportunities is only a tenuous hope for the future. For them in-service training is now the only educational possibility.

The next category is comprised of young people who seek short-term preparation for a vocation, with emphasis on a specific, limited objective. Reasons similar to those cited above operate also at this level. Lack of sufficient financial resources for more than a short and inexpensive course is often a decisive consideration. Education of this type is provided in courses of a year or less in vocational schools supported by federal, state, and local community funds and in innumerable private business, craft, or trade schools.

The third group plans approximately two years of post-high-school education. Some seek liberal arts study in a college or university; others choose terminal-occupational courses in junior colleges, technical institutes, community colleges, or the general colleges of state universities. Still others prefer courses in schools devoted exclusively to their special field of interest, such as schools of design, dramatics, merchandising, industrial technology, music, or nursing.

There are now many opportunities for students from different income levels to obtain the junior college type of education in a variety of fields. Expenses vary from nominal amounts in some publicly supported local institutions to the full cost of instruction and maintenance in a residential private college or university. Regardless of their length college courses have a high prestige value and many students are attracted to them. Here again the extension of opportunities in senior colleges for students with marked ability but limited funds is a goal for the future, and there is more hope of its attainment for members of this group than of the other two.

The fourth group is made up of students who plan definitely to study for a baccalaureate degree at least. Their backgrounds and family attitudes may make this a natural goal, or they may cherish the ambition to achieve new heights. Differences in ability and in economic status affect relative success and rate of progress, but these students are interested only in programs that provide the means of reaching their objective.

Personnel for some occupational areas are drawn from all four groups. Diversified programs are means of both quantitative and distributive supply. A high-school graduate wishing to enter business, for example, is free to choose whether to seek a position requiring no further education and depend entirely upon in-service training and experience for advancement; or take a short course in a vocational school, public or private, to give proficiency in such skills as typewriting, shorthand, accounting, and the operation of business machines; or enroll in a college course that combines general education and vocational preparation. This course may be a two-year terminal one or may offer the

possibility of continued study for a baccalaureate degree, and even for a subsequent advanced degree in a graduate school of business administration. The needs of modern business could certainly not be met by the old apprentice system, in which the store clerk or new office boy began his duties by sweeping the floor and gradually worked himself up to the level of his ability; business itself could not provide the breadth or varied types of education essential for many of its personnel.

In selecting an occupation the student himself, his family, and teachers and counselors are generally concerned that the preparation required be appropriate to the student's ability, interest and ambition, and financial resources. Many strive for goals beyond their capabilities or means and guidance is often far from wise. However, the availability of educational opportunities of the type desired is often a determining factor. It also is a powerful influence with advisers in giving counsel. Students who are "good college material" are steered away from fields in which higher education is lacking, scarce, or not available in the kind of institution preferred. Studies have shown that the most frequent reason for preference is geographical accessibility of the college or university. Others are the presence or absence of religious auspices and whether it is coeducational or not. The relative costs of public and private, or nearby and distant institutions are also considerations. The distribution and extent of educational opportunities, both geographically and according to type, and the expense involved are important elements in determining the numbers of students who enter a particular field.

The fact that the hospital school program has been practically the only route by which workers could enter nursing has largely limited the supply to part of the third group mentioned above. Provisions are now only beginning to be made for in-service training and for short-term vocational programs that may attract desirable young people from the first category and part of the second. The "college-minded" groups interested in either junior or senior college education have been almost entirely excluded as sources of supply. The scarcity and limited distribution of collegiate courses, and public conceptions of nurses' training as a

narrowly applied type of education, involving hard physical work and a preponderance of routine, with little intellectual content or stimulating teaching, have caused many parents and high-school advisers to think that nursing is not a suitable occupation for bright students unless they can afford nothing better. Therefore, students who lacked the ability for college work, or the financial resources, or both, have frequently been the ones for whom nursing was recommended.

On the other hand, able students interested in the field have been discouraged on every side by their relatives, teachers, advisers, and friends. Scholarship aid has occasionally been provided so that they could prepare for some *other* occupational area. Many who are now leaders in the nursing profession were beset with obstacles in their student days and persisted only because of extraordinary strength of purpose. Other uncounted numbers had an initial interest but abandoned it and were lost to nursing because the educational opportunities were unsatisfactory to them and they lacked this powerful motivation and tenacity. The road needs to be straight and clearly marked for young people who are potential assets to the health services. Their abilities should be developed to the fullest extent, instead of being frustrated, retarded, and undernourished.

With the development of college-level programs, the attitudes of parents and high-school advisers toward nursing are gradually changing. Students in all parts of the country have told the writer that they experienced great opposition until the state university, or a college approved by their parents, offered professional preparation in the nursing field.

The college-minded group of women becomes progressively larger and is a source of excellent material for responsible positions in the nursing profession. But, as already indicated, it has hardly begun to be tapped. Only 1.2 per cent of the 720,906 young women in colleges and universities in 1950–1951 were enrolled in nursing programs. It is still true that the majority of college girls do not even think of nursing as a career for themselves. Yet, many are groping for a satisfactory solution to the problem of what to choose. In spite of the current emphasis on

security, a large number of young men and women are idealistic. Counselors of college students will bear witness that many in trying to define their purpose say that they want to work with people and to contribute to the good of humanity—a purpose usually expressed hesitantly but with great sincerity. Popular major studies at present are psychology and sociology, though often students have rather vague ideas of their occupational objectives within the impressive-sounding areas of social and personnel work.

A business executive who had become deeply interested in the need for more thoroughly prepared nurses in the health services recently tested the reaction in his own social milieu. His friends discussed with great enthusiasm the urgency of the need until he raised the question of their own daughters. Then there was a pronounced chilling of the atmosphere.

Adaptation of Education to Nursing Functions

It is difficult to imagine the effects on human progress if improved and diversified means of education adapted to changing needs had not been made available. In some occupations all the workers have advanced because of being given education appropriate to the particular functions to be performed. In other occupations that include a range of activities suited to the interests and abilities of several types of personnel, as in business, and in engineering in the inclusive sense, it is clear that the maximum number properly qualified for their respective roles can be supplied only by educational programs of corresponding kinds and levels. That this is the case in nursing has been the opinion of leaders in the field for many years.

Functional Analyses

As suggested earlier, the concept of closely coordinated team effort involves a clear differentiation of nursing functions and the utilization of personnel with varied qualifications. The movement to arrive at such a differentiation is of great significance in the effort to meet nursing requirements. Every other ameliorative

measure is relatively unimportant compared with the attempt now being made to reassess the various ranges of competence in nursing and to provide adequate preparation for each in an orderly system.

The American Nurses' Association is currently promoting a five-year program of studies of nursing functions, in response to the need for clarification and intelligent planning. This program was instituted by the vote of the Association's House of Delegates in May, 1950, and eight grants for specific studies had been made by February, 1952. Two of these were brief pilot studies, but the others are broad in scope and the results will not be available for some time. The state nurses' associations accepted responsibility for providing funds through assessment of their members. A Technical Committee prepared a *Master Plan for Studies of Nursing Functions in Hospitals* as a general guide, and the same group reviews proposals for individual studies in relation to national aims and research standards. Upon approval of the projects by the Committee, appropriate grants are made by the board of directors of the Association.

The results hoped for may be briefly summarized as follows: specific definition of the duties of various workers; better care of patients and possible saving in the costs of staffing through more effective and economical use of personnel; the establishment of patterns in nursing teams that will challenge the competence of the professional nurse and of each team member and give greater security and satisfaction to all, through an understanding of the complementary roles and the importance of each in the achievement of common purposes; the revision of educational programs to give the best preparation for the work of each group; and the facilitation of recruitment for these programs through a clear differentiation of educational and career opportunities.[1]

The Association also encourages in every hospital analyses of current practices and experiments in organization and in-service education—measures designed to bring about rapid improvements in local situations and to help generally through the pooling of experience. Many hospitals are already studying and revising their own practices.

[1] La Perle, Elizabeth S., "Studies of Nursing Functions," *American Journal of Nursing*, vol. 51, August, 1951, pp. 504–505.

In business and industry job analysis, study of the qualifications and distribution of personnel, and evaluation of results in relation to costs have long been considered essential for the achievement of efficiency. The need for the application of similar principles and techniques in hospital administration is apparent. The use of registered nurses and students for omnibus functions has been extremely uneconomical of their time and skills. Often adventitious circumstances, rather than considered policy, have dictated the use of auxiliary personnel. Practices have been inconsistent, as is instanced by exacting nursing procedures performed in men's wards by orderlies and attendants with very limited training, though the same types of procedures are rigorously restricted to graduate nurses and advanced students in other parts of the hospital.

Tentative Differentiation of Functional Areas

Precise definition of duties within each functional area and of the education best adapted to prepare each group should be based on these studies, on carefully controlled experimentation and evaluation, and on subsequent agreement upon valid criteria. However, the pressures of immediate demand permit no delay and many steps have already been taken. A Joint Nursing Curriculum Conference of the six national nursing organizations has formulated a description of the general ranges within the nursing spectrum that require different types of education, and current developments are along the lines suggested.

Some preliminary explanation seems needed here as to why this classification, now obviously so desirable, was not made long ago. The conception of nursing as an all-inclusive, indivisible function of doing everything for the welfare of patients stems from the circumstances under which the earliest training programs were established. The groups of public-spirited women who organized them attempted to meet the opposition that had arisen to the replacement of servant nurses by workers systematically prepared for nursing. They persuaded hospital authorities to let

them demonstrate the efficacy of their proposed system, whereby the staff and students would assume the entire responsibility for certain wards, including all the household work as well as the care of patients. The plan proved so advantageous to hospitals that it was generally adopted. From that time until shortages of personnel and increased demands for nursing skills began to focus attention upon the wastefulness of the system, nursing included everything from the simplest and heaviest housekeeping tasks to the most exacting nursing functions.

This traditional pattern has had many adverse effects. Perhaps the most harmful has been the association in the public mind of predominantly manual work with nursing, which continues to obscure understanding of its many scientific and highly skilled aspects and of the need for higher education for some of the group. But the adjustment of nurses to this situation, expressed in a fine philosophy of service that emphasizes the dignity and worth of anything done for the comfort and well-being of the sick, has somewhat offset this adverse effect. The inner conviction of the humanitarian value of their calling in its every aspect has been instilled into the minds of thousands of young women, and has contributed largely to staffing the nation's health services.

Pride in their profession has, however, led to the feeling on the part of many nurses that only they were capable of performing satisfactorily the diverse functions that custom had assigned them. This idea of inseparability has operated against the advancement of the profession as its scope widened. It has interfered until recently with the acceptance of other personnel as co-workers, whose effective preparation and functioning are a vital concern of the nursing profession if its social responsibility is to be interpreted as providing for all-inclusive nursing care.

Reluctance to admit that others are just as capable of doing some things as we is a common human frailty. The mother who hesitated to entrust her daughter with the perfect timing of a baked potato, the doctor who discounted the ability of a mere nurse to read a thermometer, the nurse who questioned whether a maid could ever be taught to make a hospital bed properly, or the one who even now insists on administering a medication, if

only an aspirin tablet, doubtless suggest to the reader comparable tendencies in himself. Everyone wishes to be needed, but the importance of lesser responsibilities is likely to be exaggerated only when larger ones are lacking or cannot be assumed. The present scope of nursing is so great that the need to delegate responsibilities is indisputable.

Another result of the idea that nursing is one and the same, from giving a bed bath to directing a school of nursing, has been the retardation of the progress of collegiate schools. The assumption that the services performed did not vary, regardless of the worker's preparation for her job, has contradicted the assertion that higher education was essential for nursing. Also, the conception that all nurses should have the same training implied that if some required collegiate programs all nursing education should be raised to that level. It was manifestly impossible for sufficient numbers to be supplied by this means, and resistance to the proposal had validity. The converse argument, however, was unsound; namely, that because higher education was neither practical nor necessary for all nursing personnel, it was not required for teachers, administrators, and other specialists in the field. Owing to the fact that these advanced functions and preparation for them have not been clearly differentiated, nurses themselves in some instances have failed to support the collegiate schools they sought so earnestly to secure by not directing to them students who were potential candidates for such education and subsequent positions of responsibility. The fallacy that although college education is an asset training in the local hospital school is just as good, has led to great confusion. It has perpetuated the impression that nursing consists largely in technical skills and has helped to delay the establishment of nursing on the upper-division level in colleges and universities on an equal basis with other professional education.

The present movement to differentiate ranges of functions and the types of education appropriate for each should clarify the situation. It offers an answer to the imperative question of supply through a distribution of educational means suitable both to the sources of personnel and to the functions to be performed. If in

practice true democracy is maintained, the nursing team will perpetuate the unity of nursing in its single purpose of all-inclusive care for patients. However, functions will be distributed among several contributors instead of being concentrated in one person.

Among the multifarious activities traditionally included in the work of a nurse, five distinct groups have been generally recognized: (1) nonnursing activities, (2) simple nursing tasks, (3) practical nurse functions, (4) general staff-level nursing, and (5) advanced specialized responsibilities.

Nonnursing Activities. The first nonnursing function from which nurses and nursing students were freed was the heavier cleaning work, which was obviously a misuse of their time, strength, and ability. Now many activities are recognized as more appropriate for workers other than nurses, whose entire time and energy are urgently needed for the actual care of patients. In the interests of efficiency and the best use of limited nursepower, most hospitals are employing qualified laymen. The number and specific functions of these employees vary with the size, kind, and organization of the hospitals and the procurable personnel, but they include receptionists, messengers, ward clerks, and additions to the housekeeping and dietary staffs. The ward clerk has proved particularly helpful. A study made at Catholic University of America revealed that, in a division of 30 beds where there was no ward clerk, the head nurse spent 37.8 per cent of her time in specific clerical activities and each professional nurse 3.1 per cent. The employment of a ward clerk reduced these percentages to 6 and 0.9 per cent respectively.[1] A recent innovation in some large hospitals is the employment of floor managers to relieve the supervisors of nursing services of many purely administrative nonnursing responsibilities.

Simple Nursing Tasks. Within the area of more direct services to patients many simple nursing functions can be satisfactorily performed by auxiliary workers with only in-service training, as indicated earlier. The nature of these functions will be understood from the following enumeration. This list is being used in the

[1] Bredenberg, Viola C., "Experimental Research in Nursing Service," *American Journal of Nursing*, vol. 50, October, 1950, pp. 661–664.

Michael Reese Hospital in Chicago to designate the duties that "may be performed for selected patients by nurses' assistants," after a fifteen-hour course of lectures, demonstrations, return demonstrations, and supervised practice. In general, "the purpose of this group is to assist graduate nurses with the care of the mildly ill, and to assist in maintaining a clean, orderly, and safe environment for hospital patients."

Care of patients' surroundings

Make empty beds
Make "anesthetic" beds
Keep bedside tables clean and in order
Clean beds and bedside tables after discharge of patients
Make beds and prepare units for admission of patients
Receive, sign for, and deliver flowers and packages to patients
Care for flowers as needed
Deliver mail to patients
Wash and refill water glasses and pitchers
Perform housekeeping duties in utility, dressing, and linen rooms; care for supply cupboards
Assist in keeping wards or rooms in order

Care of patients

Give baths
Give morning and evening care
Make beds of convalescent patients
Prepare patients for meals and feed them
Carry and collect trays during the serving of meals as needed
Get patient up in chair, assist him in dressing, walking, and so forth
On discharge of ward patients, take chart, discharge book, and patient to . . . [the designated office]
Pass and collect bedpans for patients except . . . [under special circumstances]
Perform general messenger service
Answer lights to ascertain patients' needs. . . .

Care of equipment and supplies

Clean, set up, and put away unsterile trays and enamelware
Care for rubber goods
Assist in putting away supplies
Assist in preparing supplies for sterilization
Fill ice caps, collars, and nasal bags[1]

[1] Lorentz, Mildred, "A Progress Report on Nurses' Assistants," *American Journal of Nursing*, vol. 51, May, 1951, pp. 304–306.

There is a second training program for selected individuals among these nurses' assistants to qualify them for somewhat more exacting responsibilities, such as collecting and labeling specimens for diagnostic tests, taking temperatures, giving simple types of irrigations, helping to care for patients in isolation with proper isolation techniques, caring for certain equipment, assisting with the reception and admission of new patients.

No uniformity exists at present among hospitals in the categories of auxiliary workers employed, the names which are used to describe them, or the range of duties assigned. However, this list is probably representative of practices in well-staffed general hospitals. In hospitals of special types, such as mental or chronic disease institutions, the duties naturally vary in kind and extent.

Practical Nurse Functions. The definition of a practical nurse, as formulated by a joint committee of the national organizations of both registered and practical nurses, is as follows:

> The practical nurse is a person trained to care for selected convalescent, subacutely and chronically ill patients, and to assist the professional nurse in a team relationship, especially in the care of those more acutely ill. She provides nursing service in institutions, and in private homes where she is prepared to give household assistance when necessary. She may be employed by a private individual, a hospital, or a health agency. A practical nurse works only under the direct orders of a licensed physician or the supervision of a registered . . . nurse.[1]

Preparation consists of a vocational course, usually a year in length in a vocational or trade school in the public school system with supervised practice in a hospital, or in a hospital-controlled program. Existing programs vary widely in effectiveness, in some cases producing results little better than in-service training, in others almost simulating a limited diploma course.

General Staff-Level Nursing. The functions of a registered nurse are those generally expected of the hospital school graduate in a first-level position, the so-called "bedside nurse." The wide variations in standards and facilities in hospital schools and in

[1] *Practical Nurses in Nursing Services.* American Nurses' Association, New York, 1951, p. 11.

minimum requirements for licensure in different states mean great discrepancies in competence. In very general terms, allowing for these differences in degree, the aspects of nursing in which this group should be skilled, as accepted by the Joint Nursing Curriculum Conference, are as follows:

> . . . the necessary manual skills; sufficient understanding of human behavior upon which to establish a good relationship with the patient under care and with other members of the institution who are involved; knowledge of the immediate effect of treatment and prevention of infection; ability to know the limits of their competence and the value of supervision and consultation.[1]

Preparation is given almost entirely in hospital schools, though a few programs exist in junior colleges.

At present the borderlines of this range of functions are indefinite. The best hospital schools excel some collegiate nursing programs. Like terminal programs in other fields, they are satisfactory in proportion to their quality as preparation for a large and vitally important area. However, they require supplementation both in general education and in nursing courses, involving time and expense, for those who wish to qualify for a degree and for graduate specialization preparing for advanced positions.

The Conference agreed that an increasingly large group of nurses are needed to take responsibility for leadership of the nursing team. Their preparation should qualify them to give expert technical care, and contribute to prevention of disease and promotion of physical and mental health through supportive care and health teaching. Basic education for these functions should be given in senior colleges or universities through an integrated program that includes general, profession-related, and professional courses combining theoretical and technical aspects, classroom and clinical teaching, and that leads to a baccalaureate degree in nursing.

Advanced Specialized Responsibilities. Selected nurses from those prepared in baccalaureate programs, upon completion of graduate study in the area of specialization in a university having rich

[1] *Curriculum Bulletin No. 2.* National League of Nursing Education, New York, 1951, p. 25.

medical and community resources, would be candidates for advanced responsibilities as specialists in various nursing services, consultants, teachers, supervisors, administrators, research workers, and writers.

Education of this kind and the opportunities for which it prepares will undoubtedly attract larger numbers from among college-minded young people as integrated collegiate programs are established and strengthened, and the responsibilities of the truly professional nurse more clearly understood, with a concomitant increase of dignity and prestige. Team leadership in the total care of patients to promote their physical, mental, and spiritual well-being, recovery, and rehabilitation is very different from the popular conceptions of a nurse's functions, which are not based on a correct understanding of developments in the health field. The exacting and stimulating responsibilities of supervision, administration, teaching, and research are as challenging to ability and initiative in nursing as in any other profession. The satisfactions of valuable service to humanity add immeasurably to the interest of the work.

Maximum Supply Dependent on Successful Adaptation

If the critical demand of the health services for large numbers of well-qualified nursing personnel is to be met, all available sources of supply will have to be used to the fullest advantage. Foregoing pages indicate that the only means of accomplishing this purpose is the provision of educational opportunities that are suited to the various types of potential workers and effective in developing the required competence for the kinds of work necessary. A further essential is public understanding of these differentiated opportunities and guidance of prospective students which will promote intelligent choice and reduce waste. The proportionate numbers of personnel in each category are yet to be determined and will differ in individual institutions, agencies, and fields of service. The precise kinds of educational programs most desirable to prepare for the general nursing functions of practical and registered nurses are also subject to the findings of

the functional analyses and experimentation with existing or newly developed plans. There is, however, no question of the need for better provisions on the college level, in quantity, quality, and distribution.

The most immediate and important demand for the maintenance and improvement of the health services is for larger numbers of better-qualified personnel for the highest range of functions. None of the programs on any level can be successful without competent teachers. No institution or agency can be efficiently organized and managed to provide good nursing care without well-qualified supervisory and administrative staffs. The unavoidable conclusion from the consideration in this section of educational opportunities in relation to sources of supply is that the most vital area where there is the most imperative demand has been most neglected. The ineffectiveness of the existing system of nursing education in supplying the special competence needed for such positions has long been recognized as the greatest weakness in the field.

As long ago as 1923 the Goldmark Report,[1] the first conspicuous landmark in the evaluation and improvement of nursing education, stated that a fundamental need was the development and strengthening of university schools, particularly to attract better-endowed candidates and to provide strong foundations for their prospective functions. Yet, the proportion of nurses having such preparation has continued to be very inadequate to the demand. Following chapters will discuss the present conditions in degree programs.

The lack of support for, if not active resistance to, collegiate education for nursing on the part of some physicians and hospital administrators has apparently been partly due to a misconception. They have thought of it presumably as drawing on the supply of students who would otherwise attend hospital schools, and as thus increasing the duration and the cost of nursing education while reducing the amount of student service. It is true that some of the candidates for collegiate programs would come from this

[1] *Nursing and Nursing Education in the United States:* Report of the Committee on the Study of Nursing Education. Prepared by Josephine Goldmark. Macmillan Co., New York, 1923.

source. Those with sufficient ability and career motivation who could afford a college education would undoubtedly be attracted by the greater opportunities. It is also probable that fewer of them would be disillusioned and lost to nursing. It would be highly advantageous for the hospitals to have them prepared as quickly and thoroughly as possible for advanced responsibilities. Some of the very people who object to collegiate programs complain of the lack of well-prepared candidates for supervisory and administrative nursing positions. Moreover, the possibility of developing an additional, new source of supply among college women who would not be interested in nursing unless it were established on a collegiate and professional level has been disregarded. It is already late in the day because so many other fields open to women have achieved status in higher education and the adverse comparisons of nursing with them have created attitudes that are difficult to alter. Unqualified support from these powerful groups could, however, accomplish a great deal.

Financial Policies in Relation to Educational Objectives

As in most movements for social betterment, economic issues are involved in the struggle to improve nursing education. Agreements concerning the need for, and methods of, amelioration are futile unless financial policies and provisions implement action.

In nursing, great confusion exists with regard to allocation of responsibility, not only for organizing and conducting educational programs but also for financing them. Preparation of young people for other occupations and simultaneously for maturity and citizenship is unquestioningly considered the responsibility of educational institutions. As has been seen, the nationwide system of education in public and private schools, colleges, and universities dedicated solely to this purpose offers breadth and diversity of opportunity and guidance to students in the wise choice of the institution, course, and career objective appropriate to the interests and abilities of each. Society supports this education to promote individual and social welfare and progress.

The accepted principle in business, industry, and employing agencies of all kinds is that their responsibility begins where formal preliminary education ends. In-service training, organized and paid for by an employing agency, is legitimately limited to specific preparation for its own purposes, and returns from employees are expected to compensate for training. In nursing, circumstances have led to misunderstanding and the public has failed to provide preliminary academic and vocational preparation for this group of students through regular educational channels as it has for every other.

The hospital school has so long been considered the *only* agency for the preparation of nurses that deeply rooted and widespread attitudes interfere with application to nursing of educational and fiscal policies that are taken for granted as valid and necessary in every other field.

Strangely contradictory and illogical ideas such as the following are generally accepted:

1. Education for nursing costs students little or nothing, yet prepares them for professional careers.
2. Although the public pays a large part of the cost of educating secretaries, mechanics, dietitians, artists, and innumerable others, education for nursing is not thought to require financial support from the general public. Yet, it is expected to provide large numbers of qualified personnel for a service essential to society.
3. Preparation for nursing, unlike that for other occupations, does not require extensive educational resources and instructors thoroughly prepared for teaching their respective subjects and employed for that exclusive purpose. This training is, however, expected to equip personnel with enough knowledge, skill, understanding, and judgment to give comprehensive nursing care to people of all kinds and ages at times of physical and emotional crisis, to administer and supervise nursing services, to teach future nurses, and contribute to research in the health field.
4. Student service is essential to hospitals and should not be reduced by educational demands, but nurses should be better prepared for their functions as graduates.
5. Hospitals cannot be expected to give students more education than they pay for in fees and service, since doing so would in-

crease costs of patient care. However, no other source of support is provided.

6. In spite of these educational and financial limitations, hospital schools of nursing should produce enough well-qualified graduates to staff all hospitals, other health agencies, and provide for public needs and defense demands.

Who does pay for nursing education?

The problem has been stated repeatedly but perhaps nowhere more succinctly than by M. Adelaide Nutting[1]:

> The crux of the whole situation seems to lie here—education when worth anything is costly, and no scheme of education that will fitly prepare women [or young men] for the extraordinarily varied demands in nursing can be carried on without expense. The hospital knows this, but cannot meet it. Society has so far not recognized it; while requiring much of the nurse . . . it has left the entire task of educating nurses to the hospital, unmindful of the fact that the hospital is not founded for such work primarily and that it cannot incorporate into its own great scheme of activities another scheme equally great but entirely different in purpose and requiring special conditions and a special government.

With the unavoidable allocation of more staff and student time to educational purposes and with the rising costs of maintenance, costs to hospitals of maintaining schools of nursing have multiplied. Student fees have been introduced or increased, and stipends, formerly paid as a means of recruiting students, have been in most instances reduced or eliminated. Some hospitals, however, particularly those having little prestige, unattractive working conditions, or poor schools, have continued to offer financial inducements to prospective students. In doing so they seem not to realize that such inducements may have a negative effect financially as well as in other ways. Girls having no special interest or ability in nursing may be attracted by stipends, but such recruitment is likely to produce a high rate of early withdrawals when students fail or are disillusioned by the discovery that they are paying heavily in work for little education and small compensation.

[1] *Educational Status of Nursing*. United States Bureau of Education, Bulletin No. 7, Washington, 1912, pp. 50–51.

In the better hospital schools, the educational content and the amount and quality of teaching and supervision have been so greatly extended that the cost tends to exceed the value of student service and thus becomes a drain upon hospital funds. A recent study of costs in one such school revealed that the annual expense per student was at least $700 beyond what was considered the value of student service. As a result of this development organizations operating hospital insurance plans protest the inclusion of nursing education in hospital expenses as an unfair charge upon patients and an unwarranted item in insurance rates.

Schools of nursing dependent upon voluntary hospitals receive their support almost entirely from students—in tuition and work—or from patient fees. If general hospital funds are used for the school, they must be diverted from uses beneficial to patients in facilities, staffing, administration, and so forth. It is true that patients benefit indirectly from a good school through the improved quality of nursing care. Also, the cost if distributed among the total number of patients may amount to relatively little per day. The estimate in one hospital was 50 cents. However, as in all other expenses for illness, the paying patient bears the brunt and the middle-income group is the hardest hit. It is doubtful whether the use of funds contributed for service purposes or derived from patient fees is legitimate without the consent of donors or patients. The practice amounts to a hidden tax on paying hospital patients for educating nurses for all the health services.

In publicly supported hospitals the profit or loss from a school of nursing affects the taxpayer in the governmental unit through which the support comes—city, county, state, or nation. These tax funds, like private donations and fees, are supposedly for health services, not education. If the value of students' service to the hospital is greater than the cost of their education, they are helping to provide hospitalization for nonpaying patients.

In contrast to this situation, the support given students in institutions of higher education, public and private, should be considered. They are beneficiaries of support from gifts, endowments, and tax funds designated for the purpose to the extent of

about 65 per cent of the cost of their education.[1] Hospital schools of nursing received in 1949 only 4 per cent of their income from the same sources.[2]

Undoubtedly the greatest cause of confusion concerning the financing of nursing education has been that the costs have been concealed in the mixed purposes of hospital schools. The relative proportion of education and of mere expenditure of time and labor has been obscured for the student because her service, no matter how extended beyond the learning stage, is considered practice. The ironical fact is that, since the length of the program is three years, regardless of the amount of teaching and content, the less a student's time is used for her education, the more she pays in service.

To patients, to contributors to hospital funds, and even in many cases to hospital administrators and trustees themselves, the cost of the school is unknown, because it is undifferentiated from other expenses for nursing services and the true division of staff and student time is undetermined. Accurate cost accounting is still generally lacking, and even when data are available, opinions differ with regard to their interpretation. In one school students' time was credited at the rate of 30 cents an hour and their maintenance was charged at $150 a month, with the result that the books showed a large deficit. In another, the total expense of the school was divided by student hours on the wards, and their time was valued at the resulting rate, 68 to 70 cents per hour; in this way a perfect balance was struck.

Of great significance is the question concerning the relation of the profit or loss for individual hospitals in operating schools of nursing to the critical need of all the health services and the public for well-prepared, thoroughly competent nursing personnel. The incongruous results of the present system are as follows:

1. The more inclusive and satisfactory nursing education is in preparing nurses to serve the public need, the more it costs the comparatively few hospitals having excellent schools, with patients or contributors bearing the burden.

2. The less extensive and valuable nursing education is, with resulting incompetence of the graduates and failure to contribute to the public welfare, the more the hospitals with poor schools profit at the expense of students, their future employers, and the patients dependent on their skills.

3. The longer a program in nursing is in proportion to the amount of education, the greater is the gain in unpaid service to individual hospitals but the greater the loss in the number and quality of graduates available for all the nursing services.

[1] Computed from Table 1 of *Finances in Higher Education:* Statistical Summary for 1949–50 by Maude Farr. Office of Education, Circular 332, Washington, 1951.

[2] West, Margaret, and Christy Hawkins, *Nursing Schools at the Mid-Century.* National Committee for the Improvement of Nursing Services, New York, 1950, Table 29, p. 50.

In other words, prevalent economic policies and allocation of responsibility to hospitals for nursing education *discourage* concentration of attention on training designed to produce maximum competence and maximum numbers. No matter how much hospital authorities desire to improve their schools, they are thwarted by the lack of funds available for that purpose and their primary obligation to provide service at as low a cost as possible.

Many developments seem to give grounds for greater hope of basic reorganization than was previously tenable. Demands for more competent personnel to meet present demands in nursing services are coming from physicians, hospital administrators, and the public. Recognition is spreading of the impossibility of supplying such demands from one limited group of prospective students prepared by one limited type of education. Auxiliary workers are now employed for many routine tasks, the performance of which has constituted a large part of student training and student usefulness to hospitals. The obligatory increase in costs is leading more and more hospital authorities to view schools of nursing as potential, if not present, liabilities rather than assets in hospital economy. Meanwhile, the shortage of nurse instructors has necessitated some utilization of the resources of educational institutions, while expanding knowledge of the "nursing situation" has awakened representatives of higher education to an awareness of how little the colleges and universities have done for the development of the nursing profession.

Few colleges or universities, however, have assumed full financial responsibility. Even publicly supported community colleges that offer free or low-cost education in many subjects, employ specialists in each field as teachers, and often provide expensive facilities, do not regard as their obligation the employment of faculty members for teaching courses in nursing and supervising the necessary clinical practice. They expect hospitals to supply the nursing portion of the program.

In one state university visited by the writer students in nursing were receiving preprofessional education on the same basis as other university students, but were sent to a local hospital to share nursing education with diploma students on the familiar terms of earning their way. The vice-president of the university said that it had not occurred to him until it was pointed out in the discussion that these students were being deprived of their fair share of state-supported education, because the university was not providing faculty and facilities for their major courses, the most expensive part of every student's education. Even in some state universities having medical centers of their own, nursing education is included in the hospital rather than the educational budget. Religious bodies that support both educational institutions and hospitals follow identical practices. The implication in all these instances is that the nursing student is considered a part of hospital service rather than the focus of an educational program.

Are not the educational and financial policies that are generally accepted in higher education equally applicable to nursing? These assume variations in ability to pay and divide educational expense between students, who are the direct beneficiaries of the education, and society, which benefits indirectly through their competence and adult contributions as individuals, workers, and citizens. Costs to students vary with the proportion of public or private support in different types of institutions. Financial aid is provided on the basis of ability, achievement, and need in the form of scholarships, grants-in-aid, loans, and opportunities for *voluntary* employment. Nursing education, unlike any other kind of education, involves obligatory employment regardless of need.

Why should society as a whole not contribute to the preparation of students for this occupation through the system of education it supports for providing general, vocational, semiprofessional, and professional training in many fields? Why should families who have the means not pay for their children's education for nursing on the same terms as in other areas?

There is growing evidence that many persons would regard nursing as more suitable for their children if nursing education were put on an equal tuition basis with other curricula; if educational goals were clarified; and if nursing students shared equally in the campus life and the resources of the institution. In one university whose school of nursing has been established with policies and standards largely comparable to those of other departments, nursing faculty members teach courses and supervise student practice in several associated hospitals. However, until recently the hospitals contributed to the maintenance of students in return for service rendered in the course of practice. Because of rising costs some of these hospitals announced that they could no longer continue this policy. Interestingly enough, apprehensions of protest or withdrawals proved groundless. One father said: "I have sent two other daughters to college and paid for their meals. Why shouldn't I do the same for my youngest girl who wishes to be a nurse?"

If financial policies were adopted in nursing education that prevail in institutions of higher education, the following principles would obtain:

1. Students would pay the same amount for tuition and, if resident, for maintenance, and would receive the same advantages as students in other departments or schools of the institution. Financial aid, if needed, would be made available to them as to other students.
2. Colleges and universities would provide instruction by qualified and regularly appointed faculty members in nursing as in all other subjects, including theoretical and clinical teaching, and supervision of practice.
3. Colleges and universities would provide or procure facilities for clinical and field work experience without cost to the hospital or agency for the instruction or maintenance of students.

Funds for the establishment and maintenance of departments of nursing as for others would be provided by tuition charges and by appropriations from legislative bodies, endowments, grants from foundations, contributions to educational institutions from organizations, religious bodies, and alumni and friends. If opportunities were widely distributed, particularly in publicly supported junior and senior colleges, prospective students could choose the type of institution and the program on the basis of comparative costs and advantages. Information would be available concerning the levels of achievement and the kinds of career opportunities to be expected upon the completion of courses of different lengths. Educational guidance could be given by counselors in secondary schools as is the case with regard to preparation for other fields. Thus, young people interested in nursing would have an equality of opportunity in a diversity of publicly aided education they have previously lacked. As stated in the report of the President's Commission on Higher Education, "Equal opportunity for education does not mean equal or identical education for all individuals. It means, rather, that education at all levels shall be available equally to every qualified person."[1] Such equality of opportunity is lacking for prospective nurses.

Scholarship aid for *all* nursing students regardless of ability to pay for their education seems no more justified than for any other group. However, the fact that a large proportion of recruits for nursing have always come from among those who could not afford a college education means that more assistance than has customarily been provided, except for the teaching profession, would probably be necessary to encourage sufficient numbers to enter collegiate schools of nursing. The social importance of the occupation would probably be an incentive to individual donors and community groups to help promising students having insufficient resources to finance their education, if the public could be disabused of the false idea that good education in nursing, unlike any other, can be secured without cost.

[1] *Higher Education for American Democracy.* Harper and Bros., New York, 1947, vol. 2, p. 3.

If hospitals were freed from the expense of providing the formal preliminary education of nurses, they could furnish excellent facilities for the supervised practice of students. According to the testimony of authorities where such arrangements exist, clinical teaching programs are stimulating to the whole nursing staff and contribute in many ways to better care of patients. Moreover, if the time of service personnel did not have to be allocated to teaching and supervising students, appropriate in-service training for employees on all levels could be increased, with considerable heightening of efficiency as a probable result. The problem of interesting prospective nurses in working in small hospitals or health agencies in rural areas might be met through offering field experience in such places after clinical preparation in larger centers. Experiments of this kind are producing gratifying results.

Under a system planned, supported, and conducted solely for educational purposes, faculties could concentrate upon improving methods, content, and organization of curricula and thus increase the competence of graduates for the nursing services. The end result of supplying all health agencies more quickly with larger numbers of better-qualified nursing personnel would certainly seem to justify public support such as that given to other types of education.

The organization and adequate financing of sound curricula are problems to be faced by individual institutions and by states and communities supporting higher education and needing well-prepared nurses. Progress is being made as will be demonstrated in the following chapters where types of existing programs in colleges and universities are described and educational policies discussed.

4

Baccalaureate Curricula and the Qualitative Demand

PRECEDING pages have emphasized the urgency of supplying the demand for a greatly increased number of nurses who have had the kind and quality of education now considered requisite for the clinical specialties, public health nursing, supervision, administration, teaching, research, writing, and the staffing of professional organizations and planning agencies. The growing interest of colleges and universities in providing nursing education that will facilitate the enlargement of this group is encouraging.

However, the response following recognition of the need has not always been accompanied by thorough study of the nature of the responsibility assumed and of the appropriate educational and social objectives. As a consequence programs that have been established vary widely in effectiveness. Many collegiate institutions having nursing programs fail to maintain for students in nursing the same policies and standards as for those in other professional curricula leading to a baccalaureate degree. In spite of the greater resources of institutions of higher education, the preparation for nursing in some degree programs is inferior to that in some hospital schools. Such courses cannot provide the foundation necessary for the most skilled staff nursing and leadership of the nursing team, or for graduate specialization and advancement into positions of responsibility, where the most serious qualitative shortages of nursing personnel exist.

General Policies in Higher Education

There is urgent need for clear understanding of the specific commitments involved in undertaking responsibility for a program leading to a baccalaureate degree in nursing. The purpose for which higher education is sought is to heighten the qualifications of candidates for professional functions. *This purpose is defeated unless policies applied to nursing are consistent with general standards of colleges and universities, nursing students receive the benefits of genuine college education, and nursing degrees are authentically representative of the completion of an upper-division major in the degree-granting institution.*

The necessity for the application of these principles seems self-evident. A university would scarcely establish a degree program in engineering, art, business, or music in which it sent students for their major subject to a noncollegiate school. In nursing programs, however, deviations from generally accepted collegiate policies are prevalent and many nurses fail to understand what is involved in elevating education of the post-high-school diploma type to the senior college level justifying a degree. A summary of some fundamental principles in higher education therefore seems necessary as a basis for the ensuing discussion of existing types of degree programs in nursing.

Faculty Standards and Policies. Since the level of any educational program is determined by the level of the teaching, the very term "higher education" implies the qualification of faculty members for college-level instruction. The faculty is the agency through which the institution fulfills its responsibility to students, their future employers, and the public for maintaining standards consistent with its professed purposes and established reputation. The scale of ranks and salaries, applying equally to comparable units, indicates relative status based on advanced education, experience, achievement, and contribution. The faculty, including members in all units, is a group of colleagues working together for common purposes, sharing in making and carrying out policies of the institution, and directly responsible to its administrative authorities and to one another. The system of grades, credits, and degrees presumes a responsibility on the part of every member of

the faculty to maintain the standards of the institution by teaching appropriate to the level of his courses and by evaluating student progress and worthiness for credits and degrees in terms of these standards. The establishment of any field of study as an educational unit of a college or university cannot be consistent with the integrity of higher education unless the faculty members in that unit are employed by the institution on an equal basis with those in other units and share equally all responsibilities and benefits of faculty members.

In a field previously excluded from the advantages of higher education, the development of personnel qualified for membership on college and university faculties is a difficult process. Individuals have to seek education in other departments and utilize it as best they can to develop teaching methods and content of collegiate level in their own subject. Advanced degrees are unattainable in a specialized area until it becomes a part of higher education. Yet, the establishment of a new professional curriculum on an equal basis with other curricula of the university or college depends on equal standards for the faculty and for their courses. This has been necessary in every field in which higher education has assumed responsibility. The slow and limited provision of educational opportunities in nursing has delayed development, but it is now accelerating and sound standards for baccalaureate and advanced degrees are gradually being established. Results will depend upon the consistency with which institutions assuming responsibility for programs apply the same standards with respect to faculty qualifications, curricular offerings, and degree requirements in this field as in others. Since a college or university is the aggregate of its parts, the standards and policies in each part are properly the concern of the whole institution.

Another important principle affecting the sound development of an educational unit is that its organization should be comparable to that of other similar units. In colleges the general pattern of organization is departments with heads or chairmen; in universities the major units are schools or colleges with directors or deans as administrative heads. Units may be grouped in a division, but if one is subordinated to another it loses equal

representation in the counsels affecting all units and equal opportunity to share resources and to advance its own interests. In one university, which is unfortunately not unique in the attitude indicated by the arrangement, programs in nursing have been set up in three different units: the school of education, the college of liberal arts, and the school of medicine. With such organization the interests of education in nursing are split and subordinated to interests essentially different. Under such circumstances there is no possibility of attaining the coordination needed to foster sound development.

Standards for Credits and Degrees. Any institution of higher learning that purports to prepare students for a profession on the baccalaureate level, which should also lay the groundwork for graduate study, provides both general education and a major curriculum in the field of concentration. The major sequence is the core of the program and requirements in both major courses and contributory subjects are designed to produce competence for the profession. As a guarantee of maintaining standards various administrative devices are used. One of these is the requirement of a specified minimum proportion of upper-division work, usually one-third, including a substantial amount of advanced work in the major.

Resident study in the degree-granting institution for at least the senior year is another standard requirement so that the faculty may judge directly whether the student qualifies for the baccalaureate. An exception is made in some institutions for students who complete the third year in residence and then enter a professional school, generally of law or medicine, requiring three college years for admission. Under such circumstances the college accepts the first year of professional preparation as the equivalent of a final year in its curriculum. As for transfer credits, institutions of higher learning will generally honor only those from colleges or universities of equal status, although an occasional student is admitted on the basis of a qualifying examination with continuance conditional upon satisfactory work.

Provision of Educational Facilities. A further essential to the fulfillment of responsibility for a sound program is the provision of

adequate facilities. An examination of any university or college catalogue reveals great variety in type of buildings and equipment, corresponding to the courses offered in the curriculum of the institution. These may include, in addition to classrooms and faculty offices: libraries and museums, laboratories, observatories, art and music studios; theaters; gymnasiums, playing fields, stadiums, and summer camps for physical education; practice houses and nursery schools for home economics; experimental schools for education; farms for agriculture; shops, drafting and design rooms for engineering; hospitals and clinics for medicine and dentistry. All these are controlled by the educational institution primarily for educational purposes, though some of them may serve other purposes also, as in the case of schools, hospitals, and research laboratories.

Even the collegiate school of nursing, however, is often regarded as a facility for the primary purpose of servicing the hospital. Too often it is not looked upon as an integral part of the university, sharing equally with other units in the use of the university's resources and facilities. Significant evidence of this difference in attitude affecting the school of nursing is the fact previously mentioned that the budget for nursing education is so often part of the hospital budget, frequently without clear differentiation from nursing service, rather than part of the educational budget of the university.

Provisions for Student Welfare. Colleges and universities generally consider provisions for the welfare and all-round development of students an essential part of their responsibility. Such provisions include guidance and health services, suitable housing, social and cultural opportunities, and facilities for extracurricular activities. The concept of equal opportunity assumes that all students should share equally in these advantages, as well as in educational benefits.

Nursing students have in many instances received less than a normal share. Even when the clinical facilities for the nursing program are on the university campus or readily accessible, segregation in a nurses' residence is usual, with the result that the nursing students are deprived of contact with the diverse interests which for other students contribute so largely to both educational and social values of college life. Exclusion from the general residences for women and sorority houses often sets these students apart socially and limits their opportunities in student activities. This practice is sometimes based only on an outworn tradition, or is due to the existence of a building adjacent to the hospital in which classrooms and student housing are combined, an arrangement undesirable for both and different from that in any other department. Remedying this situation would do much to make the nursing group an integral part of the educational community with a due share in its advantages.

When the clinical facilities are separated geographically from the main campus, the provision of services and facilities as nearly comparable as possible seems necessary if the institution regards the fulfillment of this responsibility as an obligation to all students alike. Such provisions are often lacking or very inadequate, except for health services. Unfavorable social conditions loom large in the minds of students and their families and have deterred many with potential interest from entering the field of nursing.

The policies of making available the same or comparable educational facilities and provisions for student welfare for nursing as for other students involves expense. Radical change in the allocation of financial responsibility for nursing education is essential if the inequities discussed in the preceding chapter are to be remedied.

Patterns of Degree Curricula

The chart on page 102 differentiates four patterns of organization of undergraduate degree programs in nursing in the United States as observed by the writer in requested visits to more than eighty colleges and universities during the years 1950 and 1951. The National Nursing Accrediting Service corroborates the view that all the basic programs for which colleges and universities in this country are now granting baccalaureate degrees in nursing or with a major in nursing belong to one of these general types. The following sections summarize the principal characteristics of each type of program.

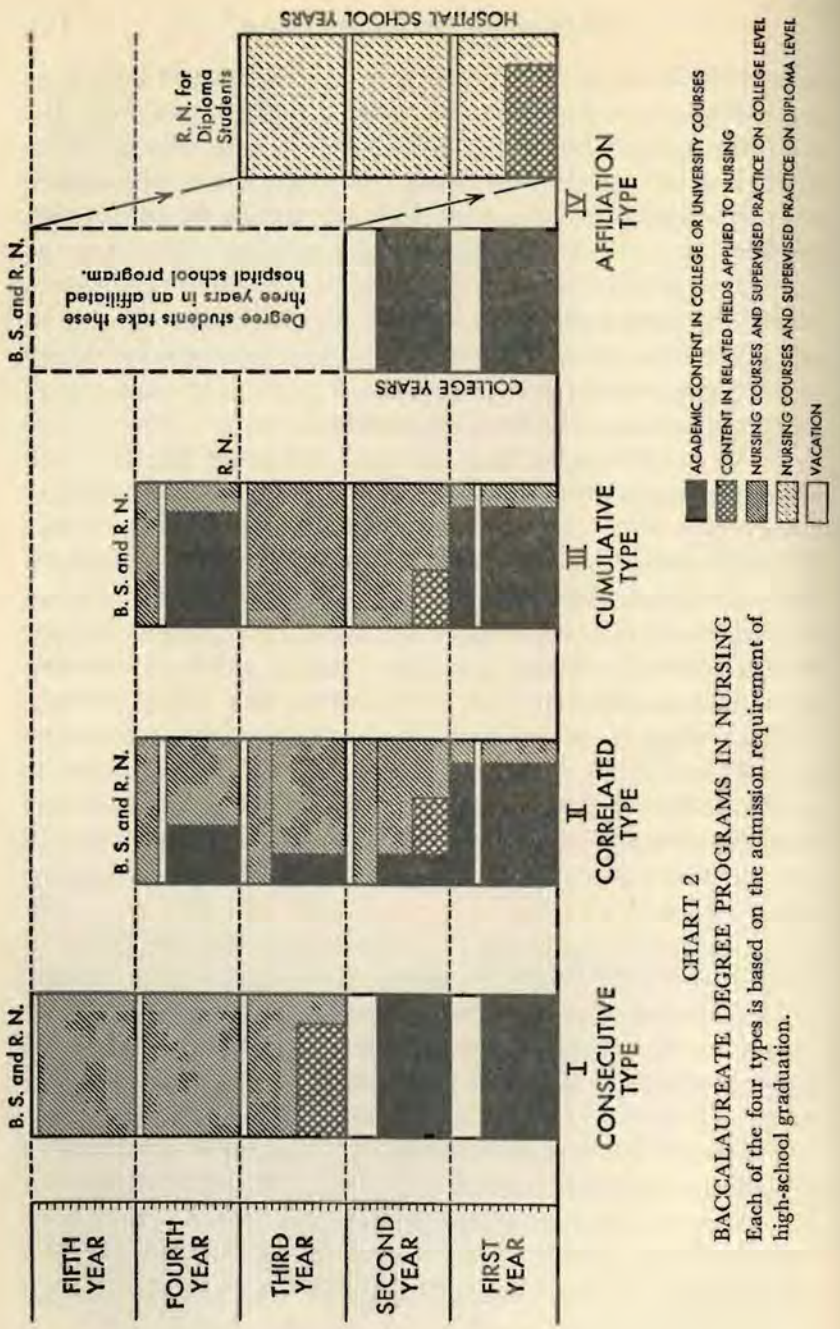

CHART 2

BACCALAUREATE DEGREE PROGRAMS IN NURSING

Each of the four types is based on the admission requirement of high-school graduation.

For the sake of uniformity, the chart represents each type as including the equivalent of 2 academic years (60 semester or 90 quarter credits) in college courses in departments other than nursing. The time allocated to courses in nursing itself is that usually required by state laws: 3 calendar years, minus a 24-week preclinical period and 12 weeks for vacations.[1] On the vertical scale on the left, each major division represents one year and each minor division 4 weeks. The width of each column reflects the normal 15 to 16-credit or 45 to 48-hour weekly schedule. This calls for approximately 3 hours per credit per week for the average student in academic courses—one hour of class plus 2 hours of study, 2 hours of laboratory work plus one hour of study, or 3 hours of laboratory work.

No uniform policy has yet been established with regard to the ratio of time in clinical practice to class time, and credit, in the major courses in nursing. The average weekly schedule of classes, laboratory, and clinical practice in nationally accredited collegiate schools is 42 hours, with no allowance for study.[2] If it is assumed that the credit requirement for a baccalaureate degree with a major in nursing should be about equal to that in other undergraduate programs, and the credit in the major about half the total, the time requirement per credit for the nursing courses in a four-calendar-year program, including practice but without study, is nearly double that in academic courses with study. In the chart the four-calendar-year programs include the equivalent of 64 weeks of academic courses and about 120 weeks of courses in nursing. As already noted, the amount of practice has been largely governed by service demands in hospitals and by state board requirements, but experimentation is now going on in some collegiate schools, as well as in a few hospital schools, to determine the correct ratio for educational purposes. The results of this experimentation are beginning to validate the theory held by many nurse educators that the major nursing programs can be

[1] In some collegiate programs the materials in the preclinical period are largely included in the preprofessional year or years, and 24 weeks are allowed for this by state boards of nurse examiners.

[2] National Nursing Accrediting Service statement concerning programs on the list of nationally accredited collegiate schools, January, 1952.

shortened and made more effective, with less repetitive and discursive practice, better teaching and supervision, and more planned time for study. One leading university is operating a correlated program of four academic years, with summers free; and plans are under way in another for a two-semester schedule, with an eight-week summer session each year instead of the 48-week year (the calendar year minus four weeks' vacation). These arrangements allow not only for longer student vacations, which may be earning periods, but also for faculty vacations and the possibility of graduate study and research.

In the first three types, if the program is authentically collegiate, the college or university assumes full responsibility for the major in nursing both in its theoretical and in its clinical aspects, with the faculty of the department or school of nursing having the same status as faculty members in other units, and with educational policies and standards equal to those in other programs leading to a baccalaureate degree. The supervised clinical experience of students constitutes part of the courses in nursing and is planned and directed by the faculty. College credit is awarded for all courses in nursing on the same basis as for other courses.

The home hospital—the hospital supplying the clinical facilities for most of the program—may be owned by the degree-granting institution, or closely associated with it by contractual agreement. In either case, the faculty and the nursing service staff of the hospital cooperate in safeguarding the educational interests of the students on one hand, and patient welfare and hospital efficiency on the other. The essential premise, however, is that students are enrolled for educational purposes and the use of their time must be planned accordingly. If some faculty members have a dual role, a clearly defined division of time and of salary between instructional and service responsibilities is necessary, with corresponding channels of obligation to the educational institution and the hospital.

The home hospital, in which the teaching and supervision are done by the faculty of the college or university responsible for the curriculum, generally furnishes facilities for courses in at least four

basic nursing subjects: medical, surgical, obstetric, and pediatric nursing. A medical center that also provides facilities for psychiatric and tuberculosis nursing is desirable. Every service should be adequate in size, variety, and quality. If facilities are not available for the college or university to conduct courses in any of the mentioned subjects and also in public health nursing, arrangements are made with other institutions.

The degree-granting institution is responsible for arrangements that guarantee an appropriate level and quality of instruction in every subject throughout the curriculum, so that policies with regard to granting or transfer of credit in nursing courses will be the same as those for courses accepted toward the degree in its other programs. Collegiate standards cannot be maintained when students who have completed a progression of college-level courses in nursing that incorporate prerequisite and concurrent materials from other departments in later years of the course share classes and clinical teaching with the students of affiliated hospital schools who have not had such advantages.

Transfer arrangements between collegiate schools are possible in some instances. Thus, University A may have a large medical center, including a psychiatric unit with clinical facilities for more students than are enrolled in its own school of nursing. It may agree to accept qualified students from schools in colleges and universities that lack facilities for a course in psychiatric nursing. Acceptance of these students by University A would depend on their meeting its requirements, and the credit granted by it would be accepted by the institution to which the students return on the same basis as any transfer credit. If facilities for one of the nursing courses are secured in a hospital or public health nursing agency not already a part of, or associated with, a college or university employing faculty for the course, the teaching personnel may be provided by the college or university from its own nursing faculty, or qualified members of the hospital or agency staff may be employed by the educational institution as teachers on a full- or part-time basis. The college or university thus acknowledges its responsibility and the authenticity of credit is assured.

Approved Types of Baccalaureate Curricula

The first two types of collegiate program described below have been fully approved by the Association of Collegiate Schools of Nursing, the National League of Nursing Education, and the National Nursing Accrediting Service. The complete four-year course of Type III has also been approved, though the arrangement is questioned by which the first three years may lead to the examination for the R.N. and an additional year to a degree. Approval of individual schools of these types obviously depends upon the actual fulfillment of valid collegiate policies affecting the quality of instruction, the adequacy of facilities, and the soundness of the curriculum, organization, and administration.

Consecutive Type. In this type of program, Type I in the chart, the college or university requires the satisfactory completion of at least two academic years (four semesters or six quarters), including certain specific subjects, as an essential foundation for the subsequent nursing curriculum. Only applicants for a degree are admitted to the professional courses, and the major in nursing is on the upper-division college level. Such a program allows for transfer of credit for the preprofessional years from other accredited colleges and universities. For this reason the content required for admission to the major in nursing depends upon the subjects that are available in the institutions from which the students come. The preprofessional requirements may be limited to courses that are generally offered by junior and liberal arts colleges, such as freshman English, biology or zoology, elementary chemistry (usually inorganic), and introductory psychology and sociology. In some cases, however, the colleges from which most of the students transfer offer courses that are especially adapted to the needs of nursing students, for example, anatomy and physiology, microbiology, nutrition, and a chemistry course including an introduction to organic chemistry and sometimes to biochemistry.

The number and kind of preprofessional courses required determine the content and length of the preclinical portion of the professional curriculum, and this, in turn, affects the over-all

length of the program. It also influences the planning for general education, which should not be crowded out by profession-related materials. This need not happen if the prerequisites are more effective, not merely multiplied. The preclinical period includes any of the subjects mentioned above that have not previously been covered, as well as pharmacology, diet therapy, introduction to nursing, introduction to medical principles, and so forth.

Although this is still commonly referred to as the "five-year type" because originally it called for two years of general education with only a few specific prerequisites followed by a full three-year nursing course, the present trend is toward reducing the length, so as to make the program comparable with other collegiate courses leading to the baccalaureate degree. The purpose is to achieve economy in time and money for students and also to produce well-qualified graduates more quickly for the nursing services. Preference for curricula equal in length to those for college students generally has been increasingly recognized.

Experiments have proved that the consecutive type of program can be condensed with no loss in quality. To help some students with acceleration, a well-staffed and equipped school may admit a spring as well as a fall class. Thus, students who have completed six quarters of college work by attending a summer session may enter the nursing course in the spring term of their second year of study. Preclinical periods are being shortened in schools that require more specific content in the preprofessional programs, and the time devoted to clinical practice is being substantially reduced by providing more effective and constant teaching and supervision. The usual length of such programs is now about four and one-half years.

The advantages of this type are that the students are more mature when they enter the professional part of the curriculum and transfers may be made from various colleges, including community colleges where the costs of preliminary education are low. Some educators also think that two years of entirely liberal arts education are desirable before specialization. The disadvantage most often cited is the long-deferred introduction to the field of

nursing itself, in which the student's interest centers. Failure to provide a focus for this interest undoubtedly causes loss of potential members of the profession. Another weakness is that there is sometimes little or no opportunity for general education beyond the sophomore level. Moreover, the possibility of taking profession-related courses in academic departments is often lacking or extremely limited in the upper years, particularly if the hospital is geographically separated from the campus. As a consequence any course in the social sciences, for example, beyond the prerequisite introductory courses may be taught by a member of the nursing faculty rather than by a member of the faculty of the social science department. This may have advantages in the direct application of theory to nursing, but disadvantages in lack of breadth and of interpretation by a specialist in the field. A third difficulty is that so long a period of time separates some of the academic from the professional courses that much valuable knowledge is forgotten before it can be put to use. Concurrence of courses does not assure correlation of facts, theories, and applications, but the utilization of materials from related fields is facilitated when knowledge is fresh.

In other professions as well, the efficacy of the preprofessional period in which theory is wholly divorced from practice is being questioned by some educators. The recommendation of the President's Commission on Higher Education is as follows: "The aim should be to integrate liberal and vocational education, letting them proceed simultaneously though in varying proportions throughout the student's college life, each enriching and giving meaning to the other."[1]

However, this consecutive type is excellently adapted to the student who cannot afford to be away from home for the full course, who prefers to postpone specialization, or whose interest in nursing develops late. It should specifically be recommended in the bulletins of colleges offering preprofessional nursing programs, and by college advisers to students who having completed their sophomore year wish a professional collegiate course in

[1] *Higher Education for American Democracy*. Harper and Bros., New York, 1947, vol. 1, p. 74.

nursing that leads to an authentic degree and will prepare them for graduate work and positions of responsibility.

Correlated Type. Type II, the correlated program, which has also been commonly designated the "integrated program," is an indivisible unit within one university. It has evolved as perhaps the soundest and most advantageous plan for basic nursing education where both academic and university-controlled clinical resources are available on the same campus, or at least in the same town, so that general education and profession-related subjects may be taken concurrently with the courses in nursing. In instances where the medical center is far removed from the main campus of a university, this type can be utilized, provided academic courses are made available concurrently with the clinical experience through an extension division or by individual instructors from the university departments, and the nursing faculty give the introductory course in nursing on the campus during the first year. Emphasis should be placed on the fact, however, that the close intermeshing of academic and professional courses that characterizes this plan almost necessitates propinquity of collegiate and clinical resources.

In a program of this kind the specific knowledge of the physical, biological, and sometimes introductory social sciences required as a foundation for the professional courses is largely contained in the first year and one summer session, with additional subjects such as pharmacology, diet therapy, and introduction to medical principles, allocated to a relatively short preclinical period. There is an increasing tendency to correlate a large part of the latter content with early clinical practice.

The professional sequences in this program, which will be considered in Chapter 6, are the same as in Type I. Since students take other than nursing courses concurrently with clinical practice, however, academic faculty members in the social sciences and in broadly cultural subjects have a continuing share in instruction.

The distribution of academic and professional content illustrated in the chart is only one of many possible variations. For example, academic courses may be distributed evenly throughout

the four years; a larger proportion may be included before the senior year; or there may be one or more periods other than summer terms when they are omitted in order to permit absence from the campus for a course, such as that in psychiatric nursing if facilities are not available in the home hospital or medical center.

This plan of education has exceptional advantages in close coordination of theory and practice; simultaneous progression in both general and professional education; maximum utilization of total educational resources; and opportunity for association and interchange of ideas between academic and professional faculty, as well as between students in nursing and those in other fields. It permits inclusion of a course in introduction to nursing in the freshman year, thus stimulating the interest of the student and giving her and the faculty a chance to determine early whether nursing is well suited to her interests and abilities.

Two difficulties, totally unlike each other, still beset this plan. The first is the procurement of university courses in the natural, and to a lesser degree in the social, sciences that will furnish the kind of basic foundation essential for professional training and will obviate the necessity for offering special courses for nursing students. This problem will also be discussed in Chapter 6.

The second difficulty is that transfer into the course from another institution is generally not possible without loss of time. However, some universities have worked out agreements with a group of colleges, whereby the latter offer students planning to transfer the courses included in the first year of the university's nursing curriculum. Consideration is also being given to the possibility of making the first two years of such a program available in some junior colleges, in combination with local hospitals where the initial clinical teaching could be provided. At least one such experiment has been started.

Cumulative Type. The third, or cumulative type, is similar in many respects to the preceding one. It has resulted from adjustments in the Type II program, when academic and clinical facilities are not available on the same campus or in the same town.

Academic work is offered as a block during the first year and again during much of the fourth year, when classes are held on the campus. During the second and third years, when students are in the hospital or medical center, academic courses as such generally cannot be provided. Some of the material taught in Type II schools by academic departments is, however, included in the professional part of the curriculum. For example, instead of a course in the family offered by the department of sociology, problems of family relationships are taught, generally by a nurse, in connection with obstetrics and pediatrics; and instead of a separate course in developmental psychology, psychological principles characteristic of various periods of life are taught in their application to nursing. An occasional university has found it possible to arrange courses given by its own faculty or by professors from a college nearby so that students may have the advantages of teaching by specialists in the related fields.

The academic courses in the fourth year may include advanced work in sociology, preceding the experience in public health nursing. Time can also be made available for general education on the upper-college level. Unfortunately, suitable courses of this kind are often not open to nursing students because they have not had the prerequisite courses. Many other students besides those in nursing, however, need electives on the senior maturity level without prerequisites, and colleges are increasingly initiating courses to meet this need in such fields as literature, government, philosophy, and the arts.

The chief criticism of the cumulative type is the necessary deferment of part of the teaching materials that should precede or coincide with the clinical courses. Also, the interruption of the clinical instruction in the senior year by a preponderance of academic courses is regarded by some as unsound practice.

Although this is essentially a four-year unified program leading to a degree, in some institutions it offers a student the possibility of completing the minimum requirements for state licensing examinations by the end of the third year. The three years leading to the R.N. are in this instance identical with the first three years of the degree program, and a student may drop out for a period in order to earn money or she may terminate the course at this point. To qualify for the degree she needs to spend only one

additional year, within time limits prescribed by the institution, instead of the longer period required to supplement a three-year hospital school diploma course; and no rebuilding of inadequate foundations is necessary. Educationally this arrangement seems distinctly preferable to Type IV, the description of which follows. It corresponds with practice in other fields when students temporarily discontinue their education and return later to complete it. There may, however, be a serious loss in skills and momentum in interrupting the course even briefly. The first three years of a properly conducted collegiate program provide stronger preparation for the R.N. than does a typical hospital school, but the consecutive completion of the requirements for the degree is so much to the advantage both of the student and of the nursing services, that loan funds should be widely available for students who need assistance in order to complete the curriculum.

As in Types I and II, the major in nursing in Type III is under the full control of the degree-granting institution, with the courses in nursing taught by its faculty. Thus, the second and third years, as well as the first, yield authentic college credit available for continuance or transfer without deviation from general collegiate policies. This avoids the difficulties present when the clinical courses are provided by a hospital school not under the control of the university and therefore not governed by college policies or accredited on the college level. In such a case college credit cannot properly be given. Type III may be regarded as a means of transition from Type IV to Type II, if total conversion seems impossible.

It needs to be said, however, that the nursing profession views this plan warily because of the possibility of abuses and of confusion concerning the qualifications of two groups of nurses prepared by the same collegiate school, both having the R.N. but only one the B.S. It has not been accepted by the Association of Collegiate Schools of Nursing as a true college-level program, making the school eligible for membership in that organization. Nevertheless, the Association has sanctioned an experiment by one of its members with a program that is similarly arranged, and other experiments might also be sanctioned if really sound in

organization and administration and under the direction of universities whose standards in nursing education have been established as thoroughly reliable. The need for this cumulative arrangement may disappear with clearer differentiation of other types of programs, more adequate financial provisions for students interested in a complete collegiate education, and more effective guidance of students into programs suited to their needs and potentialities.

Some programs that purport to be of Type III, but actually are composed of a freshman year in college, two years or more in a hospital school, and a final year in college, cannot rightfully claim collegiate status and belong in Type IV. The test of collegiate status is the level and quality of the major program in nursing, the direct responsibility for it by the faculty of a college or university, and the utilization in the nursing courses themselves of substantial knowledge derived from college courses in related fields. Many of the unsound practices in existing programs are due to confusion in regard to these points.

The Unapproved Affiliation Type

Type IV, the so-called affiliation program in nursing, was the earliest to develop. It consists merely of two unintegrated blocks of education, namely, two years of lower-division college work, done either prior or subsequent to hospital training, and the three-year hospital school diploma course in nursing. Both start from the high-school graduation level. When initiated, this seemed the only way for nursing students, at least those with potentialities for advancement, to obtain the broader education needed. However, it has proved to be a means of perpetuating the apprenticeship system. Colleges have granted a degree for this combination without taking any real responsibility for the content or quality of the major in nursing, and hospital school methods have therefore persisted. Many institutions of higher education are now realizing that such a program is unsound.

It violates *all* the policies, summarized earlier in this chapter, that are generally accepted by degree-granting institutions as essential to maintain college standards and ensure the integrity

of the baccalaureate degree. Regardless of whether the two years of college precede or follow hospital training, the combination is not a true college-level curriculum in nursing. Students who enter a hospital school with the greater breadth and maturity that two years of collegiate education provide return to the high-school graduation level and share classes with students who lack these advantages. Those who take the diploma course in nursing first are largely limited in the later college work to the freshman-sophomore level, since they lack not only the English and the introductory natural and social science courses that are generally lower-division requirements for the degree, but also the prerequisites for most upper-division courses. In neither case is there the progressive and integrated preparation for the profession of nursing for which the baccalaureate degree should stand.

Thus, the curriculum consists at best of two junior college experiences. Moreover, the hospital school lacks accreditation as a collegiate institution and frequently has standards even below the junior college level. Generally the B.S. in nursing based on this type of education actually represents no more competence *in nursing* than the diploma from whatever hospital school the student attended. As a consequence the purpose of the important movement toward college-level education in nursing is very largely defeated. The degree is a misleading credential under these circumstances because it does not represent real values in superior preparation for the responsibility a college graduate in this field is expected to assume.

This may be just as true when training rests with a university-owned hospital as with one that is independent. Not unless the preliminary years of college are required of all students, the nursing program is on the upper-division college level, and the faculty are members of the college or university faculty and meet the same standards as those in other departments, is there justification for regarding the curriculum as collegiate or for awarding a baccalaureate degree.

A visit to a large university with a long-established reputation for sound educational policies revealed practices in its Type IV school of nursing that would seem incredible, were it not for the

fact that similar practices have characterized most university-controlled hospital schools until recently. Both degree and diploma students, in this instance about equal in number, were being offered the same training in the clinical and in most of the preclinical courses. The outline of this program, which appears as Table 6, illustrates the educational unsoundness of such policies. The faculty attempted to meet the needs of both groups by teaching the classes on a level approximately halfway between what would have been suited to the preparation and maturity of each. The result was that half the diploma students withdrew or failed, while the degree students were retarded to such an extent that they could not achieve the competence that a degree in nursing should represent and that is needed for professional functions in the nursing services. Obviously the university was not providing a sound educational experience either for those students to whom it would award its degree, or for those in the diploma school operated by its own hospital.

When we consider the question of responsibility by higher education for ensuring the quality of teaching in the major subject, the dismaying fact is that colleges and universities have not assumed this responsibility in any direct way for nursing education in programs of the affiliation type. When arrangements for affiliation are made between a college and a hospital school, the former *supposedly* seeks to assure itself that the hospital provides training consistent with collegiate standards. Even if an examination is made, however, it is often of little value for reasons that will be discussed below. Beyond a cursory survey, the college may do nothing. Sometimes it appoints a nurse who is on the educational staff of the hospital school as director or coordinator of the program leading to the degree; occasionally it makes merely nominal appointments, without salary or academic privileges, of hospital teachers to its staff. Such gestures do not change the status of these teachers as employees of the hospital, many of whom must make nursing service rather than education their primary function. Neither does it alter the fact that a large proportion of them still do not have even a baccalaureate degree. If such neglect of educational standards were practiced by col-

TABLE 6. COMPARISON OF ADMISSION AND CURRICULUM REQUIREMENTS FOR DIPLOMA AND DEGREE STUDENTS IN THE AFFILIATION TYPE OF PROGRAM

Diploma students	Degree students
PRECOLLEGE PREPARATION	
High-school graduation, with credits for 15 units, including English 3 Mathematics 2 Chemistry 1	Same as for diploma students
COLLEGE PREPARATION	
None	*Semester hours* English composition 6 Chemistry 8 Zoology 4 Electives—at least 4[2] Recommended: American or European history American government General and abnormal psychology Sociology Suggested: American and English literature Anthropology Biology Botany Physics Speech Minimum total 60
SCHOOL OF NURSING COURSES IN SCIENCES RELATED TO NURSING	
Semester hours Elementary chemistry 4 Anatomy and physiology 4 Microbiology 3 Nutrition 3 Psychology 3 Sociology 3 Total 20 Total academic courses beyond high school 20	*Semester hours* Advanced chemistry 4 Other subjects same as for diploma students in classes shared with them (substitution may be made for psychology and sociology if they were included among college electives) 16 Total 20 Total academic courses beyond high school—minimum 80
SCHOOL OF NURSING COURSES IN NURSING	
Semester hours Nursing principles, supervised practice, medical and other related content 86	*Semester hours* Same as for diploma students and taken with them 86

leges in a noticeable proportion of the curricula they operate, they would shortly lose the approval of regional accrediting agencies. Collegiate accrediting agencies, however, have manifested little concern about nursing curricula as yet, presumably for the same reasons that college faculties have countenanced policies in this field which they would certainly condemn in others.

In the affiliation type of degree program, academic standards concerning residence requirements and transfer of credits are applied in a dangerously haphazard manner. Degrees are granted in some instances to students who have never had a day's residence in the degree-conferring institution. In the nursing programs of some colleges and universities, credit is automatically accepted for two years of work in another college and for the training offered by a hospital school. What is more serious, however, is the fact that credits are regularly accepted for transfer from the affiliated hospital school or schools, although such training units have never been accredited *by any agency of higher education as being on the college level*. The National Nursing Accrediting Service considers each school in its appropriate category. It has no power to accredit a hospital school as a collegiate institution—nor any such intention or desire.

In recent years colleges have permitted themselves to enter into such loose arrangements with hospital schools concerning transfer of credit that some actually announce in their catalogues that a student who completes two years in the particular institution and graduates from *any* state-accredited[1] school of nursing will be granted a B.S. degree. As a consequence the recent catalogue of a well-known hospital school is able to state that through affiliation agreements with several colleges, its students are granted credits that enable them to obtain bachelor of science degrees on completion of from four to six semesters of academic work preceding the course in the school. It then lists *seven* colleges and universities, three of which are in other states, with which agreements have been made. The reader is left to imagine how

[1] Meeting minimum legal requirements for admission of its graduates to examinations for licensure to practice nursing in the state.

close are the ties between higher education and hospital training in such instances.

Reasons Underlying Adoption of This Pattern. This deceptive pattern of nursing education has been adopted by many colleges and universities for a variety of reasons. Some of them have been previously discussed but a summary may be useful at this point.

1. There has been an overemphasis on degrees as such, without sufficient understanding of the content and quality of the education they represent. Colleges and universities have thought they were rendering a service to the community and to nurses by enabling them to obtain degrees without considering the importance of increased competence for increased responsibilities.
2. Nursing education has been so isolated in the hospital schools that educators in other fields know little about it. Respect for the social contribution of nurses, coupled with the lack of a reliable basis for judging the standards of their education, has led to an uncritical acceptance of its quality and status. As one college administrator phrased it, "The school has always turned out good nurses; why shouldn't we give them college credit and a degree?"
3. Many colleges and universities have misunderstood the purpose of higher education in nursing, thinking that all that was needed was general education. Some educators seem to assume that the more education students have that is *outside* the field of nursing, the better justification there is for a degree in nursing, regardless of the quality or content of the program in nursing itself or of any integration between the two parts.
4. Many educators tend to think of nursing education only as "training," that is, merely the development of technical skills without much intellectual content, and therefore separate and distinct from the "education" to be obtained in academic departments. As a consequence nursing has not been accepted generally as an appropriate subject for which higher education should take the same kind and extent of responsibility as for other major sequences leading to a degree.
5. Accreditation by state boards of nurse examiners, the official recognition of schools whose graduates are eligible to take examinations for licensure as nurses, has been confused with accreditation by educational bodies. The term "professional nurse," used interchangeably with "registered" or "graduate" nurse, has led to the misapprehension that hospital schools of nursing are professional schools in the same sense as are medical, law, or engineering schools, although it is well known that the latter are units of universities. Curiously enough, this mistaken idea is sometimes set forth simultaneously with the equally fallacious assumption that hospital schools train only for technical skills.
6. Colleges and universities have found it easy to establish programs in nursing that entail little or no expenditures for faculty salaries in the major field when students were sent to a hospital school for the clinical period. Providing general education in academic departments for nursing students is no problem; indeed, it is a means of attracting additional numbers to a college, which is financially advantageous. The same result could be achieved, however, by providing preprofessional curricula for nursing programs of Type I.
7. The establishment of this easily instituted and inexpensive type of program, which seemed to be meeting a popular demand, has been encouraged by the example of some respected universities, which have used a diploma course in a hospital school as a substitute for an upper-division, truly professional major curriculum. Continuing the diploma program and merely offering a degree to students who also took two years of academic courses has actually been a matter of expediency rather than the result of sound educational planning. But sponsorship by these universities has conferred prestige upon this pattern. When the diploma course is in the university hospital, the university itself profits, at the cost of sacrificing the best educational interests of both diploma and degree students, as in the instance cited on page 115. Some universities have hesitated to change from a diploma to an exclusively degree course because they feared a reduction in number of students, on whom their hospitals rely for nursing service. They have proceeded on the assumption that the proportion of candidates for a degree would increase in time and that conversion could then take place without risk. Experience has proved, however, that the degree students do not tend to increase in such a pattern and that there is usually a high withdrawal rate for both groups of students, as well as instability in the faculty because of dissatisfaction. Where conversion has been completed and a strictly collegiate curriculum established, the number of students tends soon to equal or exceed the previous total number. The quality of students, also, is greatly improved because the program then appeals to students who recognize good educational standards, and student and faculty morale is heightened.
8. Hospital authorities have found affiliation with a college advantageous in recruiting students even for the diploma course, and

welcome the prestige thereby obtained. Many students who desire the advantages of college preparation for their profession lack understanding of the content and quality of education they should seek. Schools have sought to attract them, although without large numerical success, by offering degree arrangements. This plan permits hospitals to continue control of student hours, which is valuable both for getting the necessary work done and for keeping down the costs of nursing service. In spite of the fact that many hospitals are now pleading for better-qualified nurses, particularly to fill supervisory and administrative positions, the immediate demand for student service is permitted to supersede the need for better education. Apparently also there is little realization of the unfairness of this plan to those students who discover too late that a degree program is not necessarily equivalent to true collegiate preparation in nursing.

9. Some nurse educators and alumnae of hospital schools strongly approve this pattern because it means continuation of their own hospital school and type of training, in which they have an understandable pride. Many of them are unfamiliar with college policies and their faith in higher education makes them confident that any program established by a college or university must be sufficiently sound. On the other hand, some are distrustful of control of the nursing curriculum by educators who do not know nursing. They do not understand that in a true collegiate plan, the faculty in nursing, composed of members of their own profession, would administer and conduct the program with university support and authority. Occasionally, also, nurses in administrative positions who have not had the advantage of higher education are unwilling to permit control to pass from the hospital school because of feelings of insecurity about their own future.

10. More important than the anxieties or self-interest of a few nurses, however, is the pernicious effect of colleges establishing affiliation with individual hospital schools, without investigation or concern about educational standards, because of extraneous community, denominational, or even personal interests. A state board of nurse examiners told the writer about a hospital school, the poorest in the state and barely admissible to state accreditation, with which a university had arranged for affiliation without consulting any authority in nursing education. The agreement had been made by the two boards of trustees, in which there was overlapping membership. It is to be hoped that such occurrences are rare.

Statistics of the Group IV Schools. There is good indication of the sterility of this type of program in the statistics of the affiliation type schools and their degree students. In 1950 there were 195 schools that offered a basic program leading to a baccalaureate degree,[1] not including the indefinite number of colleges offering a degree in nursing without established connection with any specific school for the major curriculum. Merely 66 of these were for degree students only with programs either of an authentic collegiate type, as defined on page 104, or at least requiring two preliminary academic years of all students though the nursing courses themselves were not controlled by an institution of higher education. The other 129 schools were of Type IV, having two programs, one leading to a diploma and one to a degree, with the nursing courses usually in common. In the school data analysis for 1949[2] only 107 schools were classified as collegiate, in the sense of being controlled by a university or college, and of these, 55 were for degree students only.

Slightly more than half of the Type IV schools (reporting in 1950) were under hospital control, and in almost half the degree students were a mere handful scattered among diploma students, probably with little or no differentiated teaching provided. Eighteen of these schools, 16 of which were operated by hospitals, announced a degree program but had not a single degree student; 38 had fewer than 10; and 30 had between 10 and 25. In only 8 of the 129 schools were there more than 100 degree students. Of these eight schools, all except the Johns Hopkins Hospital School of Nursing were under college or university jurisdiction, and in seven degree students exceeded those in the diploma program. The fact that for a variety of reasons these schools had attracted larger numbers of college-oriented students accentuates the seriousness of policies inconsistent with college standards. Several of the parent universities are institutions to which large areas of the United States look, or should look, for leadership in nursing education.[3]

[1] *1951 Facts About Nursing*, Table 2, p. 52.
[2] See Table 1, p. 49.
[3] Data from *State-Approved Schools of Nursing*. National League of Nursing Education, New York, 1950.

Disservice to Nursing Education. It seems little short of tragic that the interest of higher education in nursing, so long and earnestly sought by the nursing profession, should manifest itself to so great an extent in a pattern that is contributing little to the improvement either of nursing education or of nursing service. Many leaders of the nursing profession regard the affiliation pattern as the most serious threat to the continuation of the notable progress that has been made in nursing education, because such schools confuse issues, devaluate the degree in nursing, and deflect students from sound collegiate schools.

Educational credentials should represent actual achievement. If this is so, should not a student who has completed two years of general education in a college and a diploma course in a hospital school of nursing be given credentials attesting these facts, rather than a baccalaureate degree, which is generally assumed to represent the satisfactory completion of senior college work in the major field? Policies of nursing education that invalidate this assumption weaken the prestige of the college degree generally, and also the status of nursing as a profession.

The National League of Nursing Education and the Association of Collegiate Schools of Nursing have agreed that the baccalaureate program in nursing should prepare for first-level staff positions in the nursing services. They believe, moreover, that both further experience and specialized graduate study are necessary for the more advanced positions. Yet, some colleges having only affiliation type schools announce that their programs prepare for supervisory, administrative, and teaching positions. It is true that because of the acute shortage of persons equipped for such tasks almost any nurse having a degree may be employed as a head nurse or teacher, regardless of fitness, but this only emphasizes the urgency of providing degree programs that ensure qualifications for these responsibilities.

5

Supplementary and Graduate Programs

THE main concern of this study is basic baccalaureate curricula in nursing. However, two further educational needs call for clear understanding and constructive action on the part of colleges and universities if the demands of the health services for qualified nursing personnel are to be met.

Collegiate education for registered nurses leading to a baccalaureate degree presents problems that are very similar to those discussed in the preceding chapter. The establishment of graduate study legitimately leading to the master's and doctor's degrees is clearly contingent upon sound policies of admission and teaching. In both cases equality of status with comparable programs in other fields, the actual benefits of higher education, and recognition of the qualifications represented by the degrees depend upon the application of generally accepted educational standards.

Senior College Education for Hospital School Graduates

The need for a means by which hospital school graduates may supplement diploma courses and prepare for larger responsibilities has long been apparent. Failure of the educational system to provide adequate opportunities initially for students with potentialities for, and interest in, collegiate programs and progression in nursing has inevitably created this demand. Colleges and universities have responded to the appeal for help from graduate nurses in their communities, from hospital schools, and from nursing organizations. Some excellent programs have been estab-

lished, which have made extremely valuable contributions in providing baccalaureate foundations for graduate nurses who wish to qualify for teaching, supervisory, and administrative positions. Unfortunately, however, many unsound programs have also resulted, because of widespread misunderstanding of the purpose and nature of such education.

Economic stringency has frequently created an urgency to increase enrollments without increasing expenses; offering existent academic courses to graduate nurses seemed an easy method. The result has been that many institutions have granted degrees that seem to certify qualification for responsible professional functions in nursing, although they had no department of nursing, no faculty, and no facilities for a basic professional curriculum that could be used to supplement the student's former noncollegiate training.

Some universities, however, have gone further than merely admitting graduate nurses to academic courses. They have created a department of nursing, or more often of nursing education, which included specialized courses in methods of teaching and administration. But little or no attempt has been made to evaluate the quality or content of the basic knowledge of the candidate in the field in which she was supposedly preparing to teach or assume administrative functions. In other instances, the department has required that deficiencies in basic nursing preparation be made up, but has sent the student back to a hospital school for the purpose. Hence, there has often been no policy of assuring standards of achievement or breadth of content comparable to those evolved by a good basic *collegiate* school of nursing. This has been true even in some universities where such a school existed but the program for graduate nurses was not connected with it, and may even have been in a different division of the institution.

The confusion is increased by the variety of baccalaureate degrees conferred upon the completion of these curricula. A graduate supposedly prepared for advanced specialization in nursing may receive a bachelor of science in education, in nursing, in nursing education, or in public health nursing, with no

guarantee that she has had the equivalent of a substantial basic college education with thorough grounding in the knowledge and skills required for her profession. The attempt to include specialization in methods of teaching and administration on the undergraduate level has crowded out not only basic professional preparation but important content in related fields and in the humanities.

Prevalent inconsistencies are, however, beginning to be resolved and principles adopted that will presumably establish degrees in nursing on a sounder foundation. The recommendations of the Joint Nursing Curriculum Conference[1] and of the National Nursing Accrediting Service[2] indicate a consensus that a graduate nurse should first earn a baccalaureate degree that represents sound basic preparation for general professional nursing, that is, broad general education essential to effective citizenship and a rich personal life—and well-rounded professional preparation—with breadth and depth of nursing knowledge, skill, and understanding. Specialization should be built on this foundation.

As opportunities for basic collegiate education are improved, schools offering such courses of study can provide more adequately for the needs of hospital school graduates. Regular university policies can be applied to this form of education as to others: a student from a school not accredited on the college level, who seeks supplementary preparation leading to a degree, may be provisionally admitted to an institution of higher education that has a well-established department in the major field. The regular procedure then is for the institution, after reviewing the record and giving appropriate tests, to estimate tentative credit for advanced standing and to inform the student that it will be granted at the end of a semester or quarter of satisfactory, planned work. The student is expected to make up any deficiencies in general education requirements and prerequisities for the major, and in the major itself in the degree-granting institu-

[1] *Curriculum Bulletin No. 2.* National League of Nursing Education, New York, 1951, p. 25.

[2] "Some Problems Identified," *American Journal of Nursing*, vol. 51, May, 1951, pp. 337–338.

tion. A minimum amount of advanced work in the major subject and in fulfillment of the total credit required, usually at least as much as that of the senior year, must be taken in the institution to validate the transfer credit and the degree in terms of the university's own standards.

In nursing, not only learning from courses taken in the diploma program but knowledge and skills acquired from experience are evaluated. For example, a nurse may have had an inadequate course in anatomy and physiology but may have added substantially to her knowledge through observation, reading, and discussion while practicing nursing. She may also have supplemented her original education by keeping up with current developments in pediatric nursing and child psychology and may be an excellent practitioner in that service but very weak in other areas. Her understanding of theory and practice throughout the comprehensive field of nursing should be raised to the same level as that of the students in the collegiate course and her general education should be equivalent to at least two college years, if her degree is to mean the same as theirs in educational value and professional competence.

Such supplementation, adapted to individual requirements on the basis of qualifications, provides an essential groundwork for the graduate nurse similar to that for the student in the basic baccalaureate program. The amount of clinical practice can be reduced in proportion to her experience and the skill she demonstrates but it cannot be eliminated, since collegiate education means the interpretation and guided application in actual clinical situations of principles learned in college-level courses in related fields and in nursing. Nurses who lack this background need not only to improve their competence but in some instances to unlearn many attitudes and practices.

For example, the director of nursing in a psychiatric institute pointed to the fact that the level and method of teaching were very different for university students and for the hospital school students who used the same facilities. The university students had been grounded in psychology, sociology, and the natural sciences and also in the constant application of this knowledge to understanding the interaction of physical and emotional factors, individual differences, and environmental influences as they affect the inclusive care of all patients. They required little orientation to the mental hospital and made rapid progress both in the theory and in the practice of psychiatric nursing. The hospital school students who had not been educated in the psychosociological approach to patient problems had to unlearn deeply embedded habits acquired during their training. They had been taught skillful technique in mechanical procedures. However, they were accustomed to doing things for a succession of persons without having had an opportunity to know them as individuals, had no knowledge of the dynamics of interpersonal relations as interpreted by psychologists, and had little or no interest in, understanding of, and responsibility for patients beyond caring for immediate physical conditions. Consequently instructors had to devote a large part of the three months allotted to psychiatric nursing to changing attitudes and instilling elementary principles. By the end of the same period, the university students had acquired an excellent foundation for specialization in psychiatric nursing or for the application of their learning and experience in this field to the better understanding of all types of patients. A member of the hospital school group, to reach the same level, would need the foundation courses in the university program followed by practice in applying this added learning.

If a supplementary program is to produce results similar to those of a basic collegiate course, it must do more than merely add academic subjects or superimpose courses in methods of teaching and administration. It must require that nurses demonstrate through clinical practice widened horizons, deeper psychological insights, informed judgment based on more knowledge in the natural and social sciences *applied to nursing*, and skill in teaching patients and in leadership of a nursing team. Emphasis should be placed on the fact that a sound *basic collegiate* school is the logical place for graduates of hospital schools to receive the necessary guidance and instruction. There, all the facilities are available for any necessary supplementation of knowledge and skill, both outside and inside the major field. The faculty are

familiar with collegiate standards in nursing and can evaluate needs and provide the means by which graduate nurses with widely varying abilities, experience, and amounts of self-education can be helped to complete as quickly as is consistent with thoroughness appropriate senior college work that will qualify them for a baccalaureate degree in nursing. A supplementary program in general nursing has recently been established at Boston University School of Nursing, which seems designed to accomplish well the purposes described here.[1]

Of approximately 21,000 students in nursing enrolled in 1950 in college and university curricula leading to a bachelor's degree, about 12,000 were in supplementary programs for graduate nurses. Of this number a mere one-third were pursuing studies on a full-time basis.[2] The proportion has decreased since with the termination of aid for veterans of World War II. These few figures reveal something of the tragic story, both of nurses attempting to make up for the deficiencies of their earlier training and of what is wrong with nursing education in general. Why should the number of students preparing for the first degree be so small when the need for highly qualified personnel is so great? And why should the figure for graduate nurses in supplementary programs exceed that for undergraduate students?

Various reasons have already been given, but one of them has not been sufficiently emphasized. Owing to the great confusion in guidance, large numbers of students initially enter hospital rather than collegiate schools and then have to go through this supplementary process, which is long and wasteful to them and to the health services. Persons who have heard radio broadcasts of recruitment drives will recall that girls are told to go to the nearest hospital school for information about becoming a nurse. There, regardless of their ability, they are too often advised to "train to be a nurse," preferably in that school in order to swell its enrollment. Hospital schools individually and collectively carry on extensive recruitment, but little or nothing is said about

[1] See "Boston University School of Nursing Introduces the General Nursing Program," *Public Health Nursing*, vol. 44, February, 1952, pp. 88–91.

[2] *1951 Facts About Nursing*. American Nurses' Association, New York, 1952, pp. 41, 59.

the advantages of collegiate education. Clergymen, sometimes in sermons from the pulpit, and physicians, particularly, do much to encourage matriculation in hospital schools with which they have denominational or professional ties. When prospective nurses indicate an interest in a college degree, they are frequently told that they can acquire that later, and are not informed that it will take five or six years instead of four to achieve the same goal, and in the end will probably be more expensive. Not until there is wide growth of public understanding about the kinds and objectives of nursing education, and not until there is informed guidance in high schools and junior colleges, will the need for supplementary education leading to the baccalaureate degree decrease in any appreciable degree.

Graduate Work in Special Fields

Development of graduate programs to prepare highly competent personnel for specialized functions and crucial responsibilities in nursing is contingent upon uniformity and reliability in the content and quality of undergraduate education, whether initial or supplementary, and a corresponding common significance in baccalaureate degrees. Advanced professional preparation is the keystone of the educational arch and the focus of the most urgent qualitative demand.

In other disciplines the indispensable prerequisite for candidacy for an advanced degree is an undergraduate major, or its full equivalent in the field of prospective study. Standards for such majors in established departments and professional schools in accredited colleges and universities are sufficiently consistent to give fair assurance that students with satisfactory records have an adequate foundation for graduate work. It is taken for granted that the generally accepted policies discussed earlier ensure broad general education and a preponderance of upper-division college study in the major field. However, graduate schools usually safeguard this essential basis for participation in their courses by evaluating the records of candidates on the basis of undergraduate major requirements in their own universities. Their bulletins

state that deficiencies in prerequisites must be made up and applicants from unaccredited institutions must demonstrate their qualifications in a term at the university before they are given more than provisional acceptance. Requirements for admission to individual graduate courses are less stringent but departments and professors insist that all members have essential prerequisites.

The extreme variability in the educational substance and stage of achievement represented by a baccalaureate degree in nursing means that there is no common base upon which authentic graduate education can be built. Many fundamentals are lacking in the preparation not only of graduates of hospital schools but of nurses whose bachelor's degrees have been granted on the completion of affiliation, supplementary, or even weak collegiate programs, in which the basic major in nursing is below senior college standards.

The result has been a failure to establish graduate work on a distinctly advanced level, with emphasis upon the necessity for strong basic nursing in an initial or supplementary program as prerequisite. Identical courses now serve both undergraduate and so-called graduate purposes. The offerings in a special area supposedly of an advanced nature leading to a master's degree in one university may practically duplicate what has been included in an undergraduate program in another. The situation of a young instructor who consulted the writer concerning her problem may be cited as an example. She had a B.S. degree in nursing education and was eager to qualify for a master's degree. She had had most of the subjects constituting the graduate curriculum, however, in her supplementary program and investigation revealed little difference in the content of the courses. Her original basic nursing had been in a below-average hospital school and her fundamental knowledge of nursing itself had never been reinforced. She really needed to go back and rebuild the whole structure, but there seemed to be no practical way of doing so. Her case illustrates the serious failure of education for graduate nurses that includes "specialization" and neglects foundations in general and professional education, and also the need for clarification of policies in graduate programs.

A statement of the Postgraduate Board of Review of the National Nursing Accrediting Service concerning present conditions in graduate education may be summarized as follows:

> Frequently programs leading to the master's degree are little differentiated from those leading to the baccalaureate. In these instances the higher degree is only a symbol indicating that the graduate has previously earned a bachelor of arts or science degree, often with a major in another field. It does not represent advanced work based on an undergraduate major in nursing.
>
> So few candidates have sound basic collegiate preparation that the occasional school actually maintaining graduate standards is forced to require students to make up many deficiencies. Two or more years beyond the baccalaureate are often necessary to qualify for the master's degree.
>
> Institutions offering graduate work sometimes lack facilities for students to make up deficiencies on an appropriate educational level. Thus, the period of preparation is prolonged without necessarily resulting in commensurate enrichment and advancement of the candidate's qualifications.
>
> Programs to prepare teachers, head nurses, supervisors, and administrators appear to be designed only for institutions with schools of nursing where personnel perform both teaching and service functions. Schools of nursing exist in fewer than 1,200 of the 6,500 hospitals. Well-designed graduate work leading to a master's degree is needed to prepare administrative personnel on all levels for the predominant type of institution.
>
> Too few graduate courses exist to prepare clinical specialists and consultants in such areas as maternity and child care, care of the aged, medical-surgical nursing, and psychiatric nursing. Such courses should emphasize nursing in terms of the most comprehensive and skilled care of patients rather than nursing education or administration. They should include well-planned, truly advanced clinical or field experience in the special type of nursing with accompanying instruction and guidance. Relatively few programs which prepare nurses primarily for nursing practice include the principles and methods of teaching applied to the important function of teaching patients though skill in such instruction is inherent in comprehensive nursing care.[1]

Principles and methods of research are also often neglected in courses for clinical specialists, although they are the very persons

[1] "Some Problems Identified," *American Journal of Nursing*, vol. 51, May, 1951, pp. 337–339.

to whom nursing and the health services should supposedly look for a variety of studies, some of which would contribute to medical research and others to analysis of nursing care and interpersonal relationships. Practically all such studies have been made by members of nursing faculties or persons in supervisory or administrative positions. As a matter of fact, the limited number of nurses who have qualified for the clinical specialties thus far have moved into such positions and have largely emphasized organizational problems. A substantial group of persons are needed to give specialized care to patients and to make research, writing, teaching, and consultation services concomitant functions.

Just as the traditional omnibus function of nurses, including everything from bed-making to the administration of a large and complex nursing service, has been based on one limited type of education, so advanced education has tended to be inclusive rather than selective, superficial rather than deeply rooted in, and developed from, richness of content. This was inevitable because the profession had no means of augmenting the preparation of teachers of nursing except by borrowing from other fields. Just as "collegiate" programs have often consisted in merely adding a block of general education without changing education in nursing itself, so "advanced" programs have merely added courses in methods of *how* to teach or manage nursing service units, with little or no study of *what* to teach or of the elements of excellent nursing care and patient welfare, the promotion of which should be the central purpose of supervision and administration.

One of the greatest sources of professional progress in other fields has been the specialization of teachers. Recent criticism asserts that in some instances this has gone too far, and excessive concentration on a narrow field with neglect of general education has led to knowing "too much about too little." However, the increase of knowledge within an area from generation to generation has depended upon depth of penetration and the passing on of ideas thus gained to minds that could test and add to them.

Another current criticism of graduate courses in established academic departments has been that research has been over-

emphasized to the neglect of teaching methods and skills in the preparation of college instructors. But the most ardent advocates of better preparation for college teaching are wary of the aridity of methods without content. They insist that depth of knowledge and ability to do at least limited research in the subject are primary essentials for competence as members of college faculties. They suggest mainly a change of emphasis so that teaching will have comparable prestige with "pure" research, the inclusion of some appropriately supervised practice teaching on the college level in graduate programs for prospective teachers, and planned guidance and assistance for instructors in first positions by interested and qualified professors on the departmental faculty.

At the present stage of development in nursing education the preparation of teachers is far too little specialized and consists largely of courses dealing with methodology rather than content. As noted, it has not been separated from preparation for administrative functions. A course in ward management and teaching, for example, may include little more than general principles of administrative supervision of students, without reference to specific knowledge for teaching any one field of nursing. Few graduate courses consist of a well-balanced combination of advanced theory, clinical practice, research, and practice teaching in a particular area of nursing. Actually, the graduate of an affiliation program with a master's degree in nursing education from an institution that does not offer a basic program or provide clinical facilities may be teaching medical nursing with no more knowledge of the subject than that derived from her original experience in a hospital school. She might even be teaching in the school of nursing of a university where the department of history would not consider entrusting the instruction in American history to a person who had not specialized in it on the graduate level.

The preparation of specialists for teaching in clearly defined areas necessarily comes late in the process of achieving professional maturity. Nursing is now approaching it by increased emphasis upon clinical teaching and by the beginnings of interest in clinical research. The demand for teachers with special prepa-

ration greatly exceeds the supply. The best schools are seeking qualified faculty members in public health and psychiatric nursing, not only to teach those courses but also to help all the teachers integrate the principles throughout the curriculum. Experts in every type of nursing are needed for clinical teaching and supervision, and to make continuing analyses of nursing care in their specialties from which to obtain pertinent clinical materials for instruction. The Postgraduate Board of Review advocates the establishment of graduate courses in nursing only in universities with rich resources, in medical centers, and in graduate schools offering opportunities for interdisciplinary study in fields having common interest for a variety of professions. Regional planning is also recommended, and is necessary for the most effective utilization of the few faculty members qualified for teaching on the graduate level. The movement for a few strong programs is gaining headway.

Notable progress has been made in the area of administration through a five-month seminar at the University of Chicago, sponsored by the W. K. Kellogg Foundation, which began in January, 1951. Nurse educators and nursing service administrators from 14 universities and representatives of government agencies and the nursing services of the armed forces participated in planning a graduate curriculum for preparation for administrative positions. Subsequently the universities submitted plans to the Foundation for experimental graduate courses in administration and have been granted financial assistance for from one to five years. This extremely valuable and far-reaching project will undoubtedly have very significant results in strengthening graduate education for this field.

Graduate work leading to the doctor's degree is in the initial stages of development. Qualified faculty are lacking except for a few who have earned this degree in other fields such as education, sociology, or psychology, and have sufficient ability and experience to create courses on an appropriate level in nursing. However, according as baccalaureate and master's degree programs are established on a sound basis and the educational process accelerated by effective organization, graduates will undoubtedly

pursue more advanced study and become so proficient that their competence to teach Ph.D. candidates will not be questioned.

The primary problem is remedying the deficiencies in the content and standards in undergraduate education. The following chapter will discuss the subject matter in a baccalaureate curriculum designed to develop competence for team leadership and inclusive patient care in beginning positions and to provide foundations for advanced specialization.

6

Content of a Baccalaureate Curriculum

THE chief problem in constructing any college program is the selection and correlation of materials that will be the most valuable in developing the abilities of the student and preparing him for his adult role. All education is a fragmentary sampling from the vast store of human knowledge, and no curriculum can encompass as much as is desirable. In an undergraduate course that attempts to include both general and professional education, the time limitations are even more acutely felt than in a liberal arts program. In the latter, the minimum requirements in the major field of concentration, such as English, history, a foreign language, are usually about a fourth of the total requirements for the baccalaureate degree. A professional major, however, usually occupies about half the total time, since it involves learning techniques as well as a special body of theory. The academic courses outside the major subject are therefore limited in extent and also must serve specific purposes in providing foundation and contributory materials. The selection of content thus becomes both more important and more difficult. Particularly the values of general education need to be protected from the encroachments of too narrow specialization. Until recently almost no general education has been included in the preparation for some fields, for example, engineering. There is now, however, a strong movement in that direction. Educators and the leaders in many occupational areas are realizing that mere technicians, however skillful, have serious limitations. Without the "intellectual and moral vision" gained from sharing in the cultural heritage of the

liberal arts, and without the basis for interpreting their functions in terms of ideal aims and of service to society, graduates are not prepared to meet the demands of professional and social life and intelligent citizenship.

The broad education needed by the college student in nursing was suggested in the previous discussion of the kinds of knowledge, understanding, and skill required for the functions of the professional nurse in modern health care. Professional courses in nursing require a broader base in prerequisites than most academic majors, and also substantial amounts of related material, provided in courses above the introductory level in allied departments or incorporated in the professional curriculum.

Policies and Problems

No one pattern is advocated for collegiate schools of nursing, and developments will depend upon experimentation and the interchange of new ideas as they emerge in various institutions. Plans for specific curricula naturally vary with the resources of each institution, its general organization and requirements. Content and arrangement should be determined jointly by the nursing and academic faculties, but there has been little cooperative planning. Too often nursing faculties outline a curriculum, select courses from the college or university catalogue that meet the needs of their students, more or less satisfactorily, and gain the approval of an administrative officer without conferring with academic instructors in regard to actual materials, purposes, and points of emphasis. Thus, one might assume that the established courses are unalterable. A reasonable premise, however, should be that all those engaged in the educational process are constantly aware of changing needs and mutually concerned with providing the best education for all groups. In some cases geographical separation between the nursing and prenursing units makes such conferences difficult, but mutual understanding and the development of an integrated program cannot be achieved without them.

Programs of Type I[1] designed to admit transfer students from junior or liberal arts colleges or the lower division of a university

[1] See p. 106.

at the end of a preprofessional period are more difficult to plan than those designed to operate within a single institution. When transfer students come largely from colleges within the state, as in a state university, conferences with representatives have been helpful in securing a degree of uniformity in prenursing curricula, and have promoted understanding among college administrators, academic faculty members, and nurse educators. When the sources of transfer students are more widely scattered, exchange of bulletins and correspondence between institutions have to be relied upon to achieve these results. The greatest need is for institutions offering prenursing education to assume responsibility for relating the curricula to the requirements of upper-division professional schools and to provide good counseling to students, both in the selection of a school and in the best preparation for it.

Need for Mutual Understanding

In any event, the nursing faculty should be well informed concerning the specific knowledge their students may be expected to have acquired in order to use this content as a base for progression and to prevent unnecessary repetition. Conversely, the interest of the academic faculty and their contribution to constructive planning are dependent on a clear understanding of the aims and methods of the professional program. An eminent sociologist recently expressed amazement concerning his own failure as a young instructor to investigate the application of sociological principles in nursing when he accepted the responsibility of teaching an elementary course for a group of nursing students. Members of the departments of physical and biological science, sociology, and psychology have on occasion visited nursing classes, learned from clinical instructors the nature of student assignments in patient care, seen something of the actual hospital situation in which students work, and attended ward conferences on specific cases in which doctors, nurses, social workers, nutritionists, students, and sometimes other members or consultants on the health team take part. Such visits have been illuminating experiences. Furthermore, sociologists, social anthropologists,

and psychologists have recently come to realize that hospitals and health agencies offer remarkable opportunities for observation and research in their own fields. Even from the few studies already undertaken they have been able to make some valuable suggestions concerning methods for improving services to the public and preparation of personnel for these services.

Group discussions concerning goals to be reached in specific courses are also very fruitful. An instance in one university may be cited in which the faculty of the nursing department invited members of the English and speech departments to confer with them. The group considered the degree of skill in expository writing that should be expected of students who had satisfactorily completed "freshman English composition," and how it could be maintained and increased during their nursing education. Should the students know how to organize and write a paper based on reading, to use the college library, to quote from published sources, to paraphrase, to formulate footnotes and bibliographical references, and so forth? On the basis of this discussion minimum requirements were determined and the nursing faculty agreed that they would constantly emphasize in all courses the importance of effective writing for professional competence.

The group also discussed courses in speech. The nursing faculty were eager to learn which would be best for their students in view of their limited time, and how in this area of communication they could help the continued development of skill on the basis of the foundation provided. Another question had to do with literature courses. Of course, opinions differed as to what would best serve the purpose of developing appreciation and stimulating interest in reading fine literature, but the discussion was enlightening and challenging to all the participants.

Nature of Courses Offered

This kind of cooperative planning raises questions as to whether the courses should be offered to nursing students alone, or include various groups needing the same foundation; whether they should be "general education" courses designed primarily for students taking only one course in the subject, or courses introductory to a

major sequence but open to all students. These questions, in turn, raise problems of economy for the institution; of the responsibility of a department for students not majoring in its own subject, who often constitute a majority in the first course; and of the narrowing effects of segregation when groups are separated not only in courses in the major field but also in other subjects. The need for more interdepartmental planning is being recognized and there is evidence of reaction to the present extreme compartmentalism of learning. The multiplication of specialized programs in institutions of higher education adds to the urgency of evolving methods by which education may be made an integrating process. Many feel that it must be made so for the full development of persons whose mutual understanding and cooperative efforts will promote the progress of a cohesive democratic society, in which diverse competencies are coordinated and contribute to common purposes, not through regimentation but through interest and initiative on the part of socially minded citizens. However, the degree and nature of educational means to achieve this goal depend upon policies and conditions in each institution, and basically upon faculty attitudes.

In nursing, as in every type of education, students need to share experience with those enrolled in other disciplines in order to realize how wide and varied are the applications of the principles they are studying in many areas of life and work besides their own. Of course, their special educational requirements are urgent and their time is limited but the consensus is that they should share courses in so far as such sharing does not necessitate sacrifice of essential preparation for their occupation. Nursing faculties and other professional groups should appreciate more fully than the nonprofessional the value of materials not directly related to their own subject. On the other hand, academic departments sometimes admit that less rigidity in adhering to traditional patterns and an interest in content desirable for various groups may produce more effective education for all students. Really creative work in a few institutions where cooperative interest has been activated and groups have freedom to experiment promises significant results in analysis of interrelationships

of natural and social sciences in their application to health problems and to successful therapy.

Suggested Contributory Sequences

The outline on pages 142–143 of the sequences that make up a collegiate program in nursing is a composite of ideas derived from conferences with many educators in nursing and in related academic fields throughout the country, from the study of curricular patterns in a large number of schools of nursing, and from publications of the national nursing associations. All the subjects suggested are probably not included in any one program, certainly not as separate courses. Some of the content is derived from the regular courses offered by academic departments and some from special courses developed only for nursing students or for students in a group of departments needing similar materials. Some may be incorporated in the professional nursing courses.

The outline indicates the kinds of knowledge needed in basic education for professional nursing functions; the purposes for which this knowledge is valuable; and the continuity of each sequence throughout the program. For successful integration this continuity must exist whatever the external structure of the program (Type I, II, or III).[1] The essential amalgamating element in the educational process is the application of knowledge from every source to the science and art of nursing. This involves coordination among the sequences as well as progression in each, and in total understanding of patient needs and skill in nursing care. The arrangement of the sequences has no significance except that the central position of the major suggests its relationship to the others. No implications are intended with regard to chronology or importance.

It is significant that the four areas of learning that contribute to the major in nursing correspond closely to the groups ordinarily included for distribution of general education in most colleges. The alignment is somewhat different from that in a liberal arts program, where there are fewer specific requirements but

[1] See p. 106.

TABLE 7. SUGGESTIONS FOR CONTENT OF A BACCALAUREATE CURRICULUM IN NURSING

Knowledge from physical and biological sciences	Communication skills	The major in nursing
Materials in basic science courses Anatomy and physiology Microbiology Chemistry Physics *Materials from allied professional fields* Nutrition Pharmacology Medical and public health principles Cumulative increase of knowledge in above as applied and interrelated throughout program in the nursing care of patients Application of sciences in understanding physical conditions, diagnostic procedures, asepsis, medications, diet, treatments, and patient reactions, for safety and intelligent fulfillment of nursing responsibilities in modern health care	*Materials in basic academic courses* English composition Speech Development of skills also in: Reading rapidly and accurately Listening and understanding Communicating supportive attitudes through voice, manner, and handling of patients as well as in what is said Instruction and continuous planned practice in: Writing clear, concise, accurate reports Talking with patients easily and skillfully Giving clear explanations and demonstrations Teaching patients and their families procedures and health care Oral and written case studies Skill and confidence in intra- and interprofessional communication in personal and group conferences Development of professional competence in speaking and writing	*Materials in professional nursing courses* Introduction to nursing Diet therapy Therapeutics Medical and surgical nursing Pediatric nursing Obstetric nursing Communicable disease nursing Tuberculosis nursing Psychiatric nursing Public health nursing Nursing as a profession: History Responsibilities in modern society Integration of preceding and concurrent courses in all related areas in all the nursing courses, with added medical and nursing principles and development of expert techniques Development of competence and responsibility in expert total care of patients and in leadership of a nursing team

Horizontal as well as vertical integration throughout.

Progressive development of student's ability to understand patient needs, interrelating psychological, social, and physical factors; of her personal qualities and interests; and of her skills in communication and human relationships.

BACCALAUREATE CURRICULUM IN NURSING

Knowledge from social sciences		General education
Materials in basic academic courses Sociology: General sociology The family The community Social anthropology Understanding the patient—as a member of a family and a community Understanding differences in cultural, religious, social, and economic backgrounds Understanding the family as a unit of health and of nursing care Using knowledge of the community and its resources to help patients and families Integration throughout of sociological and related public health principles to promote prevention, cure, recovery, rehabilitation, and continued health Application of accumulated knowledge and skills in public health nursing	*Materials in basic academic courses* Psychology: Developmental psychology including guided experience with well children Psychology of learning *Materials from allied professional fields* Dynamics of personality Psychiatric principles Understanding the patient as a person: Stages of development in children Normal characteristics of various stages of life Emotional problems Personality differences and difficulties Minor deviations Serious maladjustments Development throughout of therapeutic attitudes, judgment, and skills in patient care Development of skills in interpersonal relations with patients, their families, and all co-workers Development of personal maturity Application of accumulated knowledge and skills in psychiatric nursing	*Materials in general academic courses* History Economics and government Philosophy and religion Literature Art and music Foreign language Courses chosen primarily for stimulating teaching and breadth, to open new vistas Courses should be appropriate for student's stage of advancement, planned for and shared with others of equal maturity (not freshman courses in the senior year) Inclusion of some upper-class courses from above fields, such as: International relations Social and intellectual history Ethics Masterpieces of English or world literature Appreciation of art or music

At least half the content (the equivalent of two academic years) in courses other than nursing, of "general" educational value as well as contributing to professional development.

Variations in selection and distribution of specific content.

the breadth and variety compare favorably with other undergraduate programs.

Profession-Related Social Sciences

Because of the close nature of the relationship between nurse and patient the nursing profession has always realized how important human factors are in successful therapy. Concern for the patient's comfort and happiness is considered the essence of good nursing practice. Unfortunately, however, with the rapid development after World War I of the biological and physical sciences and of mechanical therapeutic devices, emphasis in the preclinical or preprofessional period came to be centered upon these sciences at the expense of other important kinds of knowledge. In clinical practice insistence upon technical efficiency, including the use of a never-ending stream of new machines and procedures, made cultivation of human relations incidental to the training of skilled technicians. In nursing, as in other professions that serve individuals directly, society is today feeling the impact of this tendency.

Since the resources of higher education have become more readily available and psychiatry, psychology, sociology, and social anthropology have been increasingly recognized as providing new insights into human problems, nurse educators have become conscious of the need for developing greater understanding of factors in interpersonal relationships. The difficulties of carrying out policies recognized as important for the education of nurses are illustrated, however, by the slowness with which they have been adopted. *A Curriculum Guide for Schools of Nursing*,[1] published in 1937, recommended 165 hours of teaching in the social sciences (the equivalent of about 10 semester credits) as a minimum standard. But in 1949 that standard was met by only 70 per cent of the collegiate schools and 20 per cent of the hospital schools.[2] Even then, as previously mentioned, courses that cannot rightly be classified as social science were included in these computations. Lack of time and of qualified instructors is the chief reason for this situation. However, social aspects of nursing have been increasingly emphasized in the leading schools even when formal courses in the social sciences were unavailable. In the best college-level programs where such opportunities exist, more courses in sociology and psychology are being included, and the principles integrated with the theory and practice of nursing throughout the curriculum, so that they are an all-pervasive influence in developing therapeutic attitudes toward patients, and skills in meeting their needs. The dean of a medical school remarked in a conference with the writer that nursing was outdistancing medicine in this educational emphasis.

[1] National League of Nursing Education, New York, rev. 1937, pp. 192–292.

[2] West, Margaret, and Christy Hawkins, *Nursing Schools at the Mid-Century*. National Committee for the Improvement of Nursing Services, New York, 1950, p. 29.

Sociology and Social Anthropology. The fields of sociology and social anthropology provide a foundation for understanding patients as social beings whose attitudes and reactions have been conditioned by their social environment. Carefully selected materials from the reservoir of knowledge concerning the origins and development of human society, social institutions and the dynamics of social change, economic, social, religious, ethnic, and racial factors in human well-being; and diverse cultural patterns help the student recognize some of the fundamental differences among people. They may help her understand also that she herself is conditioned by the social environment in which she has lived. She may realize the natural tendency to interpret the reactions of others in terms of her own experience, and consciously try to adapt herself to their point of view with objective and sympathetic understanding. A sociological foundation may aid her in the therapeutic setting to deal constructively with the emotions of a young Italian, the reserve of a New Englander, the Catholic's need for his priest, the desolation of an elderly Jewish woman who is separated from the closely supportive family group, the aggressiveness and distrust of an adolescent from the city streets, the feeling of betrayal in a sheltered child ousted from the security of home.

An understanding of the powerful influences for good or ill of family relationships; of the problems of families in different strata of society; and of the effects of harmony, conflict, or over-

dependence in marital, parent-child, or sibling situations assists the nurse in discerning the needs of various patients in relation to their adjustment or maladjustment to the crisis of illness and to its aftermath in the home environment.

For those engaged in public health nursing or charged with responsibility for planning public health programs, knowledge of the community and its institutional composition is indispensable. Such nurses need to learn sources of data about any community, urban or rural, to which they may go. Knowledge of the community is also useful to bedside nurses. One hospital staff nurse said that she frequently could picture quite accurately the home conditions of a patient just by knowing his address, and that being aware of his environment helped greatly in teaching him how to take care of himself after he left the hospital.

Society would be benefited if every college student could gain understanding of these socially determined differences among people, of family relationships, and of community conditions. Sociology departments can make invaluable contributions to general education in these areas, as well as to the preparation of groups that have special responsibilities for public welfare. Some departments are so exclusively designed to meet the needs of students wishing to major in sociology that courses are unavailable or too technical for those who do not have time for a complete series. However, many departments now provide courses well adapted to serve the nursing student and similarly desirable for others outside the major group, namely, an introductory or general course occasionally including some fundamentals in social anthropology, a course in the family, and one in the community. Undergraduate courses in social anthropology, unfortunately, are not always available, and even when one does exist it may have to be omitted for lack of time in a nursing curriculum.

The general sociology course should precede or coincide with the introduction to nursing. The course in the family is also basic, since the care of every patient should include consideration of the home situation. Its relevance to the study and practice of obstetric and pediatric nursing is evident. The place of the course in the program affects the extent to which there may be direct application of theory to real situations. Usually, when there is a choice between the course for sociology majors and a more or less popularized course in marriage and the family, often emphasizing boy-girl and courtship relations and marital adjustments rather than the family as a social unit, the major course is preferable for nursing students. The course in the community should precede the experience in public health nursing. Departmental faculty members should be consulted concerning the specific content and relative merit for nursing students of various offerings in the department of sociology or the school of social work, such as community organization, urban sociology, rural sociology, fields of social work.

The integration of sociological knowledge should be continuous in every part of the student's experience, in her earliest contacts with patients, in her orientation to the community, in the outpatient department, in field trips and home visits, in the constantly guided application of theory to the interpretation of the actual needs of patients and families, and in the final experience in public health nursing. Social factors relate to prevention, care, recovery, rehabilitation, and continued health. The whole sequence of interrelated classwork and practice should be planned so far as possible by the nursing and academic faculties cooperatively to provide sound bases for understanding, judgment, and appropriate action and to stimulate interest and a sense of social responsibility.

Psychology. Similarly, the courses in psychology should be chosen for their most fruitful contribution to the understanding of individual persons and their interrelationships. Psychosomatic medicine is in its infancy as a clearly defined method of combining the knowledge and techniques of psychology, psychiatry, and related social disciplines with those of biological, physical, and medical science in the treatment of the patient as a complete human being. Moreover, until very recently, there has been little emphasis upon these aspects of disease in general medical education.

> "Consider the patient as a person!" This highly implicit precept was generally offered to the medical student of twenty years ago as

> his sole introduction to the social aspects of medicine. In most schools it was an empty platitude except in isolated instances, and naturally so because it was left dangling without the support of generally applied instruction by clinical teachers. If it had any meaning to the medical instructor himself, he seldom revealed a sense of responsibility for its elucidation. The social implications of the phrase acquired significance only after years of private practice during which the physician for the first time faced the realities of social and environmental factors in relation to his patient.[1]

The development of understanding and skill in these areas has therefore been variable, depending upon the individual physician's interest, self-education, and enlightened appraisal of his experience.

However, there is currently a broadening awareness of the need. The recommendations in the report just cited include: (1) the requirement that premedical students be as thoroughly grounded in the social sciences as in the natural sciences; (2) better orientation of the student during the preclinical years and the entire course to the physician's responsibility in understanding the social implications of illness and dealing with relevant psychological, social, and environmental factors; and (3) early and continuous application of knowledge and understanding in these areas in medical education.

A recent visitor to a series of group discussions of the medical staff in a large general hospital was surprised to find that most of the time was spent in analyzing and discussing methods of dealing with the mental, emotional, and social factors in the patients' conditions. This emphasis is probably exceptional, however. Some medical schools give only lip service to the importance of understanding these aspects of disease and health. In one, the writer was told that while the catalogue advocated the inclusion in premedical preparation of more courses in the humanities and social sciences, in actual practice the admissions committee gave preference to candidates with heavily weighted natural science backgrounds. Nevertheless, a distinct trend is evident toward

[1] *Widening Horizons in Medical Education:* Report of the Joint Committee of the Association of American Medical Colleges and the American Association of Medical Social Workers. Prepared by Jean A. Curran, M.D., and Eleanor Cockerill. Commonwealth Fund, New York, 1948, p. 3. Reprinted by permission of the Commonwealth Fund and Harvard University Press, Cambridge, Mass.

recognition of the psychosocial as well as the physicochemical elements that a medical student must learn to interpret.

This development has important implications for nursing, as was suggested in the earlier discussion of supportive care as part of the responsibility of a professional nurse. She is expected to recognize and report to physicians symptoms of emotional tensions or mental distress, create an atmosphere conducive to ease of mind, inspire confidence in patients and a sense of freedom in discussing their problems, understand varying needs, contribute to positive attitudes that will promote recovery, and consult about constructive measures with appropriate members of the therapeutic team. The nurse shares with others in the health services the function of the medical profession, which is described by Dr. John Romano, professor of psychiatry at the University of Rochester School of Medicine and Dentistry, as acquiring knowledge and applying it "to prevent disease, to free man, and to help man to free himself, from the enslavement of pain, illness, and disability, and from the equally great enslavement of fear, prejudice, and neurotic restriction, in order that man may function to the maximum of his capacity as an intelligent, conscious, free human being."[1]

Dr. James S. Plant, in discussing the place of the nurse in *Personality and the Cultural Pattern*,[2] pointed to her peculiar position of being associated with crises, as is the doctor, but of having a more natural relationship with those she serves. While she is in a position commanding considerable authority, he said, and patients accept her advice, they do not "dress" for her, physically and mentally, as they do for the physician. Dr. Plant believes that the molding of personality is in the hands of those who are most closely in contact with the persons involved, and in this respect the opportunity of the nurse exceeds that of the doctor.

The chief of staff in a pediatric unit recently said he thought that the atmosphere created by a remarkable nurse supervisor with a broad understanding of child development and general

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psychology, and the attitudes she helped her co-workers develop, contributed more to the children's happiness and progress than any physical treatments. In many cases diseases are incurable, but gaiety and courage lift the hearts of both the children and their troubled parents, and help immeasurably not only while the patient is in the hospital, but afterward as well. Regaining physical or mental health, or the favorable adjustment to permanent limitations, such as heart disease or the crippling effects of poliomyelitis, may largely depend on the attitudes of the child and those in his home environment.

A specialist in child development stated in a conference with the writer that even the premature infant, almost too fragile to be touched, needs in some way to be made to feel the warmth and security of love, if he is not to develop merely as a little physical mechanism. Symptoms of illness such as vomiting, for which doctors could find no physical cause, have been diagnosed as indications of emotional malnutrition and have been cured by "t.l.c.," now a familiar prescription meaning "tender, loving care." Nurses who understand and want to minister to this need are able not only to prevent such unfavorable reactions but also constantly to contribute to the positive well-being of the babies in their charge.

The head of a diabetic clinic testified in a similar conference that collegiate nursing students were making an important contribution to his work. They sit unobtrusively in conferences between doctor and patient, observing the patient and taking notes. Then they conduct follow-up interviews, more leisurely than is possible for the doctor, and their outgoing friendliness and understanding, patience, and skill in creating a permissive atmosphere often enable them to discover significant factors that are interfering with the patient's progress, such as departures from diet unacknowledged to the doctor because of awe or fear, personal anxieties or unhappiness, misunderstanding of directions, language difficulties or unadmitted deafness, or home conditions that make a dietary and hygienic regime difficult to follow. The doctor finds the students' reports of these interviews extremely helpful in his subsequent handling of the case.

Members of the nursing service staff in a general hospital have found that the collegiate students who have the clinical practice in their courses there can often help with emotionally disturbed patients. Graduate nurses turn to them for assistance in such cases.

What portions of psychology would be most useful in preparing nursing students to make the maximum contribution of which they are capable to the welfare of patients and morale of co-workers? A member of the psychology department in a leading university has studied this problem intensively in relation to selecting the most valuable content for a course in psychology she conducts for graduate nurses. The students are a highly selected group of experienced nurses, whose basic program in a hospital school included little or no study of psychology. Their awareness of need for the understanding and skills they lacked has sharpened their appreciation of the enlightenment and confidence they are now gaining. The content is more advanced than would be suggested for the early years of a basic collegiate program in nursing, but the basic elements are the same.

The indispensable component in a sequence in psychology for nursing students is, in the opinion of the psychologist referred to in the preceding paragraph, a thorough course in personality development and social adjustment, emphasizing emotional development from birth through childhood and adolescence into maturity. An understanding of normative developmental trends, the dynamics of individual behavior, and the problems and methods of adjustment provides means for interpreting elements in all behavior, positive and negative reactions, and the interrelationships of physical growth, learning, social influences, and emotional factors in the process of maturation. These fundamentals help the nurse in adjusting to her profession and in aiding the patient adjust to his illness.

Another important area of study is the psychology of learning, in which the view should be broad and integrated, including different types and applications. The nurse needs to know the underlying principles of effective teaching, for she is constantly explaining how and why things are done. Also, she needs to con-

sider the perceptual field of the learner and know how to use appropriate methods in a wide variety of situations.

Still another kind of knowledge especially important for the nurse to have is that of methods of evaluation. Medical progress has been achieved through scientific experimentation, checking of results, and development of new theories, techniques, and procedures. The nursing profession, both in its relation to medicine and for advancement of its own proficiency, requires constant adjustment to change, and acceptance of knowledge and custom as subject to evaluation and progress. Skills in defining aims, devising means for their attainment, measuring results, and attaining redefined goals are essential. Consideration of relative values is often involved; for example, efficiency is a goal that, though important in itself, should be subordinated to less tangible purposes in human relationships. Familiarity with psychological and sociological techniques for measuring such subjective factors as attitudes, group morale, and qualitative as well as quantitative results is needed for the continuous improvement of nursing services. A course in social psychology conducted in either the sociology or the psychology department, or taught jointly, may provide some of these materials.

In some universities a course in emotional development or the dynamics of personality is given by a psychiatrist rather than in the psychology department. The professor may be a member of the staff of the university health service or of the medical school, and for nursing students the course may be preliminary to, or concurrent with, clinical practice. Occasionally a general survey of all periods of life is followed by a more intensive study of child growth and development. Experience with well children, including expert guidance of students in their observation work and participation in a nursery or play school and in well-baby clinics, is generally considered an important prerequisite for pediatric nursing.

The complexities of human behavior, the unpredictable variables, and the dangers of superficiality and misinformation, increased by current popularized dissemination of ideas about psychology and psychiatry, emphasize the importance and the difficulties of providing as many young people as possible with sound fundamental principles for the development of understanding and good judgment. For the nurse these qualifications are among the most essential. Conferences between the faculties of the nursing and psychology departments with a psychiatrist and a psychiatric nurse as consultants are perhaps the best instrumentalities for arriving at satisfactory solutions with regard to course content and methods of teaching.

Biological and Physical Sciences

The importance of the social sciences in no way reduces that of the biological and physical sciences; they are obviously essential as a foundation for nutrition, pharmacology, medical principles, and nursing. Increased understanding of the interrelationships of physiology, bacteriology, chemistry, and nutrition, and the application of principles of physics in many treatments makes thorough and integrated scientific knowledge of the utmost importance for competent professional nursing. The perplexing problem is how to include enough of these sciences, even though content be most carefully selected, without crowding out other vitally important educational experience.

According to *Nursing Schools at the Mid-Century*, the recommendations made in 1937 in *A Curriculum Guide for Schools of Nursing* have been more fully met in the area of the biological and physical sciences than in any other. However, the amounts recommended, equivalent altogether to only about 12 semester credit hours, are extremely small according to college standards.

In the consecutive type of program, Type I, which requires two years of general education for admission to clinical preparation, biology or zoology and general chemistry are usually required as part of the prenursing curriculum. Therefore, all students have a foundation in these for anatomy and physiology, microbiology, and organic and physiological chemistry, which are taught in the preclinical period.

In the correlated type, Type II, the first year, which generally consists of two semesters and a summer session, or of four quar-

ters, is used for essential foundation materials from the academic departments and for a concurrent introduction to nursing that begins the process of correlation. As has been noted, this program is usually condensed into four years and general and profession-related academic subjects are continued throughout the period. This necessitates a concentration of prerequisite content, which in Type I may be spread over the two preprofessional years followed by the intensive preclinical period of six months. Arranging for instruction in the natural sciences presents a particularly difficult problem, because the courses offered that are designed primarily for majors in the respective departments generally do not serve the best interests of the nursing students. They need substantial courses that are more thorough than those given in the typical hospital school in anatomy and physiology, microbiology, and physiological chemistry. The usual roads to these subjects are, however, too long and the emphases and applications irrelevant for their purposes. For example, some chemistry departments believe that the only respectable route to biochemistry is by way of a year of general chemistry, sometimes qualitative or quantitative analyses, or both, and at least a semester of organic chemistry. Similarly a full year of biology or zoology is often required for any other work in the department, and courses in human anatomy and physiology, if given at all, are often conducted on the advanced level. A typical university catalogue prescribes biology, chemistry, and bacteriology as prerequisites for microbiology. Physics courses frequently require college mathematics, or more high-school mathematics than the average student has had. If prospective nurses took all these science courses in the prescribed sequences, there would be little time for anything else and the years of academic content would have to be greatly prolonged.

In a very few institutions the writer has found regular courses favorably arranged for nursing students. For example, in one university, organized on the quarter system, the following sequences are available:

In biological science: zoology, one quarter; anatomy and physiology, two quarters; microbiology, one quarter.

In chemistry: general chemistry, largely inorganic, one quarter; organic chemistry, one quarter; physiological chemistry, one quarter.

In nutrition: foods and nutrition, one quarter.

This kind of planning for the general student and for those needing the materials for some major other than science is rare but makes possible an arrangement such as the following:

	Quarter credits			
Subject	First	Second	Third	Fourth
English composition (perhaps both oral and written)	3	3	3	–
Biology or zoology	4	–	–	–
Anatomy and physiology	–	4	4	–
Bacteriology or microbiology	–	–	–	4
Chemistry	4	4	4	–
Nutrition	–	–	–	3
Sociology	3	3	–	–
Psychology	–	–	3	3
Nursing	2	2	2	2
Total	16	16	16	12

A semester arrangement with an eight-week summer session might be as follows:

	Semester credits		
Subject	First	Second	Summer session
English composition	3	3	–
Anatomy and physiology (Prerequisite high-school biology)	4	4	–
Bacteriology or microbiology	–	–	3
Chemistry (Prerequisite high-school chemistry)	4	4	–
Nutrition	–	–	3
Sociology	3	–	–
Psychology	–	3	–
Nursing	2	2	2
Total	16	16	8

This is a stiff freshman course but infinitely better than the short, crowded preclinical period offered in the hospital school or in some Type I collegiate programs. The student load and time

for study is the same as in other college programs. No more than two laboratory sciences are taken at a time and the sequences, whereby microbiology and nutrition follow the other biological and the chemical sciences, and psychology follows a semester or a quarter of anatomy and physiology, allow for effective integration. Many obstacles to curriculum planning appear in individual institutions and adjustments have to be made, such as postponing part of the academic content until the sophomore year and introducing more nursing content if the medical center is adjacent, or more general education if the profession-related courses can be arranged for later.

In some universities special courses have been set up for nursing students only: a two-semester or three-quarter course in anatomy and physiology, including a brief introduction to the methods of biological science and to the lower forms of life; and a course of the same length in chemistry, including carefully selected content in inorganic, organic, and physiological chemistry to give the maximum understanding of basic principles. A professor of biochemistry in a university medical school, who had planned and taught such a course, recently reported in a curriculum discussion that he considered it very satisfactory. He had previously attempted to cover the essentials in a one-semester course for diploma students in the university hospital school of nursing, and had found that he could not teach them enough in the time allowed to make the course of any real value. He thought that a large portion of the material ordinarily included in a year of general chemistry was unnecessary for nonmajors but that a limited, wisely chosen amount of inorganic chemistry, followed by carefully selected materials in organic chemistry and biochemistry produced excellent results. Such a course doubles the time usually allotted in hospital schools, but takes only about two-thirds of that required in a nursing curriculum of Type I for the customary year course in general chemistry followed by a course for nursing students in biochemistry. Thus, a semester is saved for something else.

Some institutions with established courses like those previously described have come to realize their superiority for general education purposes to the traditional introductory courses in biological science and chemistry, which give too limited a view of the field to students who can take only one course in each science.

The situation in physics is similar. Only a short course is possible, if any, and it becomes a question of providing special preparation for nursing students or preparation that will meet the needs of a larger number. Where such a course is unavailable or time cannot be found for it, the necessary principles of physics can be taught in connection with nursing procedures.

Problems vary also with regard to nutrition. Sometimes the course offered by the home economics department involves prerequisites in foods and cookery that are unnecessary for nursing, or too long for inclusion, or both. Sometimes a special course is provided, preferably one designed to serve other groups as well. In some places courses in nutrition, which are valuable to the general as well as the nursing student for understanding the relation of diet to health in personal and family life, are being arranged so that students who can pass a test in cooking are not required to spend time learning the processes of food preparation.

Often a course in bacteriology is available that can be shared with other students. Courses in microbiology are less often provided, but, if necessary, requisite materials in microbiology can be added in the professional program to a foundation in general bacteriology.

Postwar discussions of general education are effectively calling attention to the fact that the majority of students in beginning courses in most fields are nonmajors and that their interests deserve consideration as well as those of potential specialists. There is also a reaction against creating special sections of courses for special groups: chemistry for science majors and premedical students, for engineers, for home economics students, for nurses, for dentists, for pharmacists. This policy is possible only in large institutions and is usually uneconomical. It also results in early separation of students from each other, with the narrowing of interests that generally accompanies narrowing of applications. Thus, the purpose of shared experience and opportunity for intercommunication among groups about their divergent interests is

defeated. Although it is difficult to rearrange materials so that an initial course with illustrative applications in various fields can be offered to several groups of students, some professors believe that it is not impossible to do so. Specialized content can be introduced later.

There appears, however, to be a particularly strong feeling among the majority of natural scientists that modifications of courses for nonmajors, involving departures from the traditional patterns in major sequences, means "watering down" the content for vocational purposes. This feeling, in turn, sometimes leads to a reluctance to teach such courses and possibly to their assignment to less experienced or less competent instructors. Frequently encountered also is the attitude that nursing students have inferior scholastic ability. The same attitude was earlier expressed toward students in home economics and physical education when such departments were new. It has been justified in some instances, though by no means always, when so-called "service courses" have been offered to students in hospital schools. Actually, however, in most of the present authentically collegiate programs, nursing students are perhaps more carefully selected than others, on the basis of nursing tests and personal qualifications, as well as the usual criteria for admission. They compare very favorably with other students, both in their initial rating on entrance tests and high-school records and in their college work. Indeed, they must be able students to meet the exacting requirements of their course. Moreover, they usually have strong motivation, so that they make a determined effort to master difficult material.

In situations where special courses in the sciences for the nursing group appear to be the best solution, some very interesting experiments in integration are being carried out. The method of correlating the content and timing of courses that remain separate units may be effective through discussion in interdepartmental conferences and making courses in physiology, chemistry, microbiology, and nutrition mutually contributory and free from unnecessary overlapping. A more extensive plan for the synthesis of the biological and physical sciences is being evolved at Boston

University. The faculty in nursing and in the respective sciences are developing a course called "human ecology," which deals with the interrelationships of organisms and their environment, both internal and external.[1] A detailed description cannot be given here, but the purpose is to select and synthesize the most valuable materials for nursing from anatomy and physiology, chemistry, microbiology, elementary pathology, sanitation, and physics in an inclusive and effective foundation course totaling about sixteen semester hours. It is hoped that teaching the essential content in less time and making more meaningful the interrelated functions of man as a whole will serve the double purpose of providing a strong basis in the natural sciences and freeing class hours for greater breadth of educational experience in other areas.

Communication Skills

English composition is universally recognized as a basic tool for all college courses, but has never been included in hospital school curricula. As a result many nurses have been badly handicapped. Unfortunately, the deficiencies of many high-school graduates are only too well known, deficiencies to which various causes contribute.

College courses in English vary, as in other subjects, and even the best cannot work miracles in correcting bad habits or in establishing good ones. However, much can be accomplished by expert teaching of the fundamentals of clear and correct writing and speaking, as is being demonstrated in many institutions. The current emphasis on these skills as essentials for success in business, industry, and the professions is helping students realize their importance and is stimulating educators to reevaluate their methods. For example, in one state university an intensive study has been made of the results of the freshman English course. Students are divided into three groups on the basis of an entrance test and are given thorough drill on the level of their preparation and ability. They may be promoted or demoted from one group

[1] Bowen, Eleanor Page, "Synthesis of the Biological Sciences," *American Journal of Nursing*, vol. 51, July, 1951, pp. 477–479.

to another at the end of each term according to their achievement, but they have to continue the course until they have met satisfactory standards. At the end of a year of concerted effort, it was found that all students had made significant progress the first term, but many merely maintained these gains or even regressed during the second. This was due to a relaxation of effort on the part of the faculty, reduced requirements in writing, and the introduction of more reading, which both teachers and students preferred. This situation has now been corrected.

The university is also attempting the very difficult task of securing cooperation from all faculty members in helping students maintain and increase their communication skills throughout the college years. It has a system by which any student who shows deficiencies in expression in any course is referred to a clinic for remedial measures. Student effort and faculty cooperation are stimulated by the requirement of satisfactory performance on a test at the end of the sophomore year and another before graduation.

A method of teaching composition found effective in another institution has the unique virtue of providing constant practice for students, without the heavy burden of paper work for the teachers. The students are required to write a paragraph every day. In class one of them is asked to state briefly what he intended to convey in writing. The paragraph is then projected onto a screen for detailed analysis and constructive criticism by the teacher and the class. When sentence and paragraph structure is thoroughly mastered, the class advances to one-page compositions, subjected to the same technique of criticism. Stimulating leadership by the instructor and the judgment of fellow students, expressed in free and good-natured discussion, have brought astonishing improvement in the clear, correct, and effective presentation of ideas.

This excellent teaching device might be used to assist nursing students with the writing of patient records and hospital reports, where clarity and conciseness have special value. But nurses need preparation that extends far beyond the written word. As members of nursing faculties recognize, skill in communication is of

major importance for the nurse in her daily rounds, in talking with patients and their families, explaining, reassuring, teaching; in her relations with hospital personnel; in conferences and demonstrations; and for participation in professional activities, such as discussions and policy-making on the local, state, or national level in nursing organizations, and for sharing in community projects as a responsible citizen.

Whether a separate course in speech can or should be included in the curriculum or in an individual student's program depends on circumstances. Some speech courses emphasize phonetics and vocal techniques useful in dramatics; others are concerned with formal public speaking. In this field as elsewhere, the requirements of the nursing student correspond closely with those of others not specializing in speech or dramatic art. She needs to develop a pleasant speaking voice, clear enunciation, and ease in contributing to a discussion and in giving a clear, well-organized exposition of a subject or demonstration of a procedure. These are the foundations for skill in public speaking just as ability to write a good paragraph is the basis for that of extensive writing. If the student has speech defects, she should be helped to overcome them, but remedial work is usually provided in a clinic rather than in a course.

Another area in which the nursing student may require help is reading. An increasing number of institutions offer remedial reading courses to improve speed and comprehension. A slow reader is at a great disadvantage and hence such a handicap, whether due to physical or psychological causes, should be discovered early and appropriate measures taken. Fortunately, diagnostic and guidance procedures for this purpose are gradually improving in many colleges and universities.

General Education

Though directly profession-related, courses in the natural sciences, the social sciences, and communication also contribute largely to the general education of the student. The so-called "requirements for distribution," that is, for a balance of education outside the major subject, generally include a prescribed

minimum of content in each of these areas. This content may be in general education courses required of all students or in a selection of departmental subjects. Requirements also usually include history and government and the humanities group, comprising such fields as literature, the arts, philosophy, and religion.

Some educators think that the humanities, as a means of communicating the culture of the past to oncoming generations, should constitute most of the content of undergraduate college education. They can, however, be given only limited space in a curriculum that requires so much professional and related material. Such courses as can be included should, therefore, be chosen with care, whether by the faculty as prescriptions for all students or by individual students under competent guidance. The most important criteria for selection of courses should be the inspiring quality of the teaching, and the breadth of understanding and vision they impart. No subject, in and of itself, is liberal or purely technical. If not properly taught, even literature may take on the form of a technical subject, involving rote-learning of biographical data and of critical opinion, and analysis of details and techniques, rather than a means of awakening and broadening the mind, communicating an appreciation of the power of ideas, of the complexity and poignancy of human problems, and of human personality and character in their infinite variety, as interpreted by masters of the literary art. Students soon become excellent judges of which courses widen mental and spiritual horizons, and deans and faculty members naturally have informed judgment concerning such courses. Unfortunately, there is always academic conflict between the advocates of content which "everyone should know" and those who urge the importance of free election according to the student's individual interests. Nevertheless, a middle ground of freedom of choice is possible, which permits students to profit greatly if selection is based on thorough inquiry and sound advice about the specific courses and who teaches them.

The need of the nurse for inner resources, for stimulating interests outside her job, and for social contacts based on shared cultural experience is very great. Absorption in her work and

isolation from the community that comes from being on a hospital staff and sometimes living in a residence for nurses too often result in extreme narrowness of perspective. This situation should be ameliorated both for the sake of the nurse's own development and happiness, and for that of her maximum contribution to her patients, co-workers, profession, and community.

Principles very similar to those relating to the humanities apply to history and government. An intelligent grasp of contemporary problems and constructive participation in their solution are an imperative, though often neglected, obligation of every educated person. Members of a profession representing the public welfare particularly need understanding of the historical backgrounds of national and international issues. They need knowledge of governmental organization; of the meaning, processes, and aims of democracy; and of practical methods of democratic action. Again, the time for acquiring even the rudiments of such understanding is infinitesimal in comparison with what would be desirable. Therefore, courses should be sought for their actual value in relation to these objectives and for a quality of teaching which makes them not only dynamic in themselves, but a stimulus to continued interest and self-education.

Where opportunities exist for learning to speak a foreign language by the direct methods developed during the last war, such a course may be one of the most rewarding of educational experiences. In an era when the improvement of intergroup relationships and international understanding is urgent for the very survival of democracy if not of civilization, the importance of language as a tool of communication is often not realized. Acquiring even limited ability to use a tongue other than one's own awakens the mind to new understanding of grammatical structure, derivations and connotations of words, and distinctive characteristics of peoples as expressed through their language. Learning one language in a group with a common foundation, such as the Romance languages, facilitates the mastery of others. Moreover, for the nurse who practices in parts of the country or in large cities where the native language of many of her patients is Spanish, knowledge of that language is particularly desirable.

Unfortunately, the crowded curriculum allows too little time for a student to acquire sufficient facility to be of much value in a new language by the ordinary classroom methods. Continuation of study begun in secondary school is advantageous, especially if conversation courses are available or the stage of advancement allows study of the literature for understanding a foreign culture.

Finally, the desirability of including in the upper years opportunities for studies unrelated to nursing should be emphasized. Students are usually more aware then of interests as yet unexplored and of the social value of "general culture." Relief from intensive preoccupation with professional preparation and often almost exclusive association with groups in the health field is particularly important as a liberalizing influence in the later stages of development for the varied aspects of adult life.

The Major in Nursing

The knowledge, ideas, attitudes, and interests a student acquires from well-chosen courses in fields outside the major are indispensable for professional education. However, the development of power to make effective use of these resources depends upon the success of the major courses in teaching methods of application. Unlike general education on one hand and technical training on the other, professional preparation is not primarily concerned with knowledge for cultural purposes or with skills and procedures in themselves. Neither is it merely a combination of the two. Its essential and distinctive function is developing abilities to utilize knowledge derived from various sources as a basis for skillful performance to achieve specific goals. The student is taught to solve problems by analysis of component and contributory factors, selection of relevant principles, judgment in their application, and facility in procedures based on the principles. Such education enables the nurse to understand and apply an increasing body of theory and knowledge of techniques, and develops the power to adapt and combine various concepts and skills in meeting diverse and complex situations. It develops also confidence and independence within well-understood limits and a strong sense of personal and professional responsibility.

The sequence of courses constituting the major in nursing in a baccalaureate program is the instrumentality by which the distinctive functions of professional education are carried out. Here the learning from related fields is focused and combined with cumulative knowledge and skills in nursing.

Since the major sequence is the core of the program and the qualifications of graduates are chiefly determined by the extent to which their abilities are activated in the field of concentration, the principal responsibility of a college or university in undertaking to prepare personnel for the most skilled and inclusive general nursing functions and for graduate specialization is to provide a high quality of education in the major courses. As suggested earlier, the fulfillment of this obligation is implicit in granting a degree assumed to be a credential of professional competence.

The tentative outline of content for the major in nursing on page 142 merely indicates the areas in which the learning processes take place. Nurse educators agree generally that a basic collegiate program should give adequate preparation for the beginning practitioner in all the types of nursing indicated: medical and surgical nursing, maternal and child care, communicable disease including tuberculosis, psychiatric and public health nursing. However, new approaches to curriculum development, reevaluation of objectives and methods, and experiments to produce more satisfactory results are increasingly advocated. The traditional pattern described in Chapter 2 persists in the majority of hospital schools, and even in collegiate programs radical changes are difficult to effect because of the large amount of student service required. Nevertheless, many question the educational efficacy of stereotyped courses with limited content and primary emphasis on techniques, combined with practice in various nursing services, the duration of which is measured by time rather than by learning experience.

Dissatisfaction with methods that have failed to solve the qualitative and quantitative demands for nursing services is acting as a stimulant to constructive thought about nursing curricula. Extensive discussion has led to formulation of promising ideas in

several schools but freedom and means to test their value are, except in rare instances, only hopes for the future. As universities establish new schools of nursing and others apply to those that already exist the same policies as govern similar units of the institution, the number of excellent programs may be increased.

How should a major sequence of nursing courses in a baccalaureate program be developed?

Resources and Conditions

An indispensable provision is a departmental faculty sufficient in number and adequately prepared to organize and give instruction in the various courses of a complete curriculum, including classes, conferences, and supervision of clinical practice and field work. Also necessary are suitable facilities for instruction for all courses in hospitals and agencies, with assurance that the opportunities for practice are adequate. This implies a high enough daily average of patients in the respective services, sufficient variety of clinical experiences, and above all a fine quality of medical and nursing care. Good practice cannot be taught in an unfavorable environment where example conflicts with advocated attitudes and methods. Unfortunately, the vital importance of the quality of patient care which students will observe and share with other personnel is sometimes given little consideration. The reason is usually failure on the part of the educational institution to realize the variations in standards of different hospitals and even the need for thorough investigation. Not only the efficiency of administration, adequacy of staffing, and qualifications of personnel should be considered but also the temper of interpersonal relationships among and within participating groups, since democratic practices, mutual consideration, job satisfaction, and group morale strongly affect staff stability and favorable conditions for patients and for students.

Another essential for a good program, of sufficient importance to justify reiteration, is assurance of the interest and cooperation of the staffs of the hospitals and agencies providing the facilities in the promotion of educational purposes. This applies in a

hospital controlled and operated by the university that conducts the nursing curriculum as well as in hospitals and agencies with which the educational institution contracts for clinical and field-work opportunities. The long-established habit of regarding nursing students as workers, rather than as learners, necessitates this emphasis.

Problems of Adaptation to Collegiate Policies

Two basic principles require consideration in any attempt to solve problems of adaptation. One is that the students' weekly schedule should be planned with a view to achieving maximum educational results rather than on the basis of working hours. In general, student hours still conform to the prevalent work-week of employed hospital personnel, without allowance for study. Hours have been reduced with changing educational and labor policies but the method and purpose of planning schedules in most nursing programs are still radically different from college practice.

The second principle is that nursing courses should be organized in accordance with general policies of higher education as applied in the particular institution offering the curriculum. Descriptions of courses as given in the college or university bulletin should correspond to those in other departments in stating the subject matter, weekly time requirements, and credit so that they will be readily understood, and can be compared readily with other courses. A fundamental concept is that guided clinical practice and field work are as inseparable parts of nursing courses as laboratory hours are of science courses. It emphasizes not only the indispensable interaction of theory and practice but also the continuity of teaching and learning in both aspects of a dynamic subject such as nursing. It makes a clear break with the traditional system of classes apart from and often largely unrelated to work experience.

As previously stated, a credit unit in academic courses requires approximately 3 hours of work each week throughout a term for the average student (one hour of class plus about 2 hours of study, 2 hours of laboratory work plus one of study, or 3 hours of

laboratory work). A normal program of 15 credit hours is thus expected to require about 45 hours per week of student time. Course content and assignments are planned to accomplish maximum results while making fairly regular weekly demands upon students proportional to credit in the course. If the relation of student time to credit in nursing courses is the same as that mentioned, two standards must be applied to make the credit value equivalent to that in other fields: (1) An average of about 2 hours of preparation would be expected for each class and allowed for in the student's weekly schedule. (2) The amount of concurrent teaching in clinical practice and field work would be equal to that in a laboratory.

The first standard necessarily applies if the content and standards of nursing courses are to warrant collegiate status. Opinions differ, however, with regard to the best proportion of clinical practice to teaching and therefore to credit, because of the difference in conditions in a hospital or agency and in a laboratory. If practice in the care of patients is considered comparable to laboratory work and the students' weekly schedule and college year are equal to those of students in academic departments, the second standard necessitates comparable conditions. Constant teaching-supervision would be required, with each clinical instructor responsible for only a few students. This policy also assumes that achieving competence in nursing practice can be accelerated by continuous teaching.

Current opinion inclines to the belief that more extensive practice is needed to learn nursing skills than to apply theory and to learn laboratory techniques in a controlled situation without the variable human factors in a hospital ward. If so, the time allowance for each course that includes clinical practice and for the program as a whole must be greater than in other baccalaureate curricula.

Conditions in collegiate schools of nursing now vary widely. In some, clinical "experience" is still primarily a work rather than a learning situation and only administrative supervision is provided. Systematic instruction is almost wholly confined to classes. Under such circumstances credit should rightly be assigned only

to hours in class. In fact, status as a collegiate program is questionable.

In other institutions, teaching-supervision by clinical instructors is included but in a considerably lower proportion than the ratio assumed in laboratory work. In that case, the credit would be distributed. For example, if the year in the professional part of a nursing curriculum is 48 weeks, or three 16-week periods, instead of the customary 32–36 academic weeks, the 30 annual credits toward the usual requirement of 120 semester credits for the baccalaureate would be 10 for each period. Assignment of credit to courses should depend on actual teaching. That is, the 10 credits might be assigned as follows: normal growth and development of children, 3 credits—2 hours per week in lecture-discussion classes, with about 2 hours' preparation for each, 3 hours in guided experience with well children (student time, 9 hours per week); maternal and child care, 7 credits—3 hours of class work (student time, 9 hours); 4 hours of planned clinical instruction with 26 hours supervised practice (student time, 30 hours). Student's weekly schedule, about 48 hours.

The important distinction between clinical instruction and mere supervision is that the former is systematic and *adds* knowledge of principles and methods of application. It therefore requires the instructor's familiarity with preceding and concurrent classroom teaching, careful planning of specific content, to be taught in direct connection with patient care, and, if individual teaching is included, planning how equal benefits to all students will be assured. Supervised practice without systematic instruction is like supervised study and does not constitute a legitimate basis for credit.

Many variations are possible. If the principle is adopted that a nursing student's weekly schedule should correspond to generally accepted practice in other fields, the average requirement would be 45 to 48 hours including study, the time usually expected for the average student carrying a 15 or 16-credit program. Recognition is spreading that a schedule making no allowance for study time is not sound practice. It makes college standards for course content impossible and deprives students of opportunities for

extracurricular activities or employment that are available to students in other disciplines.

Only experimentation and evaluation of results can determine the correct proportion, as exclusive educational emphasis is made possible. In any case, the principle should apply that assignment of credit to a course is based on actual instruction plus provisions for student learning. Award of credit to students and accompanying grades are based on individual achievement through use of equal opportunities. The ratio of time to credit should be determined by faculty judgment as to educational needs and faculty responsibility in determining actual teaching hours, with care that credit and degrees in nursing are comparable in educational values to those in other baccalaureate curricula. If the number of credits is greater for the same degree, the implication is that each credit is worth less.

Faculty loads are also involved in the policies adopted. Weekly schedules for teachers of nursing like those of students have been determined by other than educational practices. Time has not been allowed for planning courses, preparation for classes, grading papers, or individual student guidance. Teaching as well as learning has been incidental to nursing service. Members of college nursing faculties should certainly have schedules for class, laboratory, and clinical teaching comparable to those in other departments of the institution. Maintenance of equal standards of instruction, aside from considerations of justice, makes such a policy essential.

Another problem of adaptation is arranging courses in nursing to correspond with college terms. Difficulties are presented by the traditional system of time blocks of irregular length, and regulations by state boards of nurse examiners based on minimum class hours in specified subjects, including many small units, and weeks of experience in differentiated services. However, increased flexibility in these regulations, so far as laws allow, is replacing rigid rules previously considered necessary to assure proper distribution. New patterns are frequently authorized by state boards if the standards of the schools proposing them assure no neglect of essentials.

Reorganization of Content

The foregoing adaptations are procedural and may even seem artificial, but in each case important principles are involved. The patterns they impose on a nursing curriculum, with the inherent educational concepts, differentiate it clearly from the typical hospital school program. The basic reorganization necessitated by full conformity to college policies may be regarded as an opportunity and a challenge. There is no more stimulating and salutary experience for a faculty than a complete reconsideration of materials and methods in relation to educational objectives. It may be compared to disassembly of a complicated machine, examining and realigning the most minute parts, perhaps discarding those that are rusty, cleaning and reshaping others, creating pieces and links to fit, and then reconstructing the mechanism to perform the same and added functions more effectively. The analogy fails because ideas in group thinking have vitality and possibilities of infinite variation singly and through interaction unlike parts of a machine, but the process of analysis and synthesis is similar.

The process of curriculum improvement has been going on for a long time in leading schools of nursing and, with emergence of actual or possible opportunities for free experimentation, some significant plans are being tried and others are under consideration. These include ideas of reorganization of clinical instruction, such as instructing students first in maternal and child care before introducing them to medical and surgical nursing in adult wards where the novice often encounters the most complex conditions, difficult procedures, and potentially traumatic experiences; or teaching them first the care of ambulatory patients, then that of patients requiring partial rest in bed, and finally that of the acutely ill; or first developing their competence in performing the simplest nursing tasks such as those of an aide on the nursing team, then the functions of each member, always in the team relationship to others, and finally those of a team leader having professional responsibility for the care of a group of patients, directly and through shared or delegated activities. In all these plans the emphasis is upon the development of the student's

knowledge, understanding, skill, and judgment through instruction and guidance in planned applications of theory.

Certainly no specific curriculum should be advocated by a layman. Moreover, continuous exploration of possibilities by faculties, experimentation with varied plans, and evaluation of results are necessary for maximum vitality and progress. Curriculum conferences have agreed that, at this stage of development in nursing education, any curriculum guide would encourage imitation rather than independent thinking and free exchange of ideas within and among groups. However, a current trend should be mentioned that affects planning, whatever the curricular pattern, and also furthers ready adaptation to college terms, namely, the trend toward integration of learning experiences into broad, inclusive courses. Educators deplore the results of fragmentary, disorganized learning in a multiplicity of separate subjects. Immature students are themselves seldom capable of seeing connections between isolated facts and ideas, and course divisions are likely to create mental compartments. It is true that the final integration must be done by the student. But the process needs to be facilitated by the organization of courses into sizable units of related content appropriate for each stage of advancement, and into a progressive sequence for cumulative learning. The faculty are best qualified to perform this correlating function. Indeed, it is their primary and continuing responsibility as a group, the fulfillment of which significantly affects the success of their individual efforts as teachers.

Much has already been accomplished in some schools in enlarging the scope of courses. For example, introductory courses tend to combine content previously taught in separate units, often with broadened fields of reference and emphasis on foundations for personal and professional development as well as for that of technical skill. Illustrative of this tendency are descriptions of two courses that have been formulated by the writer on the basis of statements appearing in several collegiate bulletins. The first is designed for the freshman year of the Type II correlated curriculum, and may be called an introduction to nursing:

> Discussion of the role of nursing as a profession in the promotion of individual, family, and community health with a general survey of its evolution; opportunities of the nurse to contribute to various aspects of health services—prevention and control of disease, care of the sick and disabled, health teaching and promotion of recovery, rehabilitation, and optimum health; and ways in which a student may develop habits, attitudes, and skills to make her contribution of maximum value. Illustrations of the relation of the natural and social sciences, nutrition, communication skills, and general education to her future work. The principles of posture and body mechanics, and guidance in their application. Importance of these principles and those of nutrition in maintenance of the student's health and for later interpretation to others. Guidance in utilizing psychological principles in understanding her own emotional reactions, in meeting problems of learning and of interpersonal relations, and in preparation for understanding patients' problems. Introduction to family and community needs and community resources. General principles of sanitary science as they relate to home and community problems. Application of sociological principles in understanding factors in individual and family situations. Visits to outpatient departments or clinics, to homes, and community agencies. Orientation visits to hospitals providing clinical facilities for the curriculum. Possibly an orientation to home nursing. Lectures, discussions, demonstrations, laboratory, field trips.

The second course is an introduction to patient care including such content as:

> Emphasis on the patient as a person and helping students meet his simpler nursing and health needs. Beginning the development of ability to understand attitudes and reactions in terms of effects of illness, emotional problems, individual differences, social, economic, racial, religious, and family factors. Guidance in studying a patient's chart for preliminary information about background and condition, in making the correct approach to him, and in establishing a favorable relationship. Simple interviewing techniques, skillful listening, alertness to significant revelations of physical or emotional conditions. Beginning simple health teaching. Accurate and concise reporting verbally and in writing. Functions of nursing and health teams, and appropriate attitudes and interpersonal relations. Skills in simpler procedures and techniques. Closely supervised care of patients. Integration of nutrition, drugs and solutions, pharmacology and therapeutics. Underlying scientific principles. Lectures, discussions, demonstrations, laboratory, patient-centered conferences, and supervised practice.

Such courses weave together strands from related fields, introduce new concepts of the social role of nursing and the personal responsibilities of the nurse in the community and in her relationship with patients, families and co-workers, and teach methods of applying principles and developing skills.

Other instances of integration may be found in some courses in medical and surgical nursing where medical principles and nursing principles and practice relevant to the various aspects of a disease requiring either medical or surgical treatment or both may be studied together. The course may include experience not only in medical and surgical wards but also in rehabilitation, emergency and operating rooms, outpatient clinics, and community agencies. Diet therapy, pharmacology and therapeutics, social and psychological aspects, health teaching, use of community resources through referrals, as well as the specific care of individuals by appropriate members of the nursing team, are related to patient needs in organizing and carrying out total nursing care based on physicians' orders.

Principles of Curriculum Planning

Alfred North Whitehead defined education as "the acquisition of the art of the utilization of knowledge." In his opinion guidance, if it is to be successful, should be adapted to the natural processes of the mental growth of the student. In the total plan and in each of the many learning experiences selected to contribute cumulatively to the achievement of desired objectives, he held there should be three stages which he termed the stage of romance, the stage of precision, and the stage of generalization. His discussion of the meaning of these stages can be summarized as follows:

> The stage of romance, or first apprehension—a general view of a new environment, topic, or problem with undefined possibilities inviting interest and exploration. Motivation and stimulus to initiative come at this stage if free imaginative activity is encouraged, and is not inhibited by a system that merely teaches facts and procedures, and rules for their use.
>
> The stage of precision—when the mind has been aroused to interest and desire for action and seeks means for knowing what to do, how, and why. This is the stage of acquiring exact knowledge of details and mastering specific techniques. Here the secret of success is pace, and the secret of pace is concentration. Quick acquisition of precise knowledge and immediate use of it is the way to promote retention.
>
> The stage of generalization—habitual use of detailed knowledge and skills, but emphasis on basic concepts illustrated by particular applications and on purpose. This is the stage of achieving "active wisdom" in free utilization of well-understood principles with confident skill. The excitement and satisfaction in this experience stimulate the desire for continuing growth in knowledge and power to apply it appropriately in the solution of challenging problems.

Too often what is called education is limited to the second stage and thus becomes mere training, for it does not "begin by evoking initiative and end by encouraging it" or develop the ability to meet the multifarious experiences of life and the changing demands of a profession with pertinent ideas and effective action.[1]

In a major sequence in nursing the student should be made conscious of the almost unlimited possibilities in the nursing profession, in the health field, and in her own potentialities for achievement and significant service. Experiences should be selected and suggestions made as to important aspects, but the student should be free to explore, to question, to seek answers among new ideas and experiences. The introduction to each course, each type of nursing, each patient's problem should present this sense of challenge and opportunity, followed by mastery of principles, applications and expert skills, and finally by the "active wisdom" and the larger view of possibilities still ahead.

The task of the faculty in developing a curriculum that will provide guidance, materials, and opportunities for such growth within the student may be compared to a continuous spiral ascent: agreement upon basic educational philosophy and general purpose, definition of specific objectives, selection and arrangement of learning experiences with suitable teaching

[1] Whitehead, Alfred North, *The Aims of Education*. Macmillan Co., New York, 1929. Reprinted in 1949 in the Mentor Book series.

materials and methods for each, trial of the plan in operation, evaluation of results in terms of objectives, reconsideration, partial or complete revision, further experimentation, reevaluation, and so on.

In a recent article, entitled "Distinctive Attributes of Education for the Professions," Dr. Ralph W. Tyler emphasized the importance of constantly comparing results with objectives, in individual learning experiences, in courses, and in the total curriculum. He pointed out that evaluation should not merely consist in testing knowledge and skills; it should also include careful, systematic appraisal of problem-solving in the professional situation and of professional interests and attitudes. Comprehensive evaluation seeks and utilizes all valid obtainable evidence: observations, interviews, questionnaires, samples of work, reports from competent judges in various relationships with the individual, and so forth. For appraisal of progress toward objectives in the program as a whole, he recommends for each class at least three such comprehensive reviews of results by the faculty, one early in their course, one near their graduation, and one after several years of service. Those during and at the end of the course enable the faculty to judge immediate effectiveness, to make improvements, and to guide individual students, while a review after graduates have had a few years of active practice gives evidence of permanence and continuity of learning. Statistical methods of systematic sampling and valid generalization from representative evidence make postgraduation appraisal practicable, but unfortunately such studies are as yet rare.[1]

Definition of objectives for a professional curriculum is inseparable from definition of the functions graduates should be prepared to perform and the degree of proficiency required for beginning practice. General standards agreed upon by a profession serve as guides to individual schools in formulating their own objectives, but the schools themselves and practicing members of the profession are the sources of these standards. Professional progress depends upon improvements initiated and demon-

[1] See Tyler, Ralph W., "Distinctive Attributes of Education for the Professions," *Social Work Journal*, April, 1952, p. 62.

strated by many individuals and groups and then integrated into a general movement.

The nursing profession is in the process of developing general standards for baccalaureate curricula through functional analyses, a survey of opinion concerning the abilities needed, proposed studies of levels of performance that students should achieve in various types of programs,[1] the work of the Boards of Review of the accrediting service, and numerous other activities. The functions and qualifications of the professional nurse need thorough reconsideration because of new demands upon her. However, significant progress is being made and every well-developed curriculum contributes to that progress.

[1] See Shields, Mary, "What's Next in Curriculum Study," *American Journal of Nursing*, vol. 52, September, 1952, pp. 1085–1087.

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The Problems Reviewed

IN the past thirty years educational goals and conceptions of occupational satisfaction have been raised generally and opportunities for women in fields other than nursing and teaching have greatly increased. Many vocations today are bidding for the interest of high-school graduates. During the same period the requirements for nursing personnel have been increased and diversified by medical advances and by the public demand for expanded and improved health services. These changes have made insistent the question: *Can the educational means of supply be effectively adapted to serve the interests of candidates for nursing education on one hand and to meet the demands for personnel in the functional areas of nursing on the other?*

The writer is convinced that such adaptation is possible. The statement must be made emphatically, however, that nothing short of drastic change in traditional attitudes about who are to perform various nursing duties and how they are to be prepared for their tasks will be effective. Change of attitudes is, in short, a prerequisite to constructive action.

Lack of knowledge of fundamental facts has been an important determinant in delaying both alteration of ideas about nursing and progressive planning for it. In this final chapter we shall review some of the problems discussed earlier.

Functional Areas of Nursing Service

Chart 3 shows the numerical proportions of the major groups of personnel providing nursing services in the United States in 1950. The most conspicuous fact it demonstrates is that registered nurses employed for all types of functions are outnumbered by

other workers sharing in the provision of these services. Although the nursing profession and the interested laity are aware of this fact, thinking and planning have so long revolved about the graduate nurse that the more numerous auxiliary personnel have received scant attention. This situation entails problems of man-

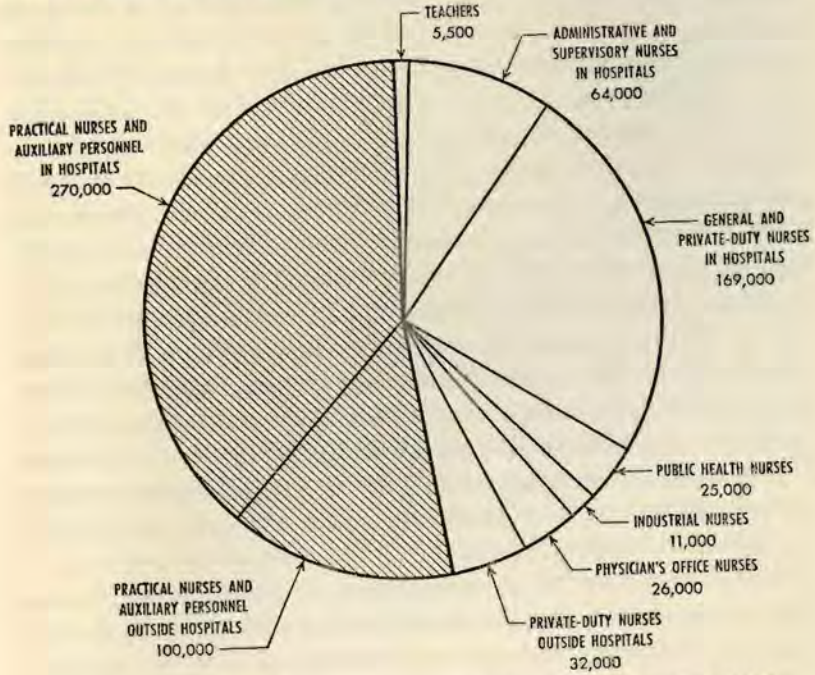

CHART 3. PERSONNEL EMPLOYED IN CIVILIAN NURSING SERVICES IN 1950

Approximately 332,500 registered nurses as compared with 370,000 practical nurses and auxiliary personnel. Based on *1951 Facts About Nursing* (American Nurses' Association, New York, 1952) and unpublished data of United States Public Health Service.

agement, training, and supervision which by themselves are sufficient to constitute need for changes in the system of nursing education, in order that nurses may be prepared in sufficient numbers and with sufficient background to supervise and administer, and to plan and conduct training courses for this large number of auxiliary workers.

Perhaps the most disturbing of the figures included in the chart is that for teachers. More than twice as many full-time instructors as are indicated here are needed in hospital and collegiate schools alone. Others are required in programs for practical nurses. Moreover, the demand for teachers to conduct in-service programs for the large group of auxiliary workers now performing nursing functions in hospitals with little or no training and for new employees in these categories is increasingly urgent. Inadequate provision for teaching is a basic cause of the ineffective preparation of every group from attendant to administrative staff.

Disturbing also is the small number of nurses who are engaged outside hospitals—in community health services and the care of patients in private homes. When industrial and office nurses are omitted, the remaining number of noninstitutional graduate personnel, devoted to public health and home care, appears meager indeed. The group of practical nurses and others giving home care is appreciably larger, but it must be remembered that few of them are trained. Deficiencies in hospital staffs are more immediately apparent and measurable, but home care, prevention of disease, health teaching and guidance, aid in convalescence and rehabilitation, and maternity and child care are equally essential for the public welfare.

Let us turn now from examination of the functional areas represented on this chart to consideration of what categories of personnel should be grouped together in planning educational preparation for these functions. The major groups are as follows:

1. Administrative, supervisory, teaching, specialized service, consultative, and research personnel
2. Registered nurses giving direct care to patients, who may be subdivided into two groups:
   - A. Team leaders in hospitals, public health staff nurses, industrial nurses
   - B. General duty, private duty, and physician's office nurses
3. Nursing personnel other than registered nurses, who may also be subdivided into two groups:
   - A. Practical nurses
   - B. Aides, attendants, orderlies, and other auxiliary workers

The divisions are by no means inflexible and, as in every occupation, individual qualifications and interests vary, so that the kind or extent of education does not always determine the kind of position that may be attained. However, in general, these groups of personnel require different types of education, and the numbers employed in each give an initial basis for estimating the numbers that should be receiving different kinds of training.

Before discussing how the educational programs can be adapted to supply the maximum number of qualified personnel for each area, it is pertinent to refer to the analysis of potential resources of supply in Chapter 3. If that analysis is valid, high-school graduates, who constitute the main reservoir of personnel for nursing as well as many other occupations, fall into four groups as the result of the combined factors of interest, ability, and economic resources. Some of these young people seek immediate employment; others a short vocational course. A third group desires junior college or its equivalent in terminal-occupational or liberal arts programs; and a fourth seeks general or professional education in colleges and universities leading to a baccalaureate degree and offering opportunities for graduate preparation if desired.

The educational system of the country has been developed to meet the needs of these young people and the corresponding needs of different occupational areas for personnel with varying qualifications. Educational opportunities on one hand, and demands for competence on the other, have been interacting influences affecting the objectives of youth and the relative proportions of these groups. The remarkable expansion of facilities for, and the rapid increase of the proportion of students in, junior and senior colleges during the past three decades have been subjects for frequent comment in discussions of educational and social progress. But nursing education has had an almost negligible share in these developments.

Effectiveness of Current Means of Supply

The obvious means for obtaining the maximum supply for an occupation that needs personnel from all four of the groups just

described is to make provision for the kinds of training that will form direct and satisfactory routes from each reservoir of personnel to the corresponding functional area. The educational process in each case needs to be effectively adapted to attract promising candidates, to challenge their interest and develop their potentialities, and to equip them with maximum competence for their prospective functions. Circuitousness, misdirection, and delay are detrimental to quantitative supply, to the achievement and satisfaction of the students, and to their future value to society in providing a high quality of service. The types of preparation for nursing that are today utilized to furnish the supply of personnel will be summarized below.

Practical Nurses and Auxiliary Workers. Although the employment of large numbers of nursing personnel other than registered nurses for duties requiring only limited training has been dictated by necessity, the practice has been more than justified by functional analyses of nursing services. General acceptance of the principle that adequate preparation for such duties can be given through in-service training or in relatively short vocational courses has opened up an extensive source of supply among both recent high-school graduates and more mature candidates, both men and women. But compared with the large number of persons now performing these duties, the number now enrolled in any type of formal training for them is hardly more than a trickle.

The present number of trained practical nurses is estimated by the United States Public Health Service as about 12,000. Efforts to establish standards for this group in both education and practice are resulting in improvement of their preparation. Substantial numbers of vocational courses are being set up, some of which are well designed to attract desirable candidates and to prepare them adequately for a specific, limited range of functions. Two important questions, however, cannot yet be answered. How large is the supply of those who would be interested in this type of training, and how many trained practical nurses are needed? Most of these courses are limited to preparation for hospital

service, though probably the need for trained practical nurses for home care is at least as great. Public health nursing agencies, industry, and doctors' offices are also now seeking trained practical nurses.

The current inclusion of these programs in the post-high-school system of vocational training, the encouragement and help now being given by the nursing profession, and the organization and constructive efforts of practical nurses themselves are giving strength to the movement. The number of students is still small; attrition rates are high, indicating poor qualifications, motivation, or instruction; and the multiplication of small schools tends to defeat efforts to improve quality. An adequate supply of teachers for these programs and their organization in larger schools with suitable facilities are urgent needs.

Systematic in-service training and supervision for auxiliary workers are developing rapidly, but are quite inadequate in proportion to the demand. The potential supply of personnel seeking immediate employment is undoubtedly larger than that of candidates who can afford and are interested in undertaking vocational training. Also, the demand for auxiliary workers is much larger than that for practical nurses. The expansion of in-service training effectively adapted to definite purposes in various types of hospitals and other agencies is therefore one of the most important measures that could be taken for the improvement of the nursing services. The primary requirement for the promotion of this movement is the development of a corps of teachers qualified to organize and conduct the training. These teachers need to study the specific work to be done by the various auxiliary groups and to plan progressive teaching and supervised practice that will produce the requisite skills. Attendants in mental hospitals, for example, require very different in-service training from that for aides in medical and surgical services of general hospitals; and auxiliary workers who are to participate in nursing care of children, or of old people with chronic diseases, should have preparation appropriate for the particular service. Skill in selecting and relating materials to functions and in adapting teaching methods

to groups of workers and to objectives is required of the instructors who provide all such in-service training.

A threat to the development of such training and to greater utilization of this group of personnel has appeared in some states with the actual or prospective passage of laws restricting all nursing care of patients to licensed registered and practical nurses. Such legislation is designed to protect patients from untrained practitioners, but it is apparently based on incomplete consideration of the realities of demand and supply. Safe use of workers with only in-service training can be assured if institutions and agencies employing them fulfill their responsibility for training and supervision. Limitation of the activities of these workers is desirable, but legislation that excludes their service in the direct care of patients may be a boomerang. Either of two unfortunate consequences may ensue. Standards for practical nurse licensure may be lowered and the significant gain that has already been made in establishing training for that group in vocational training institutions may be lost through the multiplication of hospital courses of varying quality. Or hospitals may be severely and unreasonably handicapped in the use of personnel available for employment as auxiliary workers.

Nurses at the General Nursing Level. The functional area of general nursing, in hospitals commonly called "staff level nursing," is not only the permanent field of activity for a large proportion of registered nurses but also an intermediate field of experience for all those who are candidates for graduate work and advancement to positions in administration, supervision, teaching, research, and nursing specialties. The number of these positions is large and is increasing. At least a third and probably more nearly a half of the nurses in the area of general nursing should have an educational foundation that would qualify them for the most inclusive staff-level functions and enable those with the interest and ability to advance quickly to positions of larger and more specialized responsibility.

Diploma programs in hospital schools have been the recognized means of preparation for general nursing. These courses are unequal to meeting present-day quantitative and qualitative demands for the preparation of all nurses at the general nursing level, for the following reasons:

1. They vary widely in quality and a large proportion are below the national standards of the nursing profession for producing staff-level competence.
2. Because of their apprenticeship nature they delay the educational process, requiring three years when comparable or superior results can be produced more quickly with concentrated educational emphasis.
3. They fail to provide adequate foundations for specialization and advancement.

Affiliation programs, requiring only two years of general college education but awarding a bachelor's degree, represent an unsuccessful attempt to improve nursing competence without changing nursing courses themselves. These programs are misleading because the professional part of the curriculum remains at a diploma level. By mere addition of academic subjects hospital school courses do not become collegiate education.

Supplementary programs for graduates of hospital schools are necessary and desirable, but the route to a collegiate degree by way of a hospital diploma course followed by a supplementary collegiate course is slow, circuitous, and expensive. Moreover, the supplementary programs also vary greatly in quality and many fail to strengthen inadequate foundations, so that the results achieved are often unsatisfactory both to students and to agencies who later employ them.

As has been repeatedly emphasized in this study, basic baccalaureate programs in colleges and universities provide the most efficient and satisfactory means of supply for the staff-level functions requiring broad preparation.

The source of supply for the area of general nursing includes both high-school graduates who seek further education of the two- to three-year variety, and those who seek a complete college or university course leading to a baccalaureate degree and constituting preparation for graduate work. Within the first group some members prefer a school devoted solely to their special interest. Hospital schools of nursing belong to this type. The pro-

grams they offer, however, are longer than the courses offered by most schools in this division. Other members of this group prefer junior colleges, or two-year terminal courses in community colleges or general colleges of universities, which have broader educational resources and offer associations with students in a diversity of fields. These institutions have multiplied and increased in size. In junior colleges alone enrollments grew from 4,500 in 1918 to about 240,000 in 1948.[1]

Though many junior colleges now offer prenursing programs, or have made arrangements by which hospital schools purchase from them instruction in some preclinical subjects, they do not have fully developed departments of nursing that are integral parts of the colleges. In general, junior colleges are serving as subsidiaries to hospital schools rather than conducting educational programs in nursing through the instrumentality of a nursing faculty. If junior college curricula were extensively established to replace hospital school programs, the chief emphasis could be shifted from the service to be obtained from students to the educational goals. Both enrichment and condensation of training would probably result.

In the main, however, nursing students who now attend junior colleges for a few courses do not represent a new group attracted by a new kind of educational opportunity in nursing comparable to junior college curricula that prepare students for many other occupations. For the very reason that the junior college has failed to cultivate this field as it has many others, one potential source of supply of nursing personnel has been neglected.

If adequate provision is to be made, therefore, for the more complex aspects of bedside nursing, for leadership of nursing teams, and for all the specialties, concerted and simultaneous action on several fronts is necessary:

> Continued efforts to establish uniformly good standards in hospital schools. Evidence is accumulating that both acceleration and the production of better qualified graduates can be accomplished through concentrated emphasis upon educational purposes, more

[1] *Statistics of Higher Education, 1947–48.* Government Printing Office, Washington, 1950, p. 6.

> and better teaching, and less repetitive practice. Such improvements involve financial problems as indicated in Chapter 3, and it is doubtful whether hospitals can or should continue to carry this educational responsibility longer than the transition makes necessary.
>
> Establishment of curricula in nursing in junior colleges and lower-division units of four-year colleges and universities on an equal basis with terminal-occupational courses in other fields.
>
> Substantial enlargement of the number of, and enrollment in, professional schools of nursing in colleges and universities. The achievement of this purpose involves making these schools equal in fact to other divisions of the institutions, and eliminating the present confusion about their relative significance through interpretation of the distinctive advantages and opportunities they offer.
>
> Assuring the effectiveness of supplementary education for graduate nurses in providing foundations equal to those in basic baccalaureate programs.

Nurses Performing Specialized Functions. The quickest and most direct route to the specialties is via graduate work following a basic baccalaureate program. This process, leading to a master's degree in nursing education, administration, or advanced nursing of a particular type, takes five years of study if the baccalaureate degree is obtained in a four-year collegiate program. It takes no more and often less time than achieving a baccalaureate degree in an affiliation or supplementary program.

Experience of at least one, and preferably of two years, preceding specialization is usually considered desirable. Leadership of nursing teams, experience as assistant to a head nurse or instructor, or increased responsibility in a type of nursing such as public health, provides a foundation for, and increases the value of, later study. However, the advisability of immediate or postponed graduate study should depend upon individual situations in this as in other fields.

The present alternative route to the master's degree is by way of the hospital school followed by a supplementary program and then by graduate study. Unless some college work or its equivalent has preceded the supplementary program, even if the basic hospital school course has been of high quality, supplementation cannot take less than two calendar years. If the degree is to be

equal to that earned in a basic baccalaureate program, no shorter time would suffice to furnish two academic years of general education and the requisite applications to nursing. The period is often three years because of deficiencies that must be remedied. At least one additional year is required for the specialty. Graduates of good collegiate schools in need of only one year of further study for the master's degree have a great advantage over hospital school graduates who have to face three to four years without earnings to reach the same objective.

The demand for nursing personnel for positions requiring broad foundations and advanced specialization has developed with amazing rapidity. Even in the depression years when many general-level nurses could not find employment, candidates with adequate preparation for the more responsible positions were notably few. Realization of their deficiencies, sharply focused by unemployment, led hundreds of nurses to seek means of bettering their qualifications by further education. The need for teachers of nursing on the college level became imperative, and with advances in health services that for other specialists also increased. As more nurses have achieved the baccalaureate many have sought graduate education to meet progressive demands.

The policies of colleges and universities in requiring the doctorate for faculty positions above the level of instructor demand extension of provisions for advanced study. Commensurate requirements for administrative posts and for clinical specialization and research also necessitate increased numbers of qualified candidates. Universities with suitable facilities have an obligation to help supply this need and to participate in regional planning for the most effective distribution of opportunities and possible sharing of resources of various kinds.

Practices differ with regard to the organization of graduate work in nursing. In some institutions it is under the jurisdiction of the graduate school; in others the school or college of nursing is autonomous on the graduate, as well as the undergraduate, level, in conformity with a similar policy for other professional units; and in still others it is associated with the school of education. Careful consideration should be given to the relative ad-

TABLE 8. PRESENT EMPLOYMENT COMPARED WITH PRESENT OUTPUT OF EDUCATIONAL PROGRAMS, BY FUNCTIONAL LEVELS OF NURSING

Level and nursing functions included	Personnel employed 1950	Preparation considered requisite	New personnel needed yearly for only 6 per cent replacement[a]	Output in 1950–51 of educational programs appropriate for level
Advanced level				
Teaching	5,500	Graduate programs leading to master's or doctor's degree, based on a baccalaureate program		
Administration and supervision in hospitals	64,000			
Public health nursing supervision	3,000			
Specialization in nursing practice, consultation services, research	—[b]			
Total	72,500		4,350	320
General nursing level				
Public health nursing staff	22,000	Baccalaureate program, basic or supplementary	6,000[c]	3,480[d]
Industrial nursing	11,000			
Staff-level nursing in hospitals	136,000			
Private-duty nursing in hospitals and outside	65,000	Diploma or "associate degree" program	9,600[e]	27,000[e]
Physician's office duty	26,000			
Total	260,000			
Auxiliary level				
Practical nursing		Accredited practical nurse program	6,000[g]	3,000
in hospitals	50,000			
outside hospitals	50,000[f]			
Auxiliary nursing functions		In-service training in hospital or other health service agency	22,000[g]	—[h]
in hospitals	220,000			
outside hospitals	50,000[f]			
Total	370,000			

[a] Approximately 6 per cent of registered nurses leave active service each year.

[b] No estimate available; number is as yet very small.

[c] Assumes that half of nurses engaged in staff-level nursing in hospitals should have preparation for competence in all types of staff nursing, for leadership of nursing teams, and for admission to specialized programs.

[d] Of this total number, 1,530 received degrees in basic collegiate programs and 1,950 in supplementary programs. From this output is recruited the enrollment of graduate programs, thereby diminishing the number available to supply personnel at this level.

[e] Some of these graduates go on to supplementary programs, enter armed services, or replace personnel withdrawn from this group for these purposes.

[f] Estimate from United States Public Health Service.

[g] Withdrawals from this group are presumably larger than 6 per cent but no estimate available.

[h] No estimate available.

vantages and disadvantages in these situations, to the interrelationships with allied fields and availability of resources, to the degree of freedom for the best development of the curriculum and pursuit of desirable objectives, and to consistency with the general policies of the particular institution to ensure equality of standards and of privileges with graduate departments.

In the table on page 189 an attempt is made to relate the need for nursing personnel with different educational qualifications and the supply of graduates from existing programs. The table does not take into account current shortages of employees to fill positions, increasing demands that population growth and hospital expansion make inevitable, or the needed improvement of the qualifications of personnel now employed. It should be noted that graduates of the supplementary and graduate programs are not additions to the total number of nurses.

Integration of Nursing in the Educational System

Every consideration seems to point in the direction of gradual integration of nursing education into the national system which now provides for every other occupational group requiring it opportunity for post-high-school education in institutions founded and supported for that purpose. Trends toward such assimilation began almost fifty years ago and have gathered momentum in the past decade. However, the movement has been lacking in coordination and has been thwarted by opposition. Progress has been slow and sporadic, as in a disorganized migration in which many individuals set out into unfamiliar territory without preliminary exploration or any map showing routes and destination. Even the compass of established educational policy has too often not been used.

The Outline of Education for the Nursing Services, shown on page 191, incorporates the ideas which have been advanced in this volume, and which are supported also by the planning groups within the national nursing associations. The outline reflects development indicated by general educational practices and followed by institutions that have pioneered in the establishment of strong programs in nursing. It received the unanimous approval

TABLE 9. OUTLINE OF EDUCATION FOR THE NURSING SERVICES

Types of preparation	Location and purposes
In-service training for auxiliary nursing personnel: aides, attendants, orderlies, etc.	In hospitals: recent high-school graduates with or without vocational high-school preparation in nursing, and mature candidates with suitable personal qualifications. Preparing for simple general functions as assistants to registered nurses or specific functions in a particular service under appropriate supervision.
Practical nurse programs Qualifying for licensure as graduate practical nurses	In vocational school system, above high school but below college grade. Number and purposes of programs related to development of in-service training and education for general registered nurse functions. Preparing for graduate practical nurse functions on nursing team in hospitals and agencies, in nonprofessional home care, and in doctors' offices.
Terminal-occupational lower-division college courses Leading to associate degree or certificate. Qualifying for R.N. licensure examination	In technical institutes, junior colleges, colleges and universities organized to offer such programs. Preparing for general registered nurse functions.
Hospital schools Leading to diploma. Qualifying for R.N. licensure examination	In hospitals. Better schools to be continued for the present. May be merged ultimately with terminal junior college and baccalaureate programs as educational and financial responsibility is shifted to educational institutions. Any school with adequate financial support and educational emphasis which remains under hospital auspices but with control like that of other schools in the state might be regarded as in same category as private art, business, or music school. Preparing for general registered nurse functions.
Basic baccalaureate curricula Leading to B.S. degree. Qualifying for R.N. licensure examination	Only in accredited four-year colleges and universities with departments or schools of nursing offering upper-division major or four-year program culminating on senior level in degree-granting institution. Junior and liberal arts college may provide lower-division preprofessional curriculum for university professional schools, or lower-division part of a correlated four-year program by arrangement with an institution offering such a program. Preparing for professional functions in beginning positions and providing foundations for graduate study and advancement.
Supplementary baccalaureate curricula for graduate nurses. Leading to B.S. degree	Existing approved supplementary programs in colleges and universities continued to meet needs. As soon as possible, supplementation should be provided in connection with basic baccalaureate programs, enabling graduates of hospital schools and terminal junior college programs to meet same standards for B.S. degree as students taking complete basic program in the college or university. Specialization transferred to the graduate level. Preparing for greater efficiency in present or prospective positions and providing foundations for graduate work.
Graduate work Leading to M.S. or Ph.D. degree	In accredited graduate schools with standards for nursing equivalent to those in other fields. Admission requirement, the B.S. with a major in general nursing from a college or university with a basic baccalaureate curriculum, as above. Preparing for advanced specialized functions: clinical or public health nursing specialist, research worker, teacher, supervisor, or administrator.

of the boards of the Association of Collegiate Schools of Nursing and the National League of Nursing Education, meeting in joint session on January 24, 1952.

Such organization fits nursing education into the present pattern of curricula that provide various levels of preparation for other occupations. It affords direct and practical educational routes from possible sources of supply to correlative functional areas in nursing. The outline is presented to help clarify objectives and guide efforts toward the generally desired goal of effective provision for more and better nursing services. It recapitulates material already presented and therefore will not be discussed here in detail.

The Potential Role of Junior Colleges

Earlier in this chapter reference was made to the small part junior colleges have so far taken in preparation of nurses. There is now occasion for urging junior colleges, and also community colleges, to give careful consideration to their educational and social responsibilities for entering this educational field. Information about existing conditions in such institutions is incomplete but a progress report made in 1952 by the Committee on Junior College-Nursing Education Relationships includes partial returns from a questionnaire survey. Of the states that submitted replies, 8 had no junior colleges. In 20 states and the District of Columbia, 110 junior colleges offered a total of 142 programs related to nursing. Of these, 51 were identified as prenursing and 42 consisted of courses for which hospital schools purchase instruction. Others were courses for practical nurses; still others were combinations of junior college courses in academic subjects and hospital school training in nursing itself. One such program for which the college grants an associate degree, for example, consisted of one academic year, with the remainder of the course spent in a hospital school. This arrangement is similar to the affiliation type of baccalaureate degree program discussed in Chapter 4.

Only 7 of the 110 institutions had consulted with any state or national authority on nursing education in planning or operating their programs. Less than half of the junior colleges conducting

programs in conjunction with hospital schools had held any consultations between academic and nursing faculties, and many of the conferences held were so superficial as to leave the college faculty with little understanding of the purposes and methods of nursing education. Prenursing courses were usually uncoordinated with the requirements of upper-division professional (Type I) schools of nursing in colleges and universities where junior college graduates would logically complete their education. Students, moreover, were rarely informed of the advantages of such courses.

These institutions, experienced in terminal-occupational education in other fields, have an extraordinary opportunity for developing a similar program in nursing. The purpose would be to produce greater competence for the middle range of nursing functions more quickly through concentrated educational emphasis than can be done when education is combined with service. Such developments, however, depend upon the willingness and ability of these junior colleges to assume full educational and financial responsibility.

Recently Teachers College, Columbia University, undertook the organization of pilot programs in nursing in several junior colleges. The project is designed to develop curricula on the basis of thoroughly considered educational objectives and to evaluate results. A discussion of the possibilities in the field is to be found in *The Education of Nursing Technicians*,[1] by Dr. Mildred L. Montag, director of the project.

Conditions for Establishing New Baccalaureate Programs

The answers to many questions are necessary before decisions can safely be made as to the desirability of establishing a department or school of nursing in a college or university.

Is there need for another collegiate school in the region? At present several potentially good schools suffer from insufficient numbers of students, faculty, and dollars. They should be helped to their maximum usefulness before competing schools are

[1] G. P. Putnam's Sons, New York, 1951.

started. The type of college—public or private, denominational or nonsectarian—and the geographic location of its constituency deserve consideration. Surveys of educational resources and of the demand for nurses have already been made in many states and are needed elsewhere. They should be used as a guide to constructive planning.

Is there a basis for expecting enough students to justify the establishment of a new school? Extensive interpretation in high schools and colleges of the value of basic baccalaureate education, the raising of its prestige in large part through the continuous improvement of existing curricula, and provisions for financial assistance for students of limited means are prerequisite to the receipt of a sufficient number of applications. For economical administration and educational excellence the prospective enrollment should not be fewer than 100 and should preferably be larger.

Can the college or university provide or secure adequate financial support for a school? The proportion of faculty members to students in the major nursing courses has to be relatively high because of the diversity of specialized subjects and the need for clinical teaching and supervision of students distributed through various hospital departments and community health agencies. Also, provision should be made for a faculty large enough to take care of future requirements.

Financial support of nursing education should be viewed within the context of the social need for nurses and the obligation of the university to supply that need. Frequently institutions of higher education have introduced nursing programs only if such undertakings put no strain on the budget. Some maintain that their funds are so completely designated for other purposes that it is impossible to embark on nursing education. However, they spend truly vast sums on medical, engineering, and agricultural education. Should such institutions not seriously consider whether society would be better served if part of the amount were diverted to preparation of nurses, without whom scores of new hospitals and expanded health services cannot be administered, the ill cared for, and sickness prevented?

In view of the present shortage of well-prepared personnel in nursing education, can the institution obtain qualified nursing faculty? Can the institution procure, in hospitals and other agencies, clinical resources adequate in quality, extent, and variety for a complete senior-college-level program in nursing? Can arrangements be made with these cooperating agencies whereby educational control would be vested in the nursing faculty of the degree-granting institution or in that of another accredited college or university from which credit could be legitimately accepted on the same basis as in other courses?

Some institutions have given little consideration to these important questions. Programs have been started before the head of the major department of nursing was employed, and before arrangements were made for clinical facilities. In one college 60 students were enrolled in the freshman and sophomore classes, supposedly in a nursing curriculum, although the institution had completed no arrangements for facilities for their upper-division education.

Unless positive answers, based on careful investigation and advice from qualified experts, can be given to these questions, it seems clear that the institution should not undertake the responsibility for a program. However, a college or university, particularly a publicly supported one, that has excellent resources can hardly fail to regard the establishment of a sound baccalaureate curriculum in nursing as a compelling obligation unless regional needs are already fully met.

The Challenge to Higher Education

Recognized criteria of the level of civilization attained in various areas of the world are the relative advancement of two social institutions: educational and health services. The two are interdependent and essential bases for economic and social progress and "the flowering of the spirit." In *Strange Lands and Friendly People*, Justice William O. Douglas says that the peasants of Asia complain of deep injustices. The absence of health services always comes first, the absence of schools second, and then the lack of

just distribution of land. In contrast, the most advanced nations are those having an effective educational system and ample provisions for the promotion of physical and mental health. The position of the United States is enviable in these respects.

Our national claim to leadership in both education and health makes it the more strange that a failure in one field should now be threatening the other. Yet, it seems undeniable that failure of the educational system to provide opportunities and maintain standards for nursing education is a crucial deterrent to an adequate supply of qualified nursing personnel and therefore to the maintenance of health services at the level demanded by our stage of social development. Neither adequate public support nor adequate attention by those responsible for higher education has been given to preparation of the personnel of the nursing services, who comprise the largest group in the health services—notwithstanding the fact that efficiency of the nursing services is indispensable to the effective functioning of the medical profession, hospitals, and other community health agencies.

Only educational institutions can provide a satisfactory solution of the problem. The groups that must be relied on to win the support of the American public are educators, physicians, hospital administrators, health and welfare organizations, and the nurses themselves. Enlightened self-interest alone should provide motivation for support by physicians and hospital administrators of the movement for reorganization of nursing education. Progress in all the curative and health fields will be increasingly hampered if nursing is not enabled to keep pace with the demands imposed by medical advances and expanding services.

All these groups, however, need assurance that colleges and universities will undertake the preparation of needed numbers of well-qualified personnel. Much of the skepticism expressed has, unfortunately, been justified by the lack of sound policies that has characterized many collegiate nursing curricula. The multiplication of weak units of instruction has produced little actual increase in the supply and only the graduates of a few collegiate schools are demonstrating definitely superior competence for their jobs.

The resolution adopted by the Department of Higher Education of the National Education Association, quoted in Chapter 1, emphasizes the need for colleges and universities to assume responsibility for nursing education. The foregoing discussion has attempted to clarify ideas concerning the nature of that responsibility. The fundamental principle seems clear: society requires the establishment by higher education of an effective system of appropriate types of preparation for diversified nursing functions and the maintenance of standards that will assure competence. Only a high quality of education will serve the need.

Index

Index

Accreditation, 49, 50, 117, 118–119
Administrative and supervisory functions: number of nurses performing, 23, 179; preparation for, 7, 25, 26, 131, 134; shortages in personnel for, 23. *See also* Specialized functions
Affiliation program: disservice of, to nursing education, 122, 185; reasons underlying adoption of, 118–120; requirements for diploma and degree students compared, 114–116; statistics for schools offering, 121
Aims of Education (Whitehead), 175*n*
American Association of Industrial Nurses, 46*n*
American Association of Medical Social Workers, 148*n*
American Hospital Association, 28*n*, 46*n*
American Medical Association, 26, 28*n*, 46*n*
American Nurses' Association, 46*n*, 76
American Psychiatric Association, 23
American Red Cross Nursing Service, 46*n*
Anatomy and physiology, 142, 153–157
Apprenticeship, 15, 42–43, 62, 68, 87–88, 90, 113
Armed forces, nurses required for, 21
Associate degree, offered by junior colleges, 189, 191
Association of American Medical Colleges, 148*n*
Association of Collegiate Schools of Nursing, 16*n*, 46*n*, 112, 122, 192
Attitudes: of educators, 17, 96, 100, 118–119, 158; of medical profession and hospital administrators, 85–86; of parents and advisers, 73–74, 93, 101; of registered nurses, 34–35, 36, 68, 78; traditional, 17–18, 77–79, 87–88
"Authentically collegiate" program, 104, 113, 114
Auxiliary nursing personnel: functions of, 80–82; in-service training and supervision of, 33–38, 183–184; number of, 22, 35, 179, 183, 189; team organization for, 37, 80
Baccalaureate program: approved types of, 101–113; "authentically collegiate," 104, 113, 114; conditions for establishing a, 193–195; consecutive type, 106–109; correlated, 109–110; cumulative, 110–113; length of, 107; preparation for team leadership in, 38; public health nursing in, 31; purpose of, 26, 122, 129–130, 185; standards for, 176–177; suggestions for content of, 136–177, 191; unapproved type of, 102, 113–122. *See also* Affiliation; Facilities; Major in nursing; Student welfare
Bacteriology, 157
"Bedside nurse," 8, 82–83. *See also* General nursing
Bellevue Hospital, 22, 41*n*
Biological and physical sciences, 153–159
"Blanket credit," 16, 39
Boston Training School, 41*n*
Boston University School of Nursing, 128, 158–159
"Boston University School of Nursing Introduces the General Nursing Program," 128*n*
Bowen, Eleanor P., 159*n*
Bredenberg, Viola C., 80*n*
Bridgman, Margaret, 8, 9
Brown, Esther Lucile, 9, 26, 46, 47

Carnegie Corporation of New York, 46
Catholic University of America, 80
Chemistry, 142, 156
Chicago, University of, 134
Civilian nursing services: personnel employed in during 1950, 179; requirements for future, 20–21
Class hours: distribution of, 56, 57; ratio of, to practice, 53
Classification of schools, 48
Clinical period, 54, 58, 59, 60–61
Clinical practice: distribution of, 54, 57; educational purposes of, 60–61; ratio

of, to teaching, 54, 57, 103–104, 168; relation of, to theory, 167; separated from theory, 61; significance of, in supplementary programs, 126–127
Clinical responsibilities: increase of, 27; listed, 28–29; preparation for, 29
Clinical specialists: need for, 21, 26; preparation of, 25, 26, 131
Cockerill, Eleanor, 148*n*
Collegiate programs: enrollment in, 16; financing of, 92; need for, 85; policies and standards, 96–105, 167–177; rated by hospital school standards, 50. *See also* Baccalaureate program; Nursing schools
Colostomy patients, work with, and other handicapped persons, 33
Columbia University, Teachers College, 193
Committee on Junior College-Nursing Education Relationships, 192
Committee on the Function of Nursing, 26
Communication skills, 55, 159–161
Community health programs, 31, 180
Connecticut Training School, 41*n*
Costs, 56, 61, 87–95, 119, 124, 185
Council of Federal Nursing Services, 46*n*
Counseling of students, 84, 94, 100, 108–109, 128–129, 138
Credit, standards for, 56, 99, 167–170
Curran, J. A., 148*n*
Curriculum: suggestions for constructing a collegiate, 137–138, 171–177; typical hospital school, 52–63, 112. *See also* Baccalaureate program
Curriculum Bulletin No. 2 (National League of Nursing Education), 83*n*, 125*n*
Curriculum Guide for Schools of Nursing, A (National League of Nursing Education), 48, 153

Degrees: advanced, 130–135, 187–188; percentage of teachers having, 63; standards for and significance of, 64, 65, 69, 99, 114, 124–125
Demand: estimates of minimum, 20, 21; increase in, 20; qualitative, 24–38
Dericks, Virginia C., 33*n*
Diploma program. *See* Hospital schools
"Distinctive Attributes of Education for the Professions," 176
Douglas, William O., 195

Education for nursing services, 191
Education for Professional Responsibility (Interprofessions Conference), 149*n*
Education of Nurses, The (Stewart), 40*n*
Education of Nursing Technicians (Montag), 193
Educational Status of Nursing (Nutting), 88*n*
English composition, 55, 159–161
Essentials of a Good School of Nursing (National League of Nursing Education), 48
Evaluation: of programs toward objectives, 176; techniques of, 152; unsound, 50
"Experimental Research in Nursing Service" (Bredenberg), 80*n*

Facilities: clinical, 93, 95, 104–105; educational, 18, 99–100, 131
Faculty standards and policies: collegiate, 97–99, 104–105, 113–118, 170; hospital school, 63–69
Farr, Maude, 90*n*
Finances in Higher Education (Farr), 90*n*
Financial aid, 92–93, 94
Financial policies, 86–95, 119
Foreign language, 143, 163–164
Functional analyses, 7, 75–77
Functional areas of nursing, 77–89, 178–181

General education, 111, 141, 143, 144, 161–164
General nursing: functions of, 82–83; preparation for, 184–187
Ginzberg Report, 26
Goldmark, Josephine, 85*n*
Goldmark Report, 85
Graduate nurses. *See* Registered nurses
Graduate programs: as preparation for specialized functions, 129–135, 187–189, 191; statement of Postgraduate Board of Review on, 131

Hawkins, Christy, 48*n*, 50*n*, 51*n*, 59*n*, 90*n*, 144*n*
Health Resources Advisory Committee, 20–21
Health teaching, 7, 31–33, 131
Higher education: challenge to, 195–197; general policies, 97–101; responsibilities of, 15. *See also* Specialized functions; Team leadership
Higher Education for American Democracy (President's Commission on Higher Education), 94*n*, 108*n*
History and government, 55, 143, 163
Home hospital, 104–105
Hospital schools: apprenticeship pattern in, 42, 185; at midcentury, 47–52;

contradictory purposes of, 39; costs of, 88–90; differences between programs of, and other types of education, 45, 53; early development of, 41; economic dependence of, 41, 43; faculty and level of instruction in, 63–69; length of training program in, 42, 59–61; number of, 42; percentage of nursing students prepared in, 16; state accreditation of, 50; variations in standards in, 49, 58, 185. *See also* Education for nursing services; Nursing schools; Preclinical period
Hospitals: correlation of functions of, with other agencies, 31; critical shortages in personnel for, 21–22; improving the efficiency of, 77, 95; patients cared for during 1950, 20
Human ecology, 159
Humanities, 143, 162

Improvement of nursing services: classification of nursing schools by National Committee on, 48; coordinated action for, 12–14; factors in, 12, 36, 46, 75–77, 79–80, 84–86, 91, 179, 183, 186–187, 190–192, 197. *See also* In-service programs
Industrial nurses: future demand for, 21; present number of, 24, 179
In-service programs, 81–82, 95, 183–184, 191; a means of promoting efficiency in general hospitals, 33, 36; in mental hospitals, 23; reasons for lack of good, 36–37
Instructors: clinical, 68; full-time, 23, 179; preparation related to level of teaching, 63. *See also* Teaching
Integration: of content, 141–143, 172–174; of general and vocational education, 108; of nursing in educational system, 190–192
International Council of Nurses, 46*n*

Johns Hopkins School of Nursing, 121
Joint Board of Directors of Six National Nursing Organizations, 47
Joint Committee on Careers in Nursing, 47
Joint Committee on Nursing in National Security, 20
Joint Nursing Curriculum Conference, 77, 83, 125
Junior colleges, 72, 110; potential role of, in nursing, 186–187, 191–193

Kellogg Foundation, 134
Kuehn, Ruth P., 20, 21*n*

La Perle, Elizabeth S., 76*n*
Lorentz, Mildred, 81*n*

Major in nursing, the, 39, 99, 115, 164–177
Massachusetts General Hospital School, 41*n*, 60
Master Plan for Studies of Nursing Functions in Hospitals (American Nurses' Association), 76
Mental Hospital Service, American Psychiatric Association, 23
Mentally ill: in-service training for care of, 23, 82, 183; nurse shortage in hospitals for the, 23. *See also* Psychiatric nurses; Supportive care
Michael Reese Hospital, 81
Microbiology, 142, 157
"Mobilization of Nurses for National Security" (Joint Committee on Nursing in National Security), 20*n*
Montag, Mildred L., 193

National Association for Practical Nurse Education, 46*n*
National Association of Colored Graduate Nurses, 16*n*, 46*n*
National Committee for the Improvement of Nursing Services, 47, 48, 50
National Education Association, 15, 197
National League for Nursing, 8, 16*n*
National League of Nursing Education, 8, 15–16, 46*n*, 48, 66, 122, 192
National Nursing Accrediting Service, 47, 48, 101, 103*n*, 117, 125, 131
National Nursing Council for War Service, 26, 46
National Organization for Public Health Nursing, 16*n*, 46*n*
National Security Resources Board, 20
Night and afternoon duty, 52
Nightingale Schools, 41
1951 Facts About Nursing (American Nurses' Association), 16*n*, 20*n*, 35*n*, 66*n*, 121*n*, 179*n*
Nonnursing activities, 80
"Nurse Power in Mobilization" (Kuehn), 21*n*
Nursing: functions, 18, 27, 75–84; number employed in, 19; services, deficiency in, 11–38; specialties, 7; students, 19, 56, 62, 87–95, 158; teams, 37, 38, 80, 83; traditional conception of, 18, 34, 77–79
Nursing and Nursing Education in the United States (Goldmark), 85*n*

Nursing education: adaptation of, 71–86, 190–192; attitudes of educators toward, 17, 96; counseling service in, 8; differences from other types of post-high-school education, 8, 15, 64, 86, 89, 118; evidences of progress in, 50; financial policies, 86–95; number enrolled in basic programs in, 16, 19; resolution of NEA concerning, 15; segregation of, 17, 26; support for, 61
Nursing for the Future (Brown), 26, 46*n*
Nursing schools: accreditation of, 50; at midcentury, 47; classification of, 48, 49; measurements for, 51; number of, 49; recommended standards for, 48; scoring method for rating, 49; student enrollment in, 16, 19; university controlled, 49. *See also* Collegiate schools; Hospital schools
Nursing Schools at the Mid-century (West and Hawkins), 48, 53, 90*n*, 153
Nutrition, 142, 157
Nutting, M. Adelaide, 88

Personality and the Cultural Pattern (Plant), 149
Personnel for nursing services: classified, 179; deficiencies in, 11–12. *See also* Improvement
Physics, 142, 157
Plant, James S., 149
Postgraduate Board of Review, 131, 134
Posthospital welfare, 31
Practical nurses: demand for, 182–183; functions of, 82; number of, 22, 35, 179, 182, 189; programs for, 183, 191
Practical Nurses in Nursing Services (American Nurses' Association), 82*n*
Preclinical period, 44, 53, 55–56
Preprofessional programs, 108, 138
President's Commission on Higher Education, 94
Private-duty nursing, 18, 24, 179
"Problems of Colostomy Patients" (Dericks and Robeson), 33*n*
Program for the Nursing Profession, A (Committee on the Function of Nursing), 26
"Progress Report on Nurses' Assistants, A" (Lorentz), 81*n*
Psychiatric nurses: preparation of, 25, 30–31; shortage of, 23
Psychology, 30, 52, 75, 111, 147–153
Psychosomatic medicine, 147–150
Public health nurses: number of, 23, 25, 179; preparation of, 31, 143, 146; role of, 7, 31–33
Public understanding and support, need for, 7, 14, 43

"Qualitative," as defined for this study, 24

Rating scale, 48–49
Reading, 161
Referrals, 32
Registered nurses: demand for, 20–21; functions of, 77, 83; number of, 19, 179; responsibilities of, toward auxiliary workers, 33–38; shortage of, 19–24; supplementary programs for, 123–129
"Report of Committee on Nursing Problems" (American Medical Association), 26
Report of the Committee on Nursing and Nursing Education (Goldmark), 85*n*
Research, 7, 26, 131–132
Results of the First Grading Study of Nursing Schools (Committee on Grading of Nursing Schools), 50*n*
Robeson, Kathryn A., 33*n*
Romano, John, 149
Rural areas, 40, 95
Russell, James E., 42
Russell Sage Foundation, 8

Schedules, 51–52, 103–104, 167–170
Scholarship aid. *See* Financial aid
School Data Analysis, Subcommittee on, 47
Schools of nursing. *See* Hospital schools; Nursing schools
Segregation: of nursing education, 17, 26; of nursing students, 56, 100–101, 140
Shields, Mary, 177*n*
"Should Nurses Do Venipunctures?" 28*n*
Sleeper, Ruth, 60
Social anthropology, 145
Social science, 51, 52, 144–153
Sociology, 52, 75, 111, 145–147
Sociopsychosomatic approach, 30
"Some Problems Identified" (National Nursing Accrediting Service), 125*n*, 131*n*
Sound Economic Basis for Schools of Nursing, A (Nutting), 88*n*
Specialized functions: preparation for, 25, 26, 83–84, 187–190; supply of personnel for, 26, 85
Speech, 161
Staff-level nursing: as foundation for advancement, 26; functions, 28–29, 82–83. *See also* Registered nurses

State-Approved Schools of Nursing (National League of Nursing Education), 121*n*
Statistics of Higher Education, 1947–48 (Office of Education), 186*n*
Stewart, Elizabeth M., 40*n*
Stipends, 88
Strange Lands and Friendly People (Douglas), 195
Student welfare, provisions for, 100–101
"Studies of Nursing Functions" (La Perle), 76*n*
Study time, 52, 103–104
Subcommittee on School Data Analysis, 47, 48
Supervisory functions. *See* Administrative
Supplementary programs: clinical practice in, 126–127; number enrolled in, 16, 128; purpose of and standards in, 123–129, 185, 191; recommendations concerning, 125
Supply: current means of, 73, 181–190; deficiency in, 11–38; deterrents to adequate, 74–75; distributive, 79; educational opportunities determining, 70–74; expected in 1954, 21; maximum, dependent on successful adaptation, 84–86, 190–192; potential sources of, 71–72; relation of education to, 69, 70–95, 178; versus demand, 19–24
Supportive care: responsibility for, 30–31, 83; sociopsychosomatic approach in, 30, 147–150
"Synthesis of the Biological Sciences" (Bowen), 159*n*

Teachers College, Columbia University, 193
Teaching: clinical, 66–68; in hospital schools, 63–69; number of nurses employed in full-time, 23, 179; number required, 23, 85, 180; preparation for, 7, 25, 26, 63, 69, 132–134
Team leadership: preparation for, 38, 83; responsibilities in, 37–38
Transfer credit, 99, 105, 117
Tuberculosis, shortage in hospitals for, and other chronic diseases, 24
Tyler, Ralph W., 176*n*

United States Cadet Nurse Corps, 19, 45
United States Children's Bureau, Nursing Unit of, 46*n*
United States Public Health Service, 35*n*, 46*n*, 48, 179*n*, 182
University of Chicago, 134

Visiting nurse associations, present understaffing of, 24
Vocational schools, 82, 183, 191

Wage scales, 37
West, Margaret, 48*n*, 50*n*, 51*n*, 59*n*, 90*n*, 144*n*
"What's Next in Curriculum Study" (Shields), 177*n*
Whitehead, Alfred North, 174
Widening Horizons in Medical Education (Curran and Cockerill), 148*n*
World War II, effect of, on nursing, 24, 28, 34, 45, 128