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ABSTRACT

A systematic procedure for reviewing a basic nursing curriculum, identifying needed changes, and developing and implementing a plan for change is described. Also examined are techniques used to evaluate the plan and to determine the relevance of the revised curriculum to community health needs. After presenting information on primary health care that relates to community nursing education, four phases of curriculum review and development are examined in detail. The first step in carrying out the review is to identify key attributes of community-oriented nursing. The school's curriculum and current program objectives should then be analyzed to determine needs for revision. While implementing changes in the teaching plan at the course level involves only a few teaching personnel, systematic curriculum revision involves policy changes, teacher preparation, and the development of new resources. Implementing the plan for changes requires the development of content, learning experiences, and course evaluation mechanisms. One aspect of evaluating the effectiveness of the changes is to monitor student competence, course content, and program effectiveness. Appendices include a report on how a nursing school adapted the guide, and protocols for applying health care processes to individuals, families, and community risk groups. (SW)

A Guide to Curriculum Review for Basic Nursing Education

WORLD HEALTH ORGANIZATION

The World Health Organization is a specialized agency of the United Nations with primary responsibility for international health matters and public health. Through this organization, which was created in 1948, the health professionals of some 165 countries exchange their knowledge and experience with the aim of making possible the attainment by all citizens of the world by the year 2000 of a level of health that will permit them to lead a socially and economically productive life.

By means of direct technical cooperation with its Member States, and by stimulating such cooperation among them, WHO promotes the development of comprehensive health services, the prevention and control of diseases, the improvement of environmental conditions, the development of health manpower, the coordination and development of biomedical and health services research, and the planning and implementation of health programmes.

These broad fields of endeavour encompass a wide variety of activities, such as developing systems of primary health care that reach the whole population of Member countries, promoting the health of mothers and children, combating malnutrition, controlling malaria and other communicable diseases including tuberculosis and leprosy, having achieved the eradication of smallpox, promoting mass immunization against a number of other preventable diseases, improving mental health; providing safe water supplies; and training health personnel of all categories.

Progress towards better health throughout the world also demands international cooperation in such matters as establishing international standards for biological substances, pesticides and pharmaceuticals; formulating environmental health criteria; recommending international nonproprietary names for drugs, administering the International Health Regulations; revising the International Classification of Diseases, Injuries, and Causes of Death; and collecting and disseminating health statistical information.

Further information on many aspects of WHO's work is presented in the Organization's publications.

A guide to curriculum review for basic nursing education

Orientation to primary health care and community health

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Preface

In 1978, the WHO/UNICEF International Conference on Primary Health Care, in Alma-Ata, recommended that primary health care should be considered the key to the achievement of WHO's goal of health for all by the year 2000. This recommendation has far-reaching implications for the practice of nursing and for nursing education. Increasingly, the nursing profession is faced with the questions: how can nursing most effectively meet the health needs of the population, what changes are needed in nursing education, and how can the necessary changes best be effected?

This guide attempts to answer these questions in so far as they impinge on basic nursing education. It describes a systematic procedure for reviewing a nursing curriculum, deciding what changes are needed, and developing and implementing a plan for bringing about these changes. It also examines the techniques that should be used to evaluate the plan and to determine how far the revised curriculum meets the criteria that it should be relevant to the health needs of the community and should prepare nurses for effective practice in community-oriented nursing based on primary health care.

An important premise of the guide is that educators alone cannot bring about the needed change in schools of nursing or in any educational system. It is also necessary to involve, for example, ministries of health, the legislative or regulatory bodies that set the rules and regulations for nursing education, health professionals, and community health consumers. Most important, it is essential that the nursing profession be committed to the need for change in nursing education and practice, and that nurses themselves become more actively involved in the change process.

In order to demonstrate how the guide may be used to examine and revise a curriculum, Annex 2 presents a report from one particular school of nursing, which shows clearly how the staff adapted the guide to make it relevant to the school, the local area, and the country. It should be borne in mind that, to achieve its potential, the guide must be adapted in such a way; it is not intended to be a directive.

The guide is the result of extensive collaboration and cooperation between many people and nursing institutions in several countries. It has been tested, rewritten, and retested in different schools of nursing by many hundreds of educators (nurses and non-nurses alike) involved in teaching in basic nursing education programmes. Critical comments have also been received from WHO staff members, both at headquarters and in the Regions. All these people have contributed useful ideas and practical suggestions, many of which have been incorporated in the final version.

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Introduction

The Concept of Primary Health Care

The World Health Organization and its Member States are committed to the primary health care approach to achieve the goal of health for all by the year 2000.

The Declaration of Alma-Ata[1] defined primary health care as "*...essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost that the community and country can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination*".

Five principles underlie this definition, equitable distribution, community participation, focus on prevention, appropriate technology, and a multisectoral approach. Put simply, these principles imply that:

- health care services should be equally accessible to all;
- there should be maximum individual and community involvement in the planning and operation of health care services;
- the focus of care should be on prevention and promotion rather than on cure,
- appropriate technology should be used, i.e., methods, procedures, techniques and equipment should be scientifically valid, adapted to local needs and acceptable to users and to those for whom they are used;
- health care is regarded as only a part of total health development – other sectors, such as education, housing, nutrition, are all essential for the achievement of well-being.

Within this framework, the eight essential elements of a primary health care service are:

- education concerning prevailing health problems and methods of preventing and controlling them;
- promotion of food supply and proper nutrition;
- the provision of safe water and basic sanitation;
- maternal and child health care, including family planning;
- immunization against the major infectious diseases;
- prevention and control of locally endemic diseases;
- appropriate treatment of common diseases and injuries; and
- provision of essential drugs.

These fundamental principles and elements of primary health care constitute a conceptual frame of reference that inevitably affects not only the planning, organization, and delivery of health care, but also the professional education and training of those who deliver such care. To put these concepts into practice, primary health care requires:

- the involvement of individuals, families, and communities in all phases of planning, organization, and management of their health care,
- the planning and coordination of health-related activities in collaboration with the social and economic sectors to achieve a better quality of life;
- the application of scientifically sound technology appropriately adapted to the social, cultural, and economic development of the community and directed towards:
  - *(a)* progressive, comprehensive health care for all, and
  - *(b)* priority care for high-risk groups;

[1] WORLD HEALTH ORGANIZATION. *Alma-Ata 1978 Primary health care* Geneva, 1978 ("Health for All" Series, No. 1).

- the staffing of primary care referral services with an appropriate mix of health workers, including:
  - (a) physicians, nurses, midwives, auxiliaries, technicians, community workers, and traditional practitioners, and
  - (b) intra- and interdisciplinary teams to provide guidance, instruction, referral services, and consultation.

Training Nurses for Primary Health Care

Since nurses provide, and will undoubtedly continue to provide a large part of health care in most countries, their training and role in health care must be enlarged and enriched. To do so a shift in emphasis must take place, and teaching and learning must be adapted so that graduates of basic schools of nursing are no longer prepared *almost exclusively* for curative care of hospitalized individuals; the emphasis must shift to acquiring the knowledge and skills most relevant to the health care needs of the community and this must be accompanied by a corresponding change in professional attitudes.

The reorientation of basic nursing education is more difficult to achieve in long-established programmes than it is in newly developing ones. However, the basic principles in effective change apply to both situations. What is needed is a critical review of the existing programme followed by a planned progressive modification of the curriculum so that nursing graduates are able to:

- provide preventive, curative, and rehabilitative care to individuals, families, and groups within the community;
- extend primary health care to all sections of the community;
- train and supervise health workers in primary health care at the community level;
- work effectively with health teams, and
- collaborate with other sectors concerned with socioeconomic development.

Purpose of the Guide

The aims of this guide are to:

- provide information about the concepts and processes essential in developing a basic nursing education programme oriented towards primary health care and community health,
- propose a methodology for reviewing existing programmes so as to identify the changes needed;
- stimulate ideas for planned progressive change in nursing education in the direction of the health care of individuals, families, and groups in the community.

The guide is *not* directed towards the development of a total curriculum plan nor does it pretend to cover all the courses normally included in a basic nursing curriculum. It presents only the concepts and experiences that are calculated to make nurses more aware of the larger health needs of the community and to increase their ability to help satisfy these needs. It describes a foundation for effective basic nursing practice based on the primary health care approach to community health.

The guide is addressed to:

- heads of programmes and teachers in basic nursing education programmes, who are expected to be the primary users;
- authorities concerned with professional education and personnel responsible for manpower planning; and
- administrators and supervisors of health services.

Format of the Guide

The guide first presents selected basic concepts and general characteristics of primary health care as these relate to the education of nurses for the practice of community-oriented nursing. It then sets out in detail the four phases of curriculum review and development needed to bring the educational programme into line with the new concepts. These four phases are:

- review of the existing educational programme;
- development of the plan for change;
- implementation of the plan, and
- evaluation of the changed programme

Community-oriented nursing in primary health care: basic concepts and general characteristics

Nursing education is crucial to keeping nursing practice relevant to the health needs and expectations of society. While few schools of nursing are unaware of the new concepts in nursing practice arising from pressing social demands for health and health care, the majority of schools have done little to bring their educational programmes in line with the primary health care approach to community health; they still prepare their students for the traditional nursing role, but include selected community health care concepts in some areas of study.

Nursing care within most health care systems tends to concentrate on the individual patient, with family and community being considered only in terms of their influence on patient care. This tendency arises from the affiliation of schools of nursing to hospitals, where students gain most, if not all, of their clinical experience. Nursing practice in hospitals tends to promote the study and development of skills in:

- a one-to-one care relationship,
- care of the acutely ill and severely disabled,
- secondary tertiary prevention,
- specialization in clinical entities.

The family and community may sometimes be seen as representing the source of the patient's problem or as a contributory cause, and they may be considered essential to its resolution. For the most part, however, the primary responsibility of nurses is for the health and welfare of the patients under their care.

Even when services are provided in out-of-hospital settings, any assessments of family and community health that the nurse may be called upon to make are usually planned from the perspective of the individuals rather than that of the groups to which they belong.

Community-oriented Nursing

In community-oriented nursing, the concepts of primary health care are integrated into nursing practice at all levels—home, dispensary, health centre, hospital. In providing health care, whether to individuals, the family, or the community, the nurse is expected to employ three processes—assessment of needs, planning and implementing the measures required, and evaluation of the effectiveness of the care provided. These three processes are discussed in greater detail on p. 10 and in Annex 1.

Other responsibilities of the nurse include:

- encouraging the community to participate *actively* in the development and implementation of health services and in health education programmes;
- working in partnership with the community and with families and individuals;
- helping families become responsible for their own health by teaching them elementary health concepts and self-care techniques;
- providing guidance and support to other primary health care workers in the community, and
- coordinating health-related community development activities with those responsible for social and economic programmes.

Community-oriented nursing provides supportive, nurturing, and therapeutic care not only to individuals, but also to their families and communities. The nature and characteristics of nursing in community health care services, within the conceptual framework of primary health care, are given below.

- Community-oriented nursing focuses on the needs, health problems, and resources of the community through:
  - *a* periodic analysis of the causes and distribution of common health problems and disabilities in the area;
  - *b* continuous updating of nursing functions in the prevention, treatment, and control of prevailing health problems (this includes case-

finding), in consonance with defined health policies and priorities; and
planning and reviewing basic and post-basic nursing preparation to develop and expand the knowledge and skills required to deal effectively with community needs.

- Community-oriented nursing requires an orderly assessment of the accessibility of primary health care to all members of the community, and the adoption of strategies for attaining complete coverage as quickly as possible including:
  - identification of groups and geographical areas where health care is either not available or not of an acceptable standard;
  - extension of nursing services as required to provide basic health care to all, especially to the neglected and underserved groups, and searching for and providing care to persons and groups at high risk in order to improve the prevention, follow-up, monitoring, and control of prevalent, preventable, or disabling health problems;
  - training and utilization of community workers in planning, providing, and evaluating primary health care services;
  - development of a referral and support system in cooperation with other health workers to ensure the comprehensiveness of health services; and
  - stimulation of community and intersectoral action to improve social conditions affecting health, e.g., economic status, nutrition, housing, education, and work environment.

Shifting the educational focus

The major programme changes expected in a nursing school curriculum when the focus shifts from a traditional pattern to community-oriented health care are presented in Fig 1.

It may not be possible for the changes shown in Fig. 1 to take place consistently and smoothly in all parts of the curriculum. Family and community concepts are natural in maternal and child care, for example, and course changes in this area may be easily implemented. In other areas, change may be more difficult.

As the educational focus is shifted to the community, opportunities for students to gain early experience in traditional settings are modified but not eliminated. However, in making decisions on such changes, precedence should be given to community based care. Questions should be asked repeatedly by the curriculum organizers to determine whether the course content and learning experiences are consistent with the strategies and service aims of the primary health care approach to community health. Such questioning helps to eliminate irrelevant, repetitive, and fragmented learning and facilitates the integration of principles from the natural, social, public health, and medical sciences into nursing practice.

Processes Involved in the Provision of Community-oriented Care

The objectives of nursing care derive from a knowledge of human social development, and of the etiology, epidemiology, and treatment of disease. However, in community oriented nursing, the objectives are specified in terms of the needs not only of each patient, but also of each population group at risk. The specification of objectives and the nature of nursing care require that the nurse should be able to apply a *problem-solving* approach to the fulfilment of her functions, using the three processes outlined below (see also Annex 1). Planning is an integral part of all three processes.

Assessment of health needs

In assessing the health of the individual, family, and community, personal factors, such as age, sex, religion, and economic status, and environmental influences on health must be taken into account. The assessment should cover:

- trends revealed in the social and health history of those assessed;
- their physical and emotional ability to function;
- attitudes, knowledge, and perceptions of health and illness;
- health behaviours and patterns of care;
- resources available to meet own needs; and
- other factors that may predispose to prevailing health problems.

Implementation of the care plan

The provision of nursing care should be planned and implemented in accordance with strategies that are:

- directly related to the specific needs and underlying causes of the problems identified,
- based on scientifically sound principles of health promotion, prevention, treatment, and rehabilitation, adapted to the situation, and
- planned in terms of desired outcomes in individual family group health and health-related behaviour, on both a short-term and a long-term basis.

Fig. 1. Comparison of traditional and community health orientation to nursing practice

Curriculum characteristics	Educational focus	
	Traditional nursing	Community-oriented nursing
Primary focus	Sick individual (patterned on the curative model)	Community health (patterned on socioeconomic health model for self-reliance in health)
Target population	Sick and disabled seeking health care	Total population, especially the underserved and high-risk groups
Primary settings for learning	Hospitals, other institutions, homes	Communities, homes, schools, industries, hospitals, and other institutions
Nursing role	Specialized and interdependent within the health sector	Generalized and interdependent within the health sector and health-related sectors
Nursing concerns	Conditions requiring hospitalization	Prevailing health problems and needs of the community
Nursing practice	Primary care (nursing care of individuals) Patient/family participation in care Some follow-up of patients through hospital outpatient department	Primary health care approach Community/family/patient participation in care Identification and follow-up of vulnerable groups Health team approach to care
Problem-solving process		
assessment of –	Individual and family needs and resources	Community/group/family/individual needs and resources
intervention through –	Individual and family	Community/group/family/individual
Objectives of practice		
prevention –	Focus on secondary/tertiary prevention	Focus on primary prevention
therapeutic –	Patient well enough to be discharged	Improved patient, family, and community health, self-care, self-reliance
Health delivery system	Institutional and individualized care of patients	Primary health care for all, involvement of other sectors influencing health, health team approach
Evaluation of nursing practice	Number of patients discharged from care by diagnostic category Frequency and intensity of patient contact	Percentage health coverage of population Service utilization rates by high-risk groups Rates of change in health status of high-risk groups/community Rates of response in treated groups, i.e., immunization, therapy complete, average length of hospitalization, self-care ability, and changes in health behaviour

Evaluation of care provided

Evaluation of the effectiveness of the care provided should be based on systematic documentation, monitoring, and observation, especially in relation to:

- individual, family, and community participation in care planning and implementation,
- quality, scope, and timeliness of care provided, judged according to service standards, recommended therapies, and specific care plans,
- accuracy, completeness, and regularity of assessments;
- individual, family, and group responses to services provided, including the assessment of care, and
- intermediate and long-term results expected from the implementation plan, with explanations of discrepancies observed, and suggestions for changes to achieve more effective strategies.

These three basic processes are employed *sequentially* and *continuously* in the course of providing nursing care. Each represents a different but equally important dimension of nursing practice. The assessment – implementation – evaluation cycle is repeated periodically in order to find more efficient and more effective ways of attaining the stated health goals.

Basic concepts of nursing education

Curriculum Organization

How the educational programme is developed and organized to prepare students for community-oriented nursing care will depend upon many factors within the school and on the requirements of the health system in which graduates of the school will eventually work. Basically, there are two ways in which a curriculum can be organized: one way is to place the emphasis on the learning of *subjects* that the experts in the field consider to be what a nurse ought to *know*; alternatively, the curriculum can be based on the acquisition of the *whole range of skills* that the graduate nurse is expected to *practise* (at defined levels of proficiency) in nursing care.

If the curriculum is organized in the first way, then the changes required for a community-oriented approach to nursing will probably take the form of the inclusion of public health/community health topics in the curriculum.

If, however, the curriculum is organized in the second way, community-oriented nursing tasks will have to be first identified and then analysed in terms of the knowledge, skills, and attitudes needed for a defined level of performance. From such an analysis it will be possible to derive the learning objectives for the new curriculum.

Learning Objectives[1]

After the defined professional functions have been divided into activities and the latter further subdivided into the tasks inherent in community-oriented nursing, the learning objectives may be stated for each task. They may be classified into three categories: knowledge, skills, and attitudes. Once stated, the objectives become the basis for assessment of learning.

[1] See GUILBERT, J.-J. *Educational handbook for health personnel*. Geneva, World Health Organization, 1977 (Offset Publication, No. 35), and ABBATT, F. R. *Teaching for better learning*. Unpublished WHO document, 1980.

Knowledge objectives (cognitive)

These are concerned with the acquisition of facts, concepts, and principles that the nurse will need for use in various situations.

Attitude objectives (affective)

These concern feelings and attitudes that affect the student's behaviour in the performance of work. Sensitivity to people and awareness of their needs will be apparent even in such simple skills as giving medicine, listening to individuals, or explaining why immunization is a good preventive health measure for a child. These attitudes are essential in caring for and about people. They constitute a basis for commitment to health development in community-oriented nursing.

Skill objectives (psychomotor)

Psychomotor skills involve coordinated muscular movements needed to complete a task successfully. Some skills are relatively simple, but some are very complicated involving complex information-processing and decision-making.

Many of the tasks that a nurse is required to carry out involve psychomotor skills, but they will also require cognitive abilities, such as the application of concepts and principles to the solving of problems, and frequently there is also an affective dimension in so far as the nurse needs to have an acceptable attitude to the task or to the patient. Therefore, when analysing any task that the nurse performs, it is essential to identify all three components—the cognitive, psychomotor, and affective; that is, the knowledge, skills, and attitudes necessary for the successful and competent performance of the task.

After the learning objectives needed for each task have been stated, decisions can be taken on the standard that has to be reached by the student in order to progress to the next phase of learning. The objectives should be stated in terms of what the

students should be able to do after a learning period/course that they were not able to do before that period.

The stating of objectives facilitates two kinds of assessment:

- formative assessment, this should be done regularly and as informally as possible throughout the learning process, with a detailed feedback on performance to both teacher and student so that they may take appropriate remedial measures in teaching and learning; and
- summative assessment: this, in addition to serving the above purposes, provides the basis for decisions on promotion and on qualification or certification to work when the student graduates.

Principles of Learning

Many theories and differences of opinion exist on how people learn. However, it is generally agreed that learning must help the learner meet ever-changing situations, acquire ways of using data, and identify and solve problems.

Learning is an *active, continuous, sequential process* because concepts, skills, and values are being constantly re-evaluated and reorganized for use, even when learning is not consciously undertaken. As needs and other conditioning factors that affect learning change, there has to be constant *unlearning* and *relearning* as well as the acquisition of new skills or values.

Learning takes place more readily when the learner has the opportunity to practise and experience what is being learned in a variety of situations. In other words, learning is facilitated when it takes place in or near the real situation in which the learner expects to work.

Teaching process

The following principles of teaching and learning should be given special attention.

Active involvement

Students must be actively involved in learning. They must have the opportunity to seek out information and to ask questions, respond, apply information, and practise thinking and practical skills. The teacher should provide varied activities that force students to seek out information and to apply the information gathered.

Feedback

Students want to know how well they are doing and must be able to understand the errors they are making in order to guide their efforts towards further progress. Teachers should provide as much information as possible about the standard of students' work, praising what is well done and showing how errors may be eliminated.

Clarity

To learn, the students must be able to hear and understand the teacher and see what is being demonstrated. Teachers should use clear language, define new words, and be certain that audiovisual and other aids are used wisely to enrich learning.

Mastery

The sense of mastery of knowledge and skills is important as a basis for new learning. Learning is sequential and is conditioned by the achievement of previous learning. Teachers must make sure students know the concepts and principles needed to progress to the next stage. Ideally, teachers should ensure at the beginning of each teaching session that students have the prerequisite knowledge and at the end of each session that the learning objectives have been achieved.

Individual differences

Students learn in different ways and at different rates. They have different interests, experiences, and abilities. Teachers should remember that students are individuals; they should try to get to know them and use methods that are most suited to their learning requirements.

When the learners believe that the teacher cares about them, they have extra motivation for learning. Teachers should try not only to talk but also to *listen* to students; they should demonstrate a serious attitude towards their teaching responsibilities and thus reflect an important aspect of caring in nursing.

Summary

Traditionally, schools of nursing have produced graduates with little or limited ability to provide nursing care outside the hospital setting. Too frequently, therefore, the traditional nursing role has little or no relevance to the present or future contribution of nursing to the health development of individuals, groups, and communities.

The nature and characteristics of community-oriented nursing, viewed within the context of the primary health care approach, must be used to identify the changes needed in the focus and emphasis of basic preparation for nursing.

Problem-solving in community-oriented nursing, applied through the three processes of assessment, implementation, and evaluation described above, is fundamental to the modification of the basic nursing programme to ensure greater relevance of nursing practice to health care needs.

The subject teacher-centred method of curriculum development focuses on subject matter and may tend to foster the recall of knowledge rather than competence or ability to meet health needs. Shifting the emphasis to a student-centred basic nursing education may be accomplished by organizing learning around the whole range of tasks students are expected to practise in their communities.

The ultimate goal of learning is the ability to meet ever-changing situations, to acquire ways of using data, and to identify and solve problems of working and living. The acquisition of this ability is facilitated when learning activities take place in or near the real situation in which the learner expects to work.

Learning objectives are based on defined nursing tasks. The three kinds of objective are the knowledge, skills, and attitudes inherent in professional community-oriented nursing. The stating of objectives permits the assessment of learning in order to provide feedback on which to base remedial measures and decisions on promotion and certification.

Phase 1

Reviewing the curriculum for community health emphasis

With a view to reorienting nursing education, the existing curriculum should first be reviewed in order to identify the aspects of family and community health already included in the various courses. For this purpose, it is necessary to list the objectives and content fundamental to a community health perspective and to make a critical examination of the educational programme for teaching/learning that supports these objectives. This examination should provide a general idea of the content included in the curriculum and its place in the total educational programme. This information is a necessary foundation for planning the steps to be taken later in curriculum development. Projected plans for changes are important in selecting the persons who will participate in the curriculum revision. Early participation in the change process stimulates interest, increases understanding, and should develop a sense of commitment to the programme review.

Preparing for the Review

Selection of participants

Participants in the review should, where possible, include the decision-makers whose active support will be needed to facilitate the implementation of changes. Although these decision-makers may not be able to take part in all phases of the review, they may be able to participate in initial discussions relating to the reorientation, results of data analysis, and specific changes to be made. The decision-makers might include administrators, senior health services staff, heads of departments, senior teaching personnel, and the head of the school. Any innovation or change in the educational programme may require such decisions as allocation of time to teachers and service personnel, and use of facilities, resources and materials, which may affect not only the cost of implementing the changes, but also the possibility of doing a curriculum review.

The person responsible for the school of nursing is crucial to curriculum change and is often the initiator of the change process. This person should be aware of the need to relate nursing education to community health needs and should be willing personally to promote changes to strengthen this relationship. However, only under exceptional circumstances should the head of the programme conduct the curriculum assessment or develop the review plan. In this case, general administrative functions should be assigned to other staff so that the head is able to devote enough time to the review.

The school's curriculum committee is generally responsible for curriculum review. Particular functions may be delegated to a subcommittee that works closely with the curriculum committee, teachers, and others involved in the instructional programme of the school. In instances where there is no curriculum committee, the head of the school should establish a review committee. The size and composition of this committee will depend on how the school is structured. Each department or programme area should be represented. In all cases, the person or persons responsible for public health and other aspects of community health nursing will be indispensable.

It is advisable to assign to *one* person the primary responsibility for directing the curriculum review (review coordinator). This responsibility includes seeing that all aspects of the review are carried out in a reasonable time, that teachers and other interested groups are kept informed and involved, and that decisions and procedures are implemented.

The teaching staff should be informed of the purpose and general plan of the curriculum review from the beginning, since ultimately they will have to examine the content of the courses they teach in respect of primary health/community concepts.

Administrators and key service personnel involved in clinical and field training of students

are important to the curriculum review. They can furnish information on services that can provide relevant learning experiences or that have potential for doing so. They should be informed and involved *early* in the the review process so that decisions on curriculum modification can take into account the information that they alone can provide.

Former graduates of the school can provide essential feedback on the extent to which the educational programme and process prepared them to practise community-oriented nursing. Students' perception of their learning experience can enrich the data base and provide suggestions for improving the community focus that might otherwise be overlooked. Students' involvement in this decision-making process is a valuable experience in learning, analogous to individual, family, community involvement in planning and implementation of care. Their commitment to this approach can become a powerful force in developing self-reliance in health care in the community.

Orientation of the participants

The first responsibilities of the review committee coordinator include:

- informing members of the committee about the issues and procedures involved in the review.
- informing members about local and national health statistics, health reports, and literature relating to community health and services; and
- familiarizing members with the methods of curriculum review and study so that standard procedures can be adapted to the school conditions for the specified purpose of the review.

As general procedures for review are considered, thought should be given by the review coordinator to their potential application to the existing situation, and, if applicable, to how, when, and by whom they can be carried out. The review plan can then be developed. Each step in the process should be described briefly and scheduled tentatively. The resulting outline serves throughout the review process as a guide to:

- *explain* the review plan to other teachers and related outside groups;
- *plan* activities that should be implemented simultaneously and those that must be sequential;
- *estimate* human resources and time requirements for each step;
- *schedule* group conferences and individual appointments within the review process;
- *report* the review process and analyse the curriculum data.

To keep the interest of all participants, efforts should be concentrated on completion of the review as quickly as possible. The time required for completion will depend on such factors as the size of the school, number of teaching staff, and scope of the task.

Carrying out the Review and Formulating Objectives

Determining programme goals

The determination of goals for community-oriented nursing educational programmes requires the teaching staff and the review committee to participate in identifying the kinds of knowledge and skills needed by the nurse to function in a primary health care role.

A nurse working in primary health care would need to know the following:

- major health problems in the area;
- primary methods of prevention, treatment, and control of the prevailing problems, together with their etiology, epidemiology, and pathology,
- principles of maternal, infant, and child health care, factors affecting individual and family growth and development, methods of family planning;
- assessment, therapeutic, and rehabilitation processes;
- principles of prevention, continuity of care, and influences of life-style on health.

Additionally, the nurse would need to know how to:

- evaluate the effect of care provided to individuals, families, and groups in the community;
- train others in the promotion of health through self-care;
- adapt health care to the needs of various social, cultural, and occupational groups in the community;
- seek active participation of the community in health development and of individuals and families in their own health care,
- extend health services to underserved population groups and modify patterns of use of health services by various population groups;
- collaborate with multisectoral groups in effecting improved community health;

- train, and collaborate with, indigenous practitioners and community health workers,
- participate in health policy formulation and decision-making for primary health care at the community level; and
- work effectively with health care teams.

Reviewing and Revising Programme Objectives

Statements of the purpose and objectives of the existing programme should then be reviewed with a view to determining the extent to which they are in agreement with the concept of primary health care and community-oriented nursing.

This procedure will enable the coordinator to identify the programme objectives that need modification. If there is no statement of objectives, the coordinator should ask the head of the nursing programme and departmental chief for the guidelines used in the development of the curriculum, which can be regarded as a substitute for formal programme objectives. Particular note should be made of sanctions influencing community health practice (e.g., legal limitations, national health policies, and health care system structure).

Review of the information obtained may show that the school objectives already include some essential elements of primary health care and community health nursing and that little change is necessary. When such elements are lacking or inadequate, programme goals should be developed or revised in order to promote more preparation for community health practice. In formulating the programme goals, consideration should be given to:

- nature and purpose of the school and its relationship to the parent institution (e.g., hospital, university);
- characteristics of students and teachers (age, basic education, career preparation, perceptions of nursing and community, responsiveness to change);
- role of the school in the community and in the health care system, its potential for expansion; and
- community health needs and services, relevance of nursing to the primary health care approach to community health, and opportunities for employment of graduates of the programme.

The resulting preliminary statement of proposed objectives should indicate the changes needed in the curriculum to prepare nurses for community health practice, using the primary health care approach, and to stimulate programme evolution with minimum disruption of the curriculum. An example of such a statement is given below.

The general purpose of the basic nursing educational programme is to prepare a competent generalist in the practice of nursing in health care. The graduate will be able to:

- provide promotive, preventive, curative, and rehabilitative care to individuals, families, and communities;
- plan and carry out nursing care in homes, other community settings, and hospitals;
- use the problem-solving process skilfully in all aspects of nursing practice;
- work effectively with individuals, families, and groups to promote self-care and support and supervise auxiliaries, community health workers, and others to provide essential preventive and curative health care,
- function effectively as a member of a primary/community health care team, and in intersectoral collaboration;
- appreciate continuing learning for personal and professional enrichment.

Obtaining Acceptance of Revised Objectives

Before the proposed objectives can become a working document they have to be discussed and accepted by the head of the school and the teaching staff. The organization and procedures to secure teacher participation and acceptance of revised objectives may vary in different schools. Nevertheless, the following procedures are likely to apply to most situations:

- present the draft statement of objectives and reasons for changes to the head of the nursing programme and the curriculum committee; revise the draft in the light of their comments, and plan for its review by other administrators and teachers;
- distribute to all reviewers clearly written copies of the revised draft statement, including explanations of the changes;
- specify the time allotted for review, allowing sufficient time for study and comments on the draft statement in relation to the overall study plan;
- further revise the draft statement on the basis of the reviewers' comments, maintaining the essence of the community focus and the primary health care approach;
- report back to the teaching staff and other reviewers, summarizing the reviews and action taken.

Gathering Information for Course/Programme Review

During the collection of information on existing course content, participants should be informed that the data will be used *only* to assess the present status of the curriculum. Changes to update the curriculum, with greater emphasis on the community focus, will be developed later and jointly with the teachers and others responsible for the respective courses.

A variety of methods of data collection may be used to collect the information needed for the review of course content. The method or combination of methods used depends on what is most practical and expedient for the school, but will have to be such that all relevant data are collected.

For a critical review of curriculum content, a report form is essential. The form ensures that all the information desired is collected in the same way for all courses.

Table 1 shows one example of such a form; it can be adapted to national, regional, and local primary community health care needs and can be used for collecting baseline data for curricula review. The information required for this first review includes, the title and number of the course being reported, the content considered essential for

Table 1. Data collection form for review of nursing curricula

Course title or number .....

Course content relevant to primary/community health care*	Learning activities				Comments
	Subject matter	Community nursing practice			
		Assessment of health needs	Implementation of care plans	Evaluation of care	
1. Common health problems					
(1) Diarrhoea					
(2) Nutritional diseases					
(3) Malaria					
(4) Pneumonias					
(5) Tuberculosis					
(6) Venereal disease					
(7) Diabetes					
(8) Parasitism					
(9) Mental health					
2. Family health care					
(10) Health care patterns					
(11) Social relationships					
(12) Family planning					
3. Maternal and child care					
(13) Prenatal, postnatal care					
(14) Delivery, care of the newborn					
(15) Normal growth and development					
(16) Prematurity					
(17) Immunization (poliomyelitis, measles, diphtheria, pertussis, tetanus)					
(18) Adolescence, sexual development					
4. Adult health care					
(19) Function/productivity					
(20) Aging processes					
(21) Acute illness and rehabilitation					
(22) Chronic illness and self-care					
5. Community needs and participation					
(23) Community health education					
(24) Community health development					
(25) Primary health care coverage					
(26) Sanitation (environmental health)					
6. Team care					
(27) Primary health care team					
(28) Interprofessional team					
7. Intersectoral involvement					
(29) Agriculture					
(30) Community development					

* This list will vary in different countries. It should include the basic components of primary health care.
The items listed are not independent or comprehensive but should reflect the essential elements of community health nursing on p. 16. Subjects include the epidemiology of health and illness and its application to nursing practice.

primary community health practice, and a method for noting whether or not the course includes the required subject matter and/or practical experience.

The school must prepare its own data form, similar to that shown in Table 1. Only data essential for the review should be collected. The list of characteristics of community-oriented nursing (p. 16) provides a basis for determining the course content that should be included in the data collection form. It is extremely important that the subjects listed on the data collection form making up the course content should be relevant to the health needs of the country.

In using the data collection form a cross is made opposite the content items in the subject matter column to show that theoretical study of these items is included in the course. Similarly, crosses are placed in the three columns under the heading "Community nursing practice" to show whether or not the course includes student practice in out-of-hospital community settings. Space should be provided for teachers to make *brief* comments on the form: notations can be explained, obstacles cited, and changes being planned for individual items can be indicated. These comments help the coordinator to analyse the programme in relation to preparation of nurses for primary/community health care and to determine where it needs improvement.

All teachers and associated clinical and service personnel should be given the necessary number of data collection forms and instructions for: (1) the completion of a form for each course in which they are involved; (2) the review of course objectives and the teaching content of each course for individual, family, and community health components listed, (3) the checking of all those items that apply. Teachers may be brought together as a total group, by departments, or in other groupings. They should be asked to fill in the forms during the meeting. Since the coordinator and members of the curriculum review committee will be present, individual questions may be answered as they arise. If more time is needed by the participants, the forms and instructions may be distributed for completion independently. The completed forms should then be returned to the review coordinator within a specified number of days.

In developing plans to obtain information, the review coordinator and curriculum review committee will need to decide whether all courses should be reviewed simultaneously or whether it would be better to space reviews over a specified period. Some factors that may influence this decision are:

- *size of school and teaching staff*—the larger the teaching staff, the more time will be needed to collect data for all courses;
- *programme structure and function*—the more traditional the programme, the more time and thought will be required and teachers may need to be freed from other pressures,
- *teacher interest*—while some teachers may be eager to cooperate in reviewing their course content, others may be ambivalent and may feel threatened by change or be resistant to it, initiating the review with those who are ready and who have more understanding of the goals will facilitate the entire effort;
- *programme focus*—certain departments or areas of study more naturally include concepts of family and community health (e.g., courses in maternal, infant, and child health, public health, and mental health nursing) and, therefore, progress in reviewing the curriculum for community focus is likely to be more rapid in these courses than in others.

When the procedure for reviewing the curriculum has been outlined, the head of the nursing programme, the curriculum committee, teachers, and others (see p. 15 on the selection of participants) who will be involved should be informed and dates should be fixed for collecting the review data. The final plan should be acceptable and convenient to all participants, in order to reduce the need for modifications or change in the schedule once the review procedure has started.

Conducting interviews with teaching staff

When more than one teacher is involved in a course, data should be obtained from both jointly or, if that is not possible, from the one responsible for course development.

For future planning it is important to have information on the teachers' perception of relevance of their course content to the community and of any plans they may have to enrich the subject matter and/or the practical training in this direction. It is essential that teachers, together with their teaching associates in the clinical practice areas, provide the basic data. Complementary data may be collected through the procedures described below or any other procedure deemed necessary.

The review coordinator may interview each teacher separately and record the information on a form developed for this purpose. Although this is a time-consuming method, it may provide the most complete and consistent data base since questions and/or misunderstandings can be clarified

personally by the coordinator and further questioning can assure thorough consideration of the content being taught. Personal interviews enable the coordinator to assess the readiness of the teacher to enlarge opportunities for students to become acquainted with a community-oriented approach.

The review coordinator may be assisted in this activity by a few members of the curriculum review committee. Heads of departments or of programme areas should, as far as possible, be responsible for conducting interviews with their teachers and associated clinical and service personnel.

Editing and summarizing the data

The completed study forms have to be edited by the review coordinator in order to be sure that *(a)* all the necessary information has been provided, *(b)* all courses that were to be reviewed have been covered, and *(c)* there are no duplications or contradictions. The data must also be prepared for analysis. If futher clarification is needed, the person reporting the information should be contacted to make the additions or adjustments.

For each course reviewed, a separate report should be prepared, summarizing all the relevant

Table 2. Summary of course content in primary/community health nursing

Course title: Maternal and child health (No. 24)

Course content relevant to primary/community health	Learning activities				Comments	Aggregate scores				
	Subject matter	Community practice				Subject matter	Community practice			Total score
		Assessment of health needs	Implementation of care plans	Evaluation of care			Assessment of health needs	Implementation of care plans	Evaluation of care	
1. Common health problems						2	5	3	-	10
(1) Diarrhoea	x	x	x		Conditions may be seen	1	1	1	-	(3)
(2) Nutritional diseases	x	x	x		in rural clinics	1	1	1	-	(3)
(3) Malaria					Standard presenting	-	-	-	-	-
(4) Pneumonias			x		treatment followed ⊕	-	-	1	-	(1)
(5) Tuberculosis						-	-	-	-	-
(6) Venereal disease		x				-	1	-	-	(1)
(7) Diabetes mellitus		x				-	1	-	-	(1)
(8) Parasitism		x				-	1	-	-	(1)
(9) Mental illness						-	-	-	-	-
2. Family health care						3	3	2	-	8
(10) Health care patterns	x	x	x		In city clinics	1	1	1	-	(3)
(11) Social relationships	x	x			only Home visits	1	1	-	-	(2)
(12) Family planning	x	x	x		not yet arranged ⊕	1	1	1	-	(3)
3. Maternal and child care						6	3	3	2	14
(13) Antenatal, postnatal care	x	x	x	x		1	1	1	1	(4)
(14) Delivery, care of the newborn	x					1	-	-	-	(1)
(15) Normal growth and development	x					1	-	-	-	(1)
(16) Prematurity	x	x	x			1	1	1	-	(3)
(17) Immunization (polio, measles, diphtheria, etc.)	x	x	x	x		1	1	1	1	(4)
(18) Adolescence sexual development	x					1	-	-	-	(1)
4. Adult health care						4	4	2	1	11
(19) Function/productivity	x	x				1	1	-	-	(2)
(20) Aging processes	x	x				1	1	-	-	(2)
(21) Acute illness	x	x	x	x		1	1	1	1	(4)
(22) Chronic illness	x	x	x			1	1	1	-	(3)
5. Community needs and participation						3	1	2	-	6
(23) Health education	x	x	x		Students responsible	1	1	1	-	(3)
(24) Health planning					for mothers' classes ⊕	-	-	-	-	-
(25) Primary health care	x		x		Observations with	1	-	1	-	(2)
(26) Sanitation	x				sanitarian when possible	1	-	-	-	(1)
6. Team care						2	1	2	-	5
(27) Primary health care team	x		x		Work with clinic	1	-	1	-	(2)
(28) Interprofessional team	x	x	x		doctors ⊖	1	1	1	-	(3)
7. Intersectoral involvement						1	-	-	-	1
(29) Agriculture	x					1	-	-	-	(1)
(30) Community development					Observation provided in schools	-	-	-	-	-
						21	17	14	3	55

data on one form Table 2 is an example of a completed form providing a summary of all the data collected on a course in maternal and child health. The first column on the left contains a list of all the topics that go to make up the course content judged to be relevant to the practice of primary health care and community-oriented nursing. The next four columns are used to indicate (by means of crosses) which topics are represented in the subject matter (theory) taught and in community practice, the latter being subdivided into assessment of health needs, implementation of care plans, and evaluation of the effectiveness of care provided. The centre column of the form is used for recording the comments of the teachers reviewing the course. Comments indicating a high potential for enlarging the community focus can be marked with a plus sign, those indicating little or no potential with a minus sign. In this way, the comments and observations of the teachers may be used to strengthen the analysis. The five columns on the right-hand side of the form are used to arrive at aggregate scores for each of the study areas and for the course as a whole. As will be seen, these scores are computed by assigning a value of 1 to each of the crosses entered under "Learning activities" and adding

Table 3 Example of a summary of courses reviewed for content relevant to primary/community health, showing total possible score obtained for each content area

Course content relevant to primary/community health care	Total possible score[b]	Courses reviewed and scores obtained[a]						Summary	
		Maternal and child health	Paediatrics	Medical-surgical nursing	Geriatrics	Mental health/ psychiatric nursing	Public health nursing	High score and % of total possible	Content limited ( ) or totally omitted (x)[c]
1. Common health problems	36	10+	17	17-	13	4-	17+	17 47.2%	
(1) Diarrhoea		(3)	(3)	-	(2)	-	(3)		
(2) Nutritional diseases		(3)	(3)	(3)	(3)	(1)	(3)		
(3) Malaria		-	(1)	(2)	-	-	(3)		
(4) Pneumonias		(1)	(3)	(3)	(3)	-	(2)		
(5) Tuberculosis		-	(3)	(3)	(1)	(1)	(3)		
(6) Venereal disease		(1)	(1)	(2)	-	(1)	(2)		
(7) Diabetes		(1)	(2)	(2)	(1)	(1)	-		-
(8) Parasitism		(1)	(1)	(2)	(2)	-	-		-
(9) Mental health		-	-	-	(1)	-	(1)		-
2. Family health care	12	8+	7	4	5	2	8	8 66.7%	-
(10) Health care patterns		(3)	(3)	(2)	(3)	(1)	(3)		
(11) Social relationships		(2)	(3)	(2)	(2)	(1)	(2)		
(12) Family planning		(3)	(1)	-	-	-	(3)		
3. Maternal and child care	24	14	11	2	0	4	10	14 58.3%	
(13) Prenatal, postnatal care		(4)	(1)	(2)	-	(1)	(2)		
(14) Delivery, care of the newborn		(1)	-	-	-	-	-		-
(15) Normal growth and development		(1)	(3)	-	-	-	-		
(16) Prematurity		(3)	(1)	-	-	-	-		
(17) Immunization (poliomyelitis, measles, diphtheria, pertussis, tetanus)		(4)	(4)	-	-	-	(4)		
(18) Adolescence, sexual development		(1)	(2)	-	-	(1)	(2)		-
4 Adult health care	16	11	0	14	12	4-	10+	14 87.5%	
(19) Function/productivity		(2)	-	(3)	(2)	(1)	(2)		
(20) Aging processes		(2)	-	(3)	(4)	(1)	(2)		
(21) Acute illness and rehabilitation		(4)	-	(4)	(3)	(1)	(3)		
(22) Chronic illness and self-care		(3)	-	(4)	(3)	(1)	(3)		
5 Community needs/participation	16	6+	8	0	4	1	10	10 62.5%	
(23) Community health education		(3)	(2)	-	(2)	(1)	(3)		
(24) Community health development		-	(1)	-	-	-	(2)		-
(25) Primary health care coverage		(2)	(3)	-	(1)	-	(3)		
(26) Sanitation (environmental health)		(1)	(2)	-	(1)	-	(2)		-
6 Team care	8	5	6	6	4	1	4+	6 75.0%	
(27) Primary health care team		(2)	(3)	(3)	(2)	-	(2)		
(28) Interprofessional team		(3)	(3)	(3)	(2)	(1)	(2)		
7 Intersectoral involvement	8	1	2	0	0	0	2	2 25.0%	
(29) Agriculture		(1)	(2)	-	-	-	(2)		-
(30) Community development		-	-	-	-	-	-		x
Total course score	120	55+	51	43-	38	14	62+	71	
% of possible score	100	45 8	42 5	35 8	31 7	11 7	51 7	59 2%	

[a] + indicates a high potential for enlarging the community focus - indicates little or no such potential (see pp 22 23)

[b] Total possible content score is calculated by multiplying the number of items in each content area by 4 i e the maximum number of crosses that could be awarded to each item of instruction

[c] Criteria for 'limited' content will have to be decided by each particular school Here instruction in less than 3 of the 4 basic care processes is considered limited

these scores together, both vertically and horizontally. The scores for different courses reviewed are then further aggregated in another form (Table 3).

Analysing the Data Collected

Analysis of the data for all courses, summarized as in Table 3, is aimed at answering three fundamental questions.

Question 1

To what extent are community health concepts and practical experience included in the curriculum?

To answer this question, the evaluator must:

- determine whether or not all content areas considered essential to primary/community health nursing practice are included in one or more of the various courses; and
- review the content areas that are included to determine whether or not students receive theoretical instruction and practical training in the basic nursing processes in out-of-hospital community settings.

To complete such a review, it is necessary to pool the data collected for the various courses and to arrange these in tabular form in the manner presented in Table 3 and Table 4.

Study of the data presented horizontally in Table 3 reveals that all the major content areas relevant to community health are included at some point in the curriculum, and that instruction in most of the specific items in each area is incorporated in many courses. This suggests that community health nursing concepts are being presented from various points of view and that students have some opportunity to apply these concepts to varied practice situations.

Even though the "measures" used for scoring give no indication of the quality of teaching, when the course scores are reviewed in relation to the total possible score they suggest decided weaknesses in the content being taught. On the basis of Table 3, the following statements may be made:

- For common health problems in the community, all courses scored less than 50% (18 out of the possible total of 36). This indicates serious limitations in student preparation for providing primary health care services.
- Adult health care scored highest (87.5%). The "high" score obtained for family health was only

Table 4. Scope of instruction[a] in courses reviewed for community health content

(*a*) by instructional components

Content items included in course / Components of instruction		Total possible score	Courses reviewed and scores obtained					
			Maternal and child health	Paediatrics	Medical/ surgical nursing	Aging/ geriatrics	Mental health	Public health
	No	30	25	23	16	18	14	24
	%	100	83.3	76 5	53 3	60 0	46 6	80 0
Subject matter (theory)		30	21	23	15	13	9	19
Practical experience								
– Need assessment		30	17	16	15	14	4	18
– Implementation		30	14	11	11	10	1	11
– Evaluation of care		30	3	1	2	1	0	4

(*b*) by number of components

Number of items		25	23	16	18	14	24
3 or 4 components	No	11	11	9	6	0	11
	%	44	47 8	56 3	33 3	-	45 8
1 or 2 components	No	14	12	7	12	14	13
	%	56	52.2	43 7	66 6	100	54 2

[a] The scope of instruction refers to the extent to which theory and practice in out-of-hospital community settings are included in the teaching of each course reviewed. Instruction scores are the sum of crosses (x) in the instructional component columns for each course. For example, in the summary of course content in maternal and child health (Table 4, page 20) crosses are found opposite 25 of the 30 items in one or more of the columns representing the four components of learning activities (theory, assessment, implementation, and evaluation). Twenty five thus represents the score obtained for this course. The scope of instruction is calculated by dividing the sum of items checked (x) for each type of instruction (theory, assessment, implementation, and evaluation) by the total possible score, and is expressed as a percentage.

66.7% and that for maternal and child care only 58.3% of the possible total score.

- Community health needs participation, including the evaluation of primary health care coverage, showed definite limitations, since even in the public health nursing course only 10 out of a possible score of 16 was obtained.
- Scores for team care reached 75% of the possible total in two courses (paediatrics and medical-surgical nursing), but in mental health reached only 12.5%.
- Instruction in intersectoral involvement appears to have been seriously deficient. Two courses achieved a score of only 2 out of a possible 8, while three courses were unable to report any content at all covering this important aspect of community health practice.
- Examination of the total course scores achieved by the individual courses shows that public health nursing scored highest (62), but this represents only 51.7% of the content considered essential for community health. Mental health received the lowest total score of all courses—14, or only 11.7% coverage.

The need for enrichment of the curriculum, as shown by the review, is further demonstrated in Table 4.

Table 4(a) summarizes the reports on the scope of the instruction contained in the respective courses. From the hypothetical data presented, it can be seen that of a possible total of 30 content items, the number included in a course ranged from a low of 14 (46.6%) (mental health) to a high of 25 (83.3%) (maternal and child care). The type of instruction also varied. Subject matter (theory) relevant to primary community health practice was included in all courses but in different amounts. The assessment component of community nursing practice was reported, in general, for half of the items, student practice in modes of implementation was reported much less frequently and evaluation of the effectiveness of care only rarely. In every instance, mental health obtained the lowest score.

Question 2

What courses appear to offer the greatest potential for improving nurse preparation for primary community health practice?

To answer this question, the individual courses need to be reviewed for variety and scope of content and instruction.

As may be seen in Table 3, the public health nursing course obtained 62, the highest total score for content (51.7% of the possible total of 120). Table 4(a) also shows that the course covered 24 of the 30 essential items and, as might be expected, offered broad practical experience. However, improvement is clearly needed in the processes of implementation and evaluation.

Similarly, the data presented for the courses in maternal and child care and in paediatrics suggest high potential for further development. By contrast, the low scores obtained for courses in mental health and geriatrics suggest that considerable course revision would be required to enrich these programmes.

Question 3

What are the omissions and important limitations?

Omissions in community health content are easily spotted when the data are arranged as in Table 3, but important limitations are more difficult to determine. The review coordinator and the curriculum review committee will have to decide what is acceptable as *minimum* preparation for primary community health nursing practice. A reasonable requirement might be the inclusion in all courses of at least three of the four basic instructional care components (i.e., theory, assessment, implementation, and evaluation). If this criterion is applied to the hypothetical data (Table 3), 10 of the 30 content items seem to be either inadequately represented or missing from the curriculum.

Report of the Review Committee

The report of the curriculum review committee documents the completion of this first phase of curriculum review, informs the school authorities and staff of the status of the educational programme in primary community health practice, and provides the basis for planning the next steps. The report should include not only the procedures used in reviewing the curriculum but also the decisions and rationale that led to their development. It should describe briefly the participants' responses to the procedures, the problems encountered in data collection, and any modifications made in the review plan during its implementation. This information is important in interpreting the results of the course reviews, explaining unexpected findings, and putting the entire experience into perspective so that it will be of most value for further curriculum review.

The report by the review coordinator should include impressions of strengths and weaknesses in the review process and suggestions based on this experience for the benefit of those undertaking curriculum reviews in the future.

In summary, the written report should include at least the following:

- the primary purpose of the curriculum review and how it came about;
- a list of personnel involved, the instructions they were given, and the nature of their participation;
- a statement of programme objectives pertinent to the curriculum review, with indications of its scope and limitations, and any institutional constraints to which it was subject;
- an account of data collection methods, and factors influencing how and what information was obtained;
- a description of how editing, summarizing, and tabulation of data were carried out, together with a presentation of the findings;
- comments on questions affecting the analysis of the data and inferences for curriculum development; and
- implications of the curriculum review experience for further study of course content and the redirection of nursing education.

Summary

An overall programme review is the starting-point for a comprehensive revision of the curriculum. Responsibility for the conduct of this review should be delegated to a committee, headed by a review coordinator.

In preparing for the review, participants should be selected from the teaching institution and from the health service and provided with information to help them understand the task. An outline and schedule of the review procedures can then be prepared.

The first step in carrying out the review is to identify the major attributes of community-oriented nursing. The current statements of the programme objectives of the school and the existing curriculum should then be analysed to determine the extent to which they are already directed to instilling such attributes. To make up any deficiencies, a revised statement of proposed programme objectives should then be drafted and submitted to the school administration and teaching staff for acceptance.

The detailed review will require the development of data collection forms, the development and application of data collection procedures, and the collecting, editing, summarizing, analysing, and subsequent reporting of the data so that decisions can be taken regarding the changes needed and a plan drawn up for implementing them.

Phase 2

Developing the plan for change

The introduction of changes into nursing curricula is, of necessity, a gradual process. At all times the goals of the change process must be borne in mind, and progress towards the goals must be charted.

Factors Influencing the Plan

When changes in a curriculum are being considered, the following questions should be raised:

- HOW EXTENSIVE should the changes be? Should they cover all aspects of primary care or only a few of them?
- WHERE should the changes be made—throughout the curriculum or only in selected study areas?
- WHEN should changes be made—early in the nursing programme or later? If later, at which point?
- HOW should the changes be introduced?

The answers to these questions provide the framework of the plan for change.

The data obtained during the review of the curriculum (Phase 1) should enable the staff of the school to make decisions about the need for change. The data will have indicated which topics relevant to community health care are adequately covered in various courses, which are missing, and which need to be reinforced. In addition, the experience of focusing on primary health care and community health may have changed the reviewers' perceptions of nursing.

Generally, indicators of community health include such factors as the occurrence of disease and injury, death and birth rates, and life expectancy, however, the current trend is towards developing health indicators that reflect individual and family abilities to lead a productive life and to contribute to the social and economic development of the community. Several factors can influence the health of the community and may have considerable influence on the care of families and individuals.

Change in the curriculum takes place at two distinct levels—the course level and the broader departmental level. The latter relates to change involving a number of courses or to a reshaping of the curriculum that cuts across departments and courses. Both levels of change require similar procedures, but the plan is more complex at the departmental level.

Course-Level Changes

An important function of teaching is to ensure that the content and the educational methods used are relevant to the objectives of the school. To some extent this happens automatically as the teacher gains experience and undertakes further study. Self-evaluation is also important in this regard; there should be systematic assessment of instruction and involvement of students and clinical associates in finding ways of improving teaching. Ideally this will be one immediate effect of analysis of courses for their orientation towards primary health care and community health.

Implementing changes in the teaching plan at the course level involves only a few teaching personnel. Sometimes all that is needed is a shift in emphasis rather than a change in the conceptual framework, this can be brought about simply by extending the content of the course or by modifying practice settings, and does not require special preparation by the teacher or the development of new resources. In such instances, the teachers, service personnel, students, and community agencies already involved in the course can often develop and implement the change plan with little or no outside assistance. At the other extreme, the changes needed may necessitate systematic revision of the curriculum, involving policy changes, special teacher preparation, and the development of new resources.

The teachers responsible for each course should be able to determine from the result of the course analysis what changes are needed to give greater prominence to primary community health care. If it is decided that the course content is already relevant to the needs of the community and that only routine updating is needed, then it is obviously not necessary to introduce major changes. On the other hand, if the analysis reveals serious deficiencies in the course, the teachers should proceed to examine the analysis to see *where* changes need to be made.

In considering the options for course revision, teachers should give thought to:

who needs to be involved in making the changes—other teachers, service administrators and personnel, students, community representatives;

what steps are needed—preparation of self and others, development of facilities and additional services, funding, policy decisions;

what will be the effect on the current programme—on student and teacher timetables, on clinical and field practice facilities, on personal and professional relationships;

how much time is required to develop the plan for change and to introduce the changes into the course.

Of the various possible approaches for improving student preparation in primary health care and in community health practice, some may be found to be natural extensions of current practice and thus easily implemented; others will be more difficult to introduce. The changes should be introduced in stages, starting with those that are easily accomplished.

Each stage should represent an independent step towards one or more of the educational objectives on which the course analysis was based A tentative plan should be drawn up, giving:

- a general description of the proposed changes and their relationship to primary and community health care;
- a list, in chronological order, of the activities necessary to bring about the desired changes,
- the requirements for personnel, facilities, funds, and other resources associated with each activity; and
- estimates of the time needed to carry out the activities and to integrate the changes into the course.

Consultation with others

Once a tentative plan has been drafted, the advice of others familiar with the topic and with the existing situation should be sought. An objective review of the proposed plan may reveal other factors that should be considered and ways of expediting the changes. This process will give the staff time to review the proposed changes as a whole and to see how they relate to the rest of the nursing programme.

Persons involved indirectly in implementing the plan but who have not taken part in the early development should have an opportunity to review the draft and to help in its final formulation. In this way their support may be obtained.

Progamme-Level Changes

Shifting the emphasis of a nursing curriculum or of one of its major study units, from care of the individual to care of the community, necessitates the systematic introduction of carefully planned changes into every part of the teaching programme.

The design and implementation of these changes will therefore require the involvement and support of a large number of people. The head of nursing, the curriculum committee, programme and department heads, teachers, students, and former graduates are all vital to the successful implementation of the changes. It is also important to include administrators of clinical services in hospitals and agencies affiliated with the school of nursing, physicians, other providers of care, and representatives from the community.

The introduction of the changes will present a challenge to curriculum planners and to those participating in the change process. Revolutionary changes necessarily disturb established patterns and beliefs, and those responsible will need to find ways to facilitate the assimilation of changes into the study units and departments.

All the teachers involved in the programme should have an opportunity to decide on the changes relevant to primary community health care in their own and related fields of study and to share in developing the new curriculum plan. Nevertheless, it is essential for one person to be responsible for planning activities to ensure their appropriate adaptation to the particular situation in the school and orderly well-coordinated implementation of the activities. Responsibility for continuity should be delegated to the curriculum review coordinator, who should collaborate closely with the curriculum committee and should be available for consultation with teachers and others involved.

The organizational structure of the school will determine whether one or more teacher groups

should be convened to review courses and develop recommendations for change in particular areas. For example, in a small school with few teachers and nursing service advisors, the staff may meet as a group with the review coordinator to identify the changes needed and to outline the major elements of the plan. In a larger school, organized into departments, with various divisions within the departments, the curriculum review committee would have to make recommendations for change at each level, appropriate to the organizational structure.

Guiding procedures

Regardless of the number of groups involved, procedures for guiding their development are essentially the same. Before the first group meeting, participants should be informed of the group's purpose and should be encouraged to consider ways of improving student preparation for primary/community health care in general and in their particular field. In particular, attention should be drawn to:

- the extent to which theoretical instruction and practical experience may be related to primary community health care;
- course elements that are inappropriate to the new programme objectives;
- changes that have been planned or are under consideration.

In collaboration with the coordinator for planning, groups should set a target date for the completion of their plans for curriculum change.

The group should review the suggestions and projected programme plans for the introduction of course content relevant to community health care. It should also identify any gaps in the proposed programme changes and show where additional content might logically be introduced into the curriculum. The group should draw up a table of all courses for which it is responsible, using a format similar to that shown in Table 5, where maternal and child health is taken as an example. As can be seen, such a presentation of the data shows vividly the gaps and limitations in the courses offered. Other curriculum areas could be presented to the group in a similar manner to focus discussion and facilitate decisions regarding curriculum change.

Curriculum Planning Committee

The final stage in the development of the plan for change should involve a combined effort by the school of nursing, service associates providing clinical/practical experience for students, graduates

Table 5 Programme objectives and related course content for primary/community health care by year of instruction and focus of care[a]

Maternal and child health department

Programme and educational objectives	1st Year						3rd Year						Comments and summary
	Course No 102–Ob Gyn			Course No 103–Paed			Course No 304			Course No			
	Focus on			Focus on			Focus on			Focus on			
	Ind	Fam	Comm	Ind	Fam	Comm	Ind	Fam	Comm	Ind	Fam	Com	
Prepare a nurse to													
(a) provide promotive, preventive, curative and rehabilitative care to mothers, infants and children, including													
- assessment of health status of													
maternity patients	TH	TH	T				C	C	C				
newborns	TH	H					C	C					
infants and young children				TH	T	T	C	C					
- methods of family planning	H						C	T	T				
- prevention, treatment and control of													
nutritional diseases	TH	TH		TH	T	T	C		T				
diarrhoea	TH			TH			C		T				
influenza	T						C						
malaria													
anaemia	TH												
pneumonia				TH									
(b) function effectively as a member of a health team with													
physicians	H			H			C						
community health workers							C	C					
health educators							C		C				
sanitarians													

[a] Course content related to individual family or community care is noted by making the following entries in the columns: theoretical basis = T, hospital practice = H, community practice = C

and potential employers of graduates, community health planners, and others knowledgeable about community health needs and resources. The formation of the curriculum planning committee, which could very well have the same membership as the curriculum review committee, is one of the most important actions for implementation of the change plan.

Orientation of the curriculum planning committee

An analysis of the summarized group reports would provide the basic data needed for decisions to be taken by the committee. These data include:

- a review of pressing community health needs and assessment of priorities;
- a statement of the revised school programme objectives relevant to an increased emphasis on community primary health care,
- specification of current programme objectives,
- identification of fundamental gaps in instruction with recommendations for closing the gaps,
- resources available to support the change plan;
- problems inhibiting the changes desired,
- aspects of nursing education and practice relevant to the changes proposed.

In addition to distributing a synopsis of background documents, the planning coordinator should personally contact members of the planning committee to ensure that they understand the task and have the necessary preparation for it. They should be clearly instructed as to their individual responsibilities and should reach agreement on how their activities will be coordinated. The coordinator may wish to meet separately with persons not previously involved in the programme review and with those who may need to be oriented to the new responsibilities.

Elaborating the plan

The issues that must be addressed by the curriculum planning committee include:

- priority content areas and suggested approaches for implementation of changes within the educational plan;
- policies of the school, parent institution, and affiliated groups that may need to be adjusted to accommodate the recommended changes,
- rescheduling of content and practice experiences of students relevant to primary community health care;
- funding sources, budgetary allocations, and financial arrangements necessary to defray the essential costs involved in implementing the revised programme;
- the curtailment of certain services to allow for greater emphasis on primary community health care and ways of overcoming resistance to these changes.

Overcoming resistance to the changes last mentioned may be one of the most difficult problems to be resolved. Hospitals and other service agencies may have firmly fixed patterns of patient care that depend on student personnel and restrict the focus of care to the sick individual. Sensitive planning by all groups involved is essential to protect the welfare of patients in the hospitals while still permitting changes in nursing education to improve the health care of the community, the individual, and the family in all settings.

Other effects of the curriculum change that should be considered include, nurse employment policies and opportunities, relationships between nurses, physicians, and other providers of health care, and community perceptions and expectations with regard to nursing.

It is possible to teach the concepts and methods of primary health care and community health in any of the study areas of the curriculum; the ultimate aim is to have them integrated throughout the educational programme. In selecting study areas in which to initiate the plan for change, the most important consideration is that they should offer the plan the greatest possible chance to succeed. Although the choice will vary with the school situation, the maternal and child health course has many features that make it particularly suited for initiating changes that place increased emphasis on community health. For instance: the development and care of normal healthy individuals are usually studied early in the nurse's education, prior to care of the sick patient; education of the family and community for the prevention of illness is emphasized, the influence of social and cultural factors on health and behaviour is clearly evident; statistical data are often more complete and reliable for mothers and children than for other groups; and nurses and midwives have traditionally assumed considerable responsibility for the assessment and treatment of common health problems among mothers and children. Consequently, the changes required to teach maternal and child health nursing in a community context are often fewer than for other courses. They may involve merely putting student contacts and practical experiences in community settings earlier in the curriculum and

require only minor changes in the theoretical base. Whatever lead programmes are selected, it is essential that students be introduced to primary/community health care concepts as early and as comprehensively as possible. Both the timing and scope of the changes should be reflected in the curriculum plan.

The plan for change should make the most of existing assets in the programme and community. Examples of such assets include: teacher and student readiness for change; favourable trends in national and community health planning; changes in progress in related education or service programmes; and other similar factors that provide impetus for the changes desired in the nursing curriculum.

Ideally, the plan for change should serve as a guide to curriculum development over a 4–5-year period. It should designate the persons or group who will have major responsibility for implementing the various elements of the plan, and it should specify at least the following:

- the course content to be expanded to achieve defined curriculum objectives:
  - preparation for relevant tasks in primary health care;
  - developing the desired problem-solving abilities, attitudes, and skills for community-oriented nursing;
  - involving the community in disease prevention and control, as well as in planning and evaluating health services;
  - collaborating in interdisciplinary team efforts in varied community settings;
  - supporting and coordinating community health services;
  - training and supervising auxiliaries and community health workers;
- the units of study that present a logical and feasible means of implementing primary health care approaches;
- the faculty preparation and support necessary to implement the curriculum plan; and
- the health services and other resources needed to facilitate student teacher learning.

Teacher review and acceptance

After the planning committee has outlined the general curriculum plan, it should be reviewed by teaching staff for its implications in their respective areas of instruction and for their approval. All teachers need to be involved in this review. They all need to know the nature of the proposed changes and be able to interpret them to students, colleagues, and associates. Teachers who are responsible for programme change will need to examine the plan carefully, making certain they understand its central purpose and their role in its implementation. Questions and suggestions for change should be discussed with the department head and planning coordinator.

The early involvement of the teachers and associated clinical and health services staff in all aspects of the change plan will have prepared them for the critical review required at this point. On the basis of their comments and suggestions, the plan should be modified or further clarified to ensure the development of the educational programme as intended.

In order to gain the commitment of teachers and health services personnel to the change process, they may need to be assured that conferences, workshops, and other forms of continuing education will be planned to assist them in teaching primary health care concepts and skills.

Once it has been accepted by the teaching staff, the curriculum plan becomes a working document, a guide to the preparation of nurses for primary health care in the community.

Adoption of the plan

It is essential that the plan for curriculum revision and changes should be accepted by the teachers and administrators concerned in order to ensure effective implementation. Unfortunately, there is no single strategy that can be applied to all types of innovation as successful implementation clearly depends on many factors. Nevertheless, experience suggests that the following preconditions have to be satisfied if institutional change is to be brought about successfully:

- the participants must feel that the project is essentially their own and not wholly devised by outsiders;
- the project must be wholeheartedly supported by the senior officials of the system;
- the change must be in reasonably close accord with the values and ideals of the participants;
- the participants must feel that they have the support and confidence of other teachers and health services personnel;
- the participants must feel sure that their autonomy and security are not threatened in any way.

It is well to remember that making an order or regulation does not always mean that it can or will be put into effect.

Summary

Having identified the need for change, it is necessary to define the extent or scope of that change, which may be confined to a particular course or topic, or may encompass an entire teaching programme.

In the development of a plan for change to community-oriented nursing, the first essential is to reassess the conceptual framework of nursing education in order to incorporate the implications of primary/community health care into nursing practice in the community.

Where change in the curriculum is required at the individual course level, it is possible for a small group of teachers associated with the course to develop proposals for its modification, giving greater emphasis to community-oriented nursing, but where change in the curriculum is required at the programme level, the more comprehensive planning organization outlined in phases has to be adopted.

In planning for change, it is essential to gather the necessary basic data required for decision-making in curriculum planning; to ensure that all concerned are given early information about the proposed change; and to involve teachers and associated staff throughout the proceedings.

Phase 3

Implementing the plan for change

The process of updating and reorienting the curriculum may be said to have begun with the analytical reviews of community needs, nursing functions and tasks, and teaching/learning content of the educational programme (phases 1 and 2). During the time required for the curriculum plan to be fully developed and agreed upon, some changes in content may already have been made in the established courses. Once the curriculum plan has been finalized, it should stimulate further changes, aimed at incorporating community-oriented primary health care approaches naturally into the various learning experiences. These course modifications could constitute a powerful impetus to implementation of the total educational plan.

However, the revision of the curriculum envisaged in the plan goes beyond changes in individual courses. It requires a systematic change in course content, learning methods, and clinical experiences with the aim of developing nurses who, at all times and in all circumstances, will base their practice on concepts of community and primary health care. There will obviously have to be a corresponding change in the attitudes of those involved in teaching.

The change plan consists of three interrelated parts: the objectives, course content and learning activities (including teaching/learning approaches); and evaluation procedures.

Statement of Objectives

Objectives describe the expectations for student learning through the various units of study. These course objectives must be in harmony with the more general curriculum objectives of the programme of the school. Therefore, before developing objectives, teachers, together with their clinical and health services associates, should:

- review the school's statement of philosophy and educational aims;
- review the proposed curriculum plan for community and primary health care in relation to their particular subject matter;
- re-examine the course analyses and proposals for change;
- study the implications of the national health plan for nursing education and service, in so far as these are pertinent to the course; and
- reaffirm the relevance of the changes proposed to the prevalent health needs of the country and local communities.

With this background, a revised statement of proposed programme objectives can be prepared. This should complement the more general curriculum goals, clearly indicating the relevant content areas and whether they are directed primarily towards care of the individual, the family, or the community at large. Course objectives can then be similarly revised to specify how the individual courses enable students to meet the health needs as reflected in the departmental and/or programme (school) objectives.

These educational objectives should describe the basic behavioural competencies students are expected to develop through the study programme. They should reflect the knowledge base, skills, and attitudes considered necessary for the student to function responsibly at an elementary level of primary health care. Also, it is important to indicate what measures will be used to determine whether the objectives have been reached. These attributes, in addition to making the educational aims clear, provide the basis for student evaluation. Table 6 illustrates the relationship between programme, departmental, and course objectives using examples from maternal and child health nursing.

Teaching/Learning Approaches

Nursing proficiency in community and primary health care requires the ability to assess the health of individuals, families, and groups; intervene

Table 6. Examples of the relationship of the school objective to departmental and course objectives in regard to maternal and child health

School objective	*MCH department objectives*	*Objectives of course in MCH nursing*
To prepare a nurse to provide promotive, preventive, curative and rehabilitative care to individuals, families, and the community	To enable the student	To assist the student.
	(1) To apply principles of primary and secondary prevention to care during the child-rearing phases of life	(a) to describe human growth and development, and social, cultural, and biological determinants of maternal and child health
		(b) to use epidemiological methods (e.g., determination of risk) as a basis for preventive health care, for understanding standards of care, and for setting priorities of care for improved maternal and child health
	(2) To assess maternal, infant, and child health care and health service coverage in the community	(a) to collect a data base relevant to maternal and child health, including demography, vital statistics, cause and distribution of common illnesses/abnormalities, community priorities, and resources for health care
		(b) to identify groups at high risks of illness and poor development and to develop skill in analysing these risks
		(c) to utilize epidemiological approaches to common health problems as a basis for planning and evaluating care strategies
		(d) to interpret community findings in terms of MCH health needs, priorities, and service objectives
	(3) To provide primary health care to individuals and families	(a) to obtain health histories and assess physical conditions of antenatal and postpartum patients and of infants and young children
		(b) to assess factors influencing family health generally and maternal and child health specifically and to plan follow-up services to individuals and families based on risk
		(c) to initiate, with the family, appropriate preventive strategies and provide instruction and guidance in positive health behaviour including — nutritional counselling — family planning — self-care techniques — immunizations
	(4) To evaluate the care provided	(a) to use criteria in assessing the effectiveness of care to families
		(b) to initiate, with individuals and families, cooperative methods for evaluating care

through education and caring processes, and evaluate practice based on patient, family, and group responses to health care. It represents a synthesis of social and biological sciences in that it relies on the study and use of:

- the science of medicine, including physiology, psychiatry, pathology, and pharmacology, in relation to the development and treatment of common health problems.
- the science of public health, including epidemiology, statistics, and administration of health services, applied to assessment of community health, identification of high-risk groups, methods of prevention, and the extension of health care coverage; and
- the social and behavioural sciences related to lifestyle, behavioural patterns affecting health, development of disease and disability, preventive mechanisms, and community organization for health.

A knowledge of the theoretical basis of nursing practice is fundamental to the development of problem-solving abilities, setting priorities, and predicting the outcome of care. For students to develop skill in providing and guiding primary health care, they must be given ample opportunity to use the techniques and procedures that comprise that care. They must learn through practice to apply concepts, examine theories, and use the nursing care processes as they deal with real-life situations.

Community-oriented nursing practice based on primary health care includes, for example, the use of:

- history-taking techniques and health assessment of individuals and families in order to identify their health needs and their ability to meet those needs;
- methods of assessing community health and health care coverage to identify common health problems, groups at high risk, patterns of care, and health priorities;
- strategies for planning and providing preventive/promotive health care in collaboration with individuals, families, and community groups;
- regimens for treating, curing, and rehabilitating patients in their homes, as well as in clinics and hospital settings;
- ways of organizing and participating in team efforts to improve community health and of involving schools, industries, social organizations and other sectors in community development activities;
- methods of promoting individual and family health through such processes as family planning, nutrition education, use of supportive services and self-care; and
- techniques appropriately adapted to the social, cultural, and economic environment of the community.

Because the nature of health problems in communities varies so widely in different areas, it is not possible to design a model syllabus for primary health care that would apply generally. Each school will need to decide what content is to be expanded and how best the primary health care approach can be incorporated into the programme. Whatever the plan, the teaching programme needs to be concerned explicitly with nursing care processes (i.e., assessment for identification of need, implementation of care, and evaluation of the effectiveness of care) and to relate these to primary/community health care. Fig. 2 illustrates how care processes are applied to various population groups (see also Annex 1).

The review of learning areas that are important to primary health care (as illustrated by the example in Table 1) is again useful in developing the teaching outline for each programme and course. Fig. 3 provides a format for constructing the details of the study unit concerning common diseases and health problems. It demonstrates how various types of prevention/implementation strategies apply quite naturally to specific patient and population groups and how content, methods, and techniques inherent in primary health care can be organized to form a coherent study plan.

Fig. 3 demonstrates how content and practice requirements evolve from consideration of: the natural history (etiology) and distribution of prevalent health problems; their effect on individual, family, and community function; and methods available for their prevention, treatment, and control. The figure also indicates that there is a wide variety of strategies for teaching all components of primary health care. When these options are discussed by teachers and service colleagues together, course content can be arranged so that all the essential elements of care are included in the programme in a logical sequence. These discussions will help to identify what study materials (i.e., textbooks, other reference sources, equipment, etc.) are needed and can be shared by several courses, what facilities are available or need to be developed, and what financial support may be required to carry out the change plan.

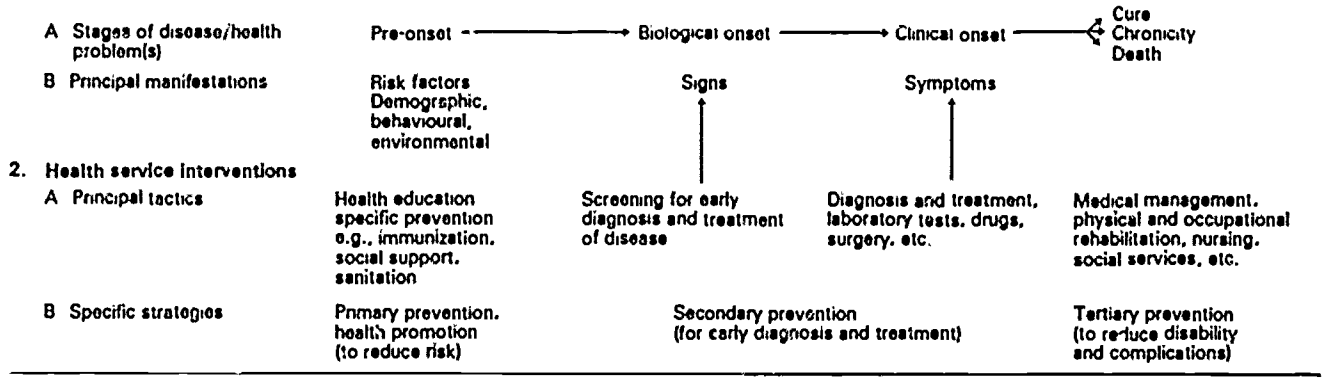
Instructional strategies and learning methods

The practice setting is critical to the learning process. Not only does it influence what is learned but it is a powerful force in determining patterns of providing care, in forming attitudes and perceptions, and in setting goals for outcome of care. Patterns of infant growth and development are not learned solely through the care of sick and abnormal infants but rather through the study of healthy babies and their families in their homes and communities. Similarly, primary health care must be taught in environments where the need exists, that is, where common diseases and injury usually occur and are treated, where primary prevention and early treatment can be instituted, and where the stresses of day-to-day living and their health effects are evident.

Fig. 2. Conceptual model of community health and primary health care

1. Health status	2. Levels of prevention	3. Population groups	4. Care settings
Essentially well	Primary prevention e.g., hygiene adequate nutrition family planning immunization safe water supply sanitary waste disposal clean environment for childbirth management of stress	High-risk groups e.g., pregnant women infants adolescents aged stressed poor	Community e.g., homes schools industries health centres
Common illness/injury	Secondary prevention e.g., screening case-finding/diagnosis early treatment repair of abnormalities prevention of disability	Individuals, families, and communities	
Less common illness/injury			Hospitals e.g., general specialized
Chronic illness/disability	Tertiary prevention e.g., prevention of complications occupational therapy support during terminal illness	Individuals, families, and communities	Community e.g., homes schools nursing homes health centres

Fig. 3. Format for studying the distribution of disease and other health problems, with related health service interventions



Therefore, when decisions are being made about the theoretical content and associated practice experiences that are to be included in the course, thought needs to be given to locations and environments that offer the best possible conditions for learning. Teachers will find this opens up the possibility of using a multitude of settings not previously considered. homes, clinics, rural health centres, schools, industries, and community work projects are just a few of the places encompassed in the concept of primary health care that offer opportunities for student practice.

At the same time, consideration should be given to ways of developing or expanding traditional practice experience to give the greatest possible prominence to the concepts of primary health care and community nursing. Assisting hospitals to extend their services into the community (for example, through follow-up patient care, outreach to high-risk populations for primary prevention, and early case-finding and treatment of individuals with prevalent diseases) has a threefold effect. it provides important experiences for students in established training centres, it enlarges the role of the hospital as a community health base and brings health services into the community, and it prepares the way for the employment of nurse graduates in positions that utilize their community practice skills.

Once the practice sites have been selected and arrangements made for them to provide the desired student experiences, they should be described in course outlines and syllabuses.

At this point, a listing of the course objectives along with the theoretical and practice experiences included in the study unit will show how the course content relates to each objective and will point up gaps or limitations in the study unit. Plans for enlarging the course content that have not yet been implemented are also noted. This is illustrated in

Table 7. Listing of objectives of a maternal and child health course, with the content and practice related to each

Course objectives	Content	Practice	Comments
To enable the nurse:			
(a) to understand human growth and development and social, cultural, and biological determination of maternal and infant health	— human anatomy and physiology — social science frameworks in human development and behaviour — family health as a function of genetics, life-style, and environment — epidemiology of health/illness in mothers and infants; birth records, morbidity, and mortality rates	— observations of two communities — discussion with several mothers in the communities about their health during pregnancy and care of their infants — participation in health centre clinic, taking family and health histories, infant measurements — summary and analysis of maternal/infant statistics for one community — assist mothers with care of well babies, observing their feeding, bathing, and rearing habits	
(b) to develop an epidemiological base for preventive health care, for understanding standards of care, and setting priorities of care for improving maternal and infant health	epidemiology of illnesses common to mothers and children with measures for their prevention and treatment — local care practices — incidence/prevalence of demographic characteristics	— administration of immunizations and screening tests appropriate to conditions studied in homes and clinics — assist families with care of sick infants at home, teaching prevention and health promotion — discuss problem with small community group; planning for prevention, case-finding, and early treatment	— student visits with birth attendants to mothers in village to be added when student transportation and housing can be arranged

Table 7, again using examples from maternal and child health nursing.

The pattern of teaching primary/community health care also influences student learning. In some schools, the theory is taught prior to introducing students to practice. In other situations practice precedes theory. Such separations of theory and practice usually occur when teachers are primarily responsible for theoretical instruction and service staff demonstrate and supervise practical work, or when the teaching staff is small in number and teachers are responsible for all aspects of instruction in more than one clinical area. It is generally agreed, however, that teaching is more effective when theory and practice are presented concurrently and the roles of classroom teacher and clinical service instructor are merged. All members of the teaching staff are then able to help students to understand concepts by applying them. By providing direct care, giving back-up support and consultation, and by participating in demonstrations and study projects, teachers maintain their clinical skills and at the same time keep their teaching vital and relevant. Ideally, a reciprocal teacher/learner role is encouraged, whereby the teacher, functioning as role model, learns with and from the students. Together they try innovative methods of extending care to underserved groups, test different approaches to primary prevention, and analyse population responses to find ways of promoting self-reliance in health matters.

Schools that have not previously expected instructors to function in these expanded roles, but are planning to do so, will need to prepare both the teaching and the clinical practice staff for their new responsibilities. Classroom teachers frequently do not feel comfortable in the practical situation; clinical practice instructors may not be up to date with the theoretical basis of practice. Both will need help in strengthening their background through a planned continuing education programme before they can comfortably and effectively combine the roles of classroom teacher and clinical practice instructor.

Designing Evaluation Procedures

Early in the implementation of the plan for change, consideration should be given to designing some form of evaluation procedure that could be used to monitor the progress of student learning and the effectiveness of course design (see Phase 4, p. 38).

Evaluation of student learning

The purpose of this evaluation is twofold:

- to demonstrate the extent to which student competence in primary health care conforms with expectations and stated objectives,
- to find ways of improving the teaching/learning process in primary health care that will result in more efficient/effective student learning.

Evaluation is a continuing process that takes place throughout the learning period and on completion of the course. Traditionally it includes written and oral examinations, case presentations, problem-solving discussions, and observations of student performance in practice settings. In addition, allowing students to assess their own development gives an important dimension to the evaluation. Such self-assessments reflect student expectations of their own abilities and of the study programme; their developing interests, attitudes, and judgements about nursing, community health, and the health care system; and their feelings of self-confidence and personal accountability in providing care. In order for self-evaluations to be most helpful, however, the students must be well informed about the course objectives and the combinations of learning methods being offered to achieve the objectives. They must be encouraged to point out positive as well as negative features and to validate their observations systematically. With this background, self-evaluations can be a substantial aid to teachers in adapting content to the individual needs of students, in pointing out weaknesses in the study programme, and in suggesting ways of improving the total learning experience and its possible impact on the health and health services of the community.

As indicated above, the measures used to evaluate student learning are drawn directly from the stated course and programme objectives. When each major objective is developed, the teachers and clinical practice instructors responsible for the programme should ask themselves what evidence they would accept as indicating that students have, in fact, attained the objective. Table 8 represents a few examples to illustrate this.

These early indicators of student learning must relate to the content and learning activities actually provided in the course. In some instances, the conceptual-theoretical basis may not have been developed as envisaged, practice sites may not have been ready for students as originally planned, or programming may not have proceeded as expected. Therefore, before each evaluation period, teachers should review the content and learning activities

Table 8. Examples of course objectives and corresponding questions to evaluate student competence

Course objectives	Questions concerning individual and family care	Questions concerning high-risk groups and community health
To enable the student	Does the student	Does the student
(a) to assess health states and function based on the epidemiology of sickness/health	take health histories and make objective observations and measurements consistent with normal patterns of growth, development, and function as appropriate to the individual's age, sex, and daily activity? – determine individual and family risks for common diseases and other prevalent health problems by screening for biological, social, and associated risk factors? – show understanding of personal and family differences in assessing health behaviour and care patterns? – demonstrate skill and sensitivity in analysing the above data to identify individual and family needs and plans for care?	use relevant vital statistics, morbidity and mortality data, and standardized measures to compare the health status of various groups? – use rates to express incidence and prevalence and to describe factors associated with risk? – relate patterns of disease and care behaviour to the identification of populations at risk for common health problems? – involve pertinent community groups (e.g., representatives of health and related sectors) in analysing community health problems and planning solutions? – use a scientific rationale in problem-solving?
(b) to utilize concepts of self care and independence of living in planning and evaluating intervention strategies	– involve the patient, family, and related groups in developing the plan for care and follow up of health problems identified? – use patient/family education (interpreting the cause and nature of the problems identified and therapeutic options available to them) as a primary means of prevention? – assist patients/families to use community resources to promote their health status wisely and effectively	plan strategies for improving community health among high-risk and other concerned groups? – initiate and assist in community health education related to prevalent diseases and disabling conditions, teach underlying causes and methods of prevention, treatment, and control? – secure participation of the community in the development of resources needed for health programming?
(c) to provide primary health care based on strategies of prevention	administer safe, appropriate, and skilled preventive care, including immunizations, nutrition, counselling, family planning, specific treatment of illness and injury, etc., in home, clinic, and hospital? – adapt therapeutic regimens and standards of care to the patients physical and psychosocial needs as appropriate to the care setting and available resources? – demonstrate a sense of accountability for patient and family care, serving as advocate with other community sectors and helping to develop community resources and supports necessary for comprehensive health services?	– participate in extending primary health care coverage to underserved groups by providing outreach services, teaching/supporting community health workers, and providing direct care to individuals based on risk? – understand and emphasize nutrition and food distribution as a basic primary prevention strategy? – demonstrate ability to work effectively with interdisciplinary and multisectoral health teams in local health centres? – show ability to evaluate effectiveness of service using appropriate process and outcome measures?

provided in the course to make certain that both the methods being used to examine student performance and the criteria selected to judge their success are still valid. Modifications should be made as indicated and the resulting operational evaluation procedures and course requirements made known to the students.

Periodic evaluations of individual students are essential to identify those who need special assistance in understanding primary health concepts and or in developing practice skills. The underlying cause of the problem can usually be uncovered through teacher-student conferences, or with the help of a student advisor, department head, or school counsellor. Then, by planning with the students, ways can be found to correct the problem. This may involve the adjustment of assignments, providing detailed study guides, additional demonstrations, or personal support from teachers and colleagues during periods of stress. The individualization of study programmes in this way is important to ensure that all students develop an acceptable degree of competence in each unit of study, thus preparing them for the courses to follow and ultimately for administering effective nursing services as needed by the people of their community and country.

Course evaluation

Although such evaluations are helpful for individual students and may even lead to changes in the study plan, difficulties experienced by one or two students cannot be generalized to the student body as a whole. Evaluation of class responses is the essential means of determining the adequacy of the course content. This is done by aggregating the student scores for each major content area and analysing the results to see what proportion of students show a satisfactory level of achievement and what proportion fall below the acceptable level. Expecta-

tions for class achievement vary with the previous experience and background of the students, size of the class, and similar considerations. However, in general, if one-fourth of the class scores in any one area are marginal or below the required standard, the teacher should examine the study plan for limitations that may explain these findings. Learning deficits that occur early in the course may indicate that the students need more preparation for a particular unit of study and a better grasp of fundamentals. Such deficits may also signify that the course needs to be more closely related to previous study units so as to eliminate gaps or inconsistencies between courses. Problems appearing later in the course may mean that the content needs to be reinforced or concepts made more explicit as they are applied to practice. They may also reflect confusion between the new and traditional focus of nursing. Services observed in established care settings are apt to vary markedly from those that students are expected to provide in a health system based on primary health care. Even when these differences have been discussed with the students, the contradictions observed in the actual provision of care may be difficult and impede learning.

In order to interpret class responses accurately and to obtain pointers for improving the course, it is essential that the classroom teacher and clinical practice instructor discuss the evaluation results with the students Through these discussions, the class obtains a more complete knowledge of the subject, misunderstandings can be corrected, and course objectives further clarified. Simultaneously, the teacher learns what aspects of the course are being effectively presented and what needs to be reinforced Questions and comments from students reveal learning gaps and may also suggest ways of correcting common misconceptions.

In addition, with increased understanding of the direction and goals of the course, the students can share in its development, seeing alternative approaches to primary health care, and working with the teacher to enlarge upon the concepts.

Student input is especially valuable to the teacher in evaluations at the end of the course. On completion of each study unit, teachers should make a thorough review of the course before planning for another student group. In this final review, the students should summarize what they have learned from the course, thus giving a "learner" perspective to the review. In this way, each new class of students benefits from the experiences of its predecessors.

These course evaluations have still another purpose. They provide a basis for examining the success of the respective departments in reaching their goals and, ultimately, for evaluating the effectiveness of the total educational programme. These procedures are discussed in phase 4.

Summary

Implementing the plan for change requires a systematic development of the content, the learning experiences, and the assessment and evaluation associated with the course.

In determining course content, it is necessary to derive and write learning objectives that describe all the behavioural performances expected of the student at the conclusion of the course, but particularly in relation to community-oriented nursing based on primary health care. The learning experiences to which the student is exposed need to be developed so as to facilitate achievement of the learning objectives that have been identified, and are likely to require the teachers to adopt practices with which they may not already be familiar. Assessment of student achievement and evaluation of the course are essential in the systematic design of courses. Care should be taken to ensure that assessment of students measures the achievement of the stated objectives, and that evaluation of the course is likely to lead to improved teaching/learning in primary health care and community-oriented nursing.

Phase 4

Evaluating the plan for change

Evaluation of the nursing education programme is the process of determining the extent to which the education provided is effective, efficient, and makes a significant contribution to meeting health care needs. Katz defines programme evaluation as "a process of making *informed* judgements about the *character* and the *quality* of an educational programme or parts thereof".[1] More specifically, programme evaluation aims at:

- measuring progress towards defined programme objectives;
- identifying and resolving conflicts and inconsistencies in the educational programme;
- providing indications for further improving the use of available resources;
- providing baseline information for future evaluations;
- stimulating increased efficiency and effectiveness in the programme; and
- deepening the insight of educational administrators and others responsible for the curriculum into the programme's accountability to the community in providing nurses for primary health care practice.

The overall responsibility for the evaluation usually rests with the curriculum committee or a subcommittee on evaluation. As indicated earlier, the curriculum committee is responsible for the curriculum review and for designing the curriculum so that the focus is on the community and primary health care. Likewise, it monitors implementation of the curriculum plan and should periodically evaluate its effectiveness. The process of systematic planning – implementation – evaluation is fundamental to continual curriculum development.

Many of the procedures described in developing the curriculum plan (phases 1 and 2) apply also to the evaluation of the curriculum for its community health orientation. The difference here is that teachers and others involved in the earlier phases will be better prepared for their role in the evaluation. They will be more knowledgeable about the aims of the programme, able to be more critical of the proposed strategies, and armed with the experience and findings of course evaluations obtained in the process of implementing the revised curriculum.

The *frequency* and *timing* of evaluations depend on the stage of curriculum development and on changes occurring in community health. When broad changes are being made in the curriculum that cut across many and possibly all programme areas, programme evaluation should be undertaken at regular intervals. Similarly, dynamic changes in community health—in the type or nature of prevalent problems or in strategies proposed for accelerating their prevention and control—increase the need for frequent curriculum evaluation. In both cases, the aim is to keep the entire nursing education programme relevant to community needs and health service efforts. In addition, the regular curriculum evaluations should be supplemented by interim monitoring of courses by the respective departments and study units.

Criteria for Curriculum Evaluation

Evaluation of the curriculum for its orientation to community health is directed towards answering three fundamental questions, each of which leads to other questions concerning the educational programme and to the development of criteria against which to judge the success of the curriculum changes.

The first question to be asked is:

Have the curriculum changes that were considered necessary to achieve community health and primary health care objectives been implemented?

[1] KATZ, F.M. *Guidelines for evaluating a training programme for health personnel* Geneva, World Health Organization, 1978, p. 5 (WHO Offset Publication No. 38).

The important considerations here are not only whether changes have been introduced but also:

- Was their implementation kept reasonably close to the desired schedule?
- What factors seemed to facilitate the changes?
- What factors obstructed efforts to change?
- What can be learned from the experience so far that could make further programme changes progress more smoothly?
- Have all the courses in the curriculum model been developed or modified as planned?
- Where are the gaps and how might they be eliminated?
- How can the programme objectives be refined in the light of these experiences?

Answers to these questions must be obtained from teachers, clinical supervisors, students, and those responsible for implementing concepts of community and primary health care in the curriculum. They rely on the monitoring of the change process at the end of each term and at the end of each year of study.

The second fundamental question is:

Did the expected changes in student knowledge, attitudes, and competence occur?

Answers to this question rely on assessments that monitor student competence during and at the end of each term, on completion of a unit of study, and on completion of all educational requirements prior to graduation. The question represents the first step in determining the *effectiveness* of the programme in that it asks explicitly whether the programme is in fact preparing nurses who are able to meet community needs consistent with the aims of the educational programme. It also implies concerns for efficiency in meeting the objectives.

Monitoring student competence

The monitoring of student competence involves the following procedures:

- A comprehenive assessment of the reports on the systematic testing of student learning in the courses taken. This includes written and oral examinations, discussions and observations relating to student performance in practice settings, and student self-appraisal throughout their courses. All of these appraisal mechanisms determine whether students have developed the understanding, values, and technical abilities expected of them in accordance with specific course objectives. Specific procedures are described under "Course evaluation" in phase 3 (p. 36).
- Review of student progress in relation to the programme objectives. Criteria developed to measure learning are generally included in study units. They require the use of knowledge and skills gained in the various study units and reflect the students' ability to synthesize related learning experiences and to apply them appropriately in practice. The use of case studies, investigative reports, problem-solving assignments, and involvement in demonstrations and research projects are examples of mechanisms used for this purpose. The findings are reported separately as one part of the respective course evaluations and are examined by teaching staff in the department in terms of students' cumulative learning, role development, creativity, and accountability. At the same time, the teachers look for deficiencies in student responses and for possible explanations that might suggest ways of improving programme effectiveness.
- Reports by teachers to the curriculum committee describing student progress towards meeting goals. These reports summarize the above findings, including course scores, student practice evaluation, and other evidence of student learning corresponding to stated objectives.

Monitoring course content

The monitoring of course content involves the following procedures:

- Review of individual courses in relation to the schedule for change outlined in the curriculum plan. This is again accomplished by using the format given in Table 5 to check the course content against the stipulated learning for community health and primary health care objectives. Comparisons can then be made with previous reviews and with proposed schedules for change to show missing elements as well as progress made.
- Review of progress made in units of study by participating teaching staff and associates. This requires aggregation of the data obtained above for all courses in the unit (Tables 3 and 4) and critical analyses of the results across courses for adherence to the curriculum plan.
- Reports by teaching staff to the curriculum committee of efforts, achievements, related learning experiences, and future plans.

These reports provide the basic data for evaluating the curriculum content and structure. The members of the curriculum committee will need to study them to identify which changes have been made and which are still to be implemented in the

various departments and in the curriculum. In addition, interviews with the teaching staff, individually and in groups, will be needed. These discussions enable the evaluator to make certain that the monitoring reports are analysed in the proper perspective and that the teachers are able to reflect on the significance of their experiences for the total programme.

Monitoring programme effectiveness

Study of the data given in the teacher reports, again supplemented by interviews with students and teaching service staff, can yield conclusions as to the effectiveness of the educational programme. The interviews are important for validating judgements about student performance made on the basis of written reports (considering unfavourable as well as the desired responses of students and others in the teaching-learning environment) and for refining criteria and methods for determining behavioural outcomes. They are also important in assessing the perceptions of students, teachers, and others who might influence the learning process and they aid in deciding whether the courses have succeeded in developing each student as a whole person responsible for providing relevant health care.

It is to be expected that graduates of nursing schools oriented to the primary health care approach will demonstrate the basic characteristics of community health nursing, described earlier, more often and in more ways than graduates of traditional nursing programmes.

A longitudinal study of students' practice after graduation will provide data about programme effectiveness. For example, graduates of the revised programme can be expected to be:

- more active in extending primary health care to underserved groups;
- more likely to be employed in out-of-hospital settings;
- more often engaged in providing preventive health care;
- more apt to use epidemiological methods in planning and analysing health care;
- more involved personally and professionally in stimulating community efforts for improved health.

A third fundamental question that should be asked is:

Have the school objectives in regard to community health and primary health care been reached?

Because there are so many factors affecting community health and primary health care services, those responsible for programmes preparing health personnel understandably hesitate to ask this question. However, since it reflects the fundamental reason for applying these concepts to the nursing curriculum, it represents one of the most important questions to be asked in evaluating the programme. At the same time, the curriculum committee should be prudent in specifying elements inherent in the question and in looking for answers. If such questions are to be asked, technical assistance should be sought from experts in programme evaluation methods to make certain that the procedures followed are sound, relevant, and manageable and will lead to valid and reliable assessments.

Katz has suggested that, as an aid to answering the above question, the following subsidiary questions should be asked and he has also indicated possible sources of the information needed to answer them:

1. Are the programme goals consistent with what is known about the health needs of the people for whom the programme is intended?
   Sources: Results of epidemiological survey; country health plan; statement of programme objectives; interview with director.
2. Are the characteristics and abilities of the teaching staff consistent with the requirements of the programme?
   Sources: Interview with staff; observation in classrooms.
3. What is the total cost of the progamme?
   Source: Budgetary analysis.
4. Has the programme had effects other than those intended, e.g., students becoming alienated from their community or becoming dissatisfied with their intended role after training?
   Sources: Interviews; observation.
5. Has official support for the programme increased?
   Sources. Interview with ministry of health officials; analysis of plans.

In conducting the evaluation of how well the revised curriculum has succeeded in resolving community health problems, it has to be borne in mind that some needs can be met more readily than others, some are more responsive to nursing interventions, and some are more easily measured than others. It will therefore be necessary to select those conditions that can be used as *indicators of programme effects*. Once indicator conditions have been chosen, an evaluation study can be designed.

Planning for such a study should begin with the development of the curriculum plan and be carried forward as an important part of the implementation of changes in each course and programme. Assumptions regarding the effects on community health are implicit in the rationale of the curriculum plan, in the setting of educational objectives, and in the selection of subject matter taught to reach the objectives.

Summary

Evaluation of the nursing education programme is the process of determining the extent to which the education provided is effective, efficient, and makes a significant contribution to meeting health care needs.

In determining the effectiveness and efficiency of the programme it is necessary to monitor student performance and the extent to which the adopted teaching strategies are contributing to the students' learning experience and the achievement of programme objectives. It is also necessary to monitor the continuing relevance of the programme objectives to community-oriented nursing and the concept of primary health care. This last aspect of evaluation can be carried out only on a long-term basis and is closely related to evaluation of the contribution that the programme makes to the health care system. The need for such long-term evaluation should not, however, prevent the review of the curriculum and its evaluation within the time available.

Bibliography

ALLEN, M. *Evaluation of educational programmes in nursing.* Geneva, World Health Organization, 1977.

ANDERSON, E. T. ET AL. *The development and implementation of a curriculum model for community nurse practitioners.* Hyattsville, MD, Department of Health, Education and Welfare, 1977.

DURANA, I. *Teaching strategies for primary health care, a syllabus.* New York, NY, Rockefeller Foundation, 1980.

FÜLÖP, T. & ROEMER, M. I. *International development of health manpower policy.* Geneva, World Health Organization, 1982 (WHO Offset Publication No. 61).

GUILBERT, J.-J. *Educational handbook for health personnel, revised edition.* Geneva, World Health Organization, 1981 (WHO Offset Publication No. 35).

KATZ, F. M. *Guidelines for evaluating a training programme for health personnel.* Geneva, World Health Organization, 1978 (WHO Offset Publication No. 38).

MANGAY MAGLACAS, A. ET AL. Nursing education. the changing pattern in Indonesia. *WHO Chronicle,* 30: 461-463 (1976).

WORLD HEALTH ORGANIZATION. *Global strategies for health for all by the year 2000.* Geneva, 1981 ("Health for All" Series, No. 3).

WHO Technical Report Series, No. 558, 1974 (*Community health nursing*: report of a WHO Expert Committee).

WORLD HEALTH ORGANIZATION. *Alma-Ata 1978. Primary health care.* Geneva, 1978 ("Health for All" Series, No. 1).

Annex 1

Protocols for applying care processes to individuals, families, and community risk groups in the context of primary health care

1. Assessment of health status

	Individuals	Families	Community risk groups
A Data needed to identify needs and plan health care	(1) Personal characteristics, e.g., age, sex, race, marital status, ethnic background, financial status, education, occupation, life-style. (2) Health history, perceptions and attitudes about health/illness, health habits, source of care, priorities. (3) Family health history, e.g., needs, support system, evidence of genetically transmitted diseases. (4) Physical state, e.g., condition of skin, nutrition, muscular development, sensory and neurological development, reproductive functioning, vital functions. (5) Emotional state, orientation to present, appearance and behaviour, mood, cognition (6) Relationships with family, with social groups, role performance and satisfaction	(1) Demographic, e.g., age and sex make-up, members, socioeconomic status, education, and occupational patterns. (2) Health history, problems that affect the health and function of the family as a group, resources for health care. (3) Physical and emotional environments, illness/disability in members, related factors associated with common diseases/disabling conditions. (4) Health perceptions, health care behaviour of the family, of individual members; use of community resources. (5) Family relationships, roles/responsibilities. (6) Decision-making strategies for health/health care.	(1) Demographic characteristics, e.g., age, sex, race, ethnic, socioeconomic distributions; birth and death rates; life expectancy. (2) Physical environment, e.g., housing and sanitation, water and food supplies, educational and job opportunities, climate. (3) Resources, e.g., economic status, schools, industries, economic and political forces; community cohesiveness, the health care system, indigenous providers of care. (4) Health states, e.g., major causes of illness, injury, and death; demographic and geographic distributions, growth and development of infants and children; fertility rates; nutritional states. (5) Primary health care: availability of basic services, accessibility to populations, eligibility of high-risk groups. (6) Health behaviour of populations and subgroups; values, beliefs, perceptions, use of health services.
B Methods of collecting data	(1) Direct observation, general survey of individual's health status and behaviour (2) Interviews with individual patient and others concerned, taking health history, health perceptions. (3) Physical inspection and assessment, verifying health history, problem and risk associations. (4) Use of standardized screening/diagnostic tests, X-ray and laboratory reports as appropriate to presenting problem(s) and care setting, prevalent diseases	(1) Review of available health records and vital statistics as appropriate to type and composition of family. (2) Direct observation of family lifestyles. (3) Health history and interviews with head of household and other responsible persons. (4) Interviews with each member of family, health screening.	(1) Use of information already available, i.e., census data, morbidity and mortality statistics, hospital and outpatient information, reports of community surveys. (2) Direct observation of health environments of neighbourhoods and regions, comparisons of groups by risk of illness and disability. (3) Use of survey techniques to elaborate on available data. (4) Interviewing selected groups, e.g., community leaders, health planners and providers, high-risk groups. (5) Community self-study mechanisms.
C Analysis of data	(1) List existing and suspected illnesses/disabilities (2) Consider possible causes and sources of the problems identified, including genetic, social, and physical environments. (3) Determine vulnerability to prevalent diseases and other health problems associated with age, sex, or other personal and family characteristics (4) Describe health practices in relation to current or predictive needs for care, assign priorities to problems considering: seriousness of condition, potential effect on family and community; – availability of resources, implications for community action, – potential for prevention, growth and development, recovery, and rehabilitation to independent living, – implications for involvement of other health manpower	(1) List existing health problems in families assessed; consider their prevalence in community, their effect on community health. (2) Examine social, cultural, and environmental factors that contribute to family health and the problems identified. (3) Consider potential health hazards for each group (age, sex, etc.) represented in family, indicate optimal modes of prevention. (4) Describe health practices in relation to need for health care: consider urgency of problems identified and effect on family health. (5) Identify community resources needed to provide preventive health care, to promote family health.	(1) Review social and epidemiological literature relevant to major health problems in demographic and social groups, in community at large. (2) Present data in analytical formats, e.g., flow charts, population profiles, and statistical tables by distribution of morbidity and mortality, by population characteristics associated with poor health. (3) Describe community social and health needs, i.e., prevalent health problems, trends, gaps in primary health services, in outreach and preventive strategies, in community interests and participation in health care. (4) Examine relationships among common diseases and population characteristics; validate needs perceived by community groups, describe target groups. (5) Draw inferences for service objectives related to specific preventive strategies; describe nursing responsibility for primary health care, e.g., training community health workers, providing care, intersectoral involvement.

2. Development and implementation of care plans for primary, secondary, and tertiary prevention

	Individuals	Families	Community risk groups
A Planning with individuals or groups concerned and with the health care team	(1) Consider nature of presenting problems, risk of common diseases/disabling conditions, and need for confirming diagnoses (2) Consider therapies recommended for conditions and risks identified, resources needed, optimal care setting, and anticipated patient outcomes (3) Develop strategies for preventive care in relation to short-term and long-term objectives utilizing self-care, health education, and supportive techniques (4) Specify individual/family responsibilities and those of care team members	(1) Consider nature of characteristics, risk association, and dynamics operating within family relevant to the health of the family as a whole (2) Consider resources and therapies needed for primary, secondary, and tertiary prevention (3) Develop health objectives, priorities, and strategies for family action, for team members, draw inferences for community action	(1) Determine community understanding of problem (2) Identify health goals and priorities of the risk groups involved, of the community generally (3) Consider possible solutions in light of scientific evidence and community prerogatives, adapt preventive strategies to population groups (4) Analyse primary health care coverage, describe resources available and those to be developed, consider other health and related services needed (5) Select most feasible plan of action to produce an impact upon common health problems and to improve community health, utilizing interdisciplinary and intersectoral approaches
B Implementation of plan	(1) Arrange for provision of services in accordance with care plan (2) Participate in the care plan by – assisting the individual patient and family to understand and carry out their responsibilities, adapting the plan as indicated in the course of care, – providing/arranging for personal care, treatment, and follow-up in the appropriate settings, – arranging for specialized consultation, referral, and rehabilitation services as needed, assisting in coordinating care of multiple providers, – working with community agencies, institutions, citizen groups and others to develop community services required to meet primary health care and related needs of the individual	(1) Assist family to contact individuals and agencies responsible for providing services needed, clarify family care plan, timing of care, coordination of services (2) Participate in the initiation and follow-through of the plan by – providing health education and supportive care to family members to understand and carry out their responsibilities, – providing/arranging for specific prevention strategies and for the collection of data required to evaluate the effectiveness of the plan, – adapting standard follow-up procedures to family situation, – serving as family advocate, assisting family to use community resources and the community to understand family needs	(1) Clarify health and related service functions with relevant agencies, (2) Determine responsibilities of other community groups, including primary health workers and their support services (3) Assist in initiating the development of resources needed to carry out plan, including health care, and referral services (4) Participate in carrying out the plan, applying concepts of primary health care to groups at high risk and to the community at large, – working directly with target groups in providing/extending primary health services; – participating in immunization and case-finding campaigns, – giving instruction to target groups in maternity care, family planning, child growth and development, nutrition, healthful living, prevention of common diseases, etc, – assisting in programmes training community health workers and indigenous providers of care, – working with school and industrial managers on health projects

3. Evaluation of the care plan

	Individuals	Families	Community risk groups
A Selection and collection of evaluative data	(1) Determine what evidence is needed to show progress expected in the health state of the individual/patient, e.g., weight change, recovery from illness, return to normal function, etc (2) Select measures of health behaviour that indicate achievement of individual's care plan (3) Decide what standards will be used to assess care given by providers of primary health care (4) Plan for collection of data needed with individual or family members and with providers of care	(1) Determine indicators of improved family health specific to problems identified and expected care outcomes, e.g., family nutrition, productivity, immunizations completed (2) Select process measures, e.g., behaviour affecting family health and self-care functions, e.g., diet, sterilization of water, use of family planning methods (3) Outline standards of care related to family care plan, e.g., type, frequency, and place of contacts to be used in evaluating care (4) Arrange for recording and collection of pertinent data	(1) Select outcome measures of community problems that interventions are aimed to improve, e.g., % of antenatal patients receiving prenatal care before third trimester, fertility rates, immunization rates, % of children achieving normal growth patterns, % decrease in deaths from diarrhoea, from cholera, or from other preventable diseases (2) Select process measures appropriate to health plan, e.g., primary health care coverage, % family involvement in community health projects, service utilization rates, such as % maternity patients receiving prenatal care before third trimester. (3) Determine what relevant community data are routinely available (4) Plan with community and care providers to collect needed information (5) Consider use of community surveys for obtaining data not normally reported
B Review of data obtained	(1) Examine service records and interview persons involved to ascertain that care was implemented as planned, note modifications in plan. (2) Check completeness of data collected, note missing items and possible means of obtaining them (3) Consider effect of missing or inadequate data and modifications of care plan on the evaluation	Same as for care of individual	(1) Assemble and review relevant vital health statistics from community, region, and country reports (2) Check data from service records for completeness, accuracy, and validity (3) Note data that are unavailable or unusuable and adjust evaluation accordingly
C Analysis of data for effectiveness of care with groups concerned and with health care team	(1) Examine individual/patient responses to determine whether anticipated changes occurred in health states and behaviour of individual under care, in keeping with time frame (2) Consider extent to which services provided produced results observed, and what other influences might account for these outcomes (3) Draw inferences from total experience for nursing and health care of other individuals and families generally and for specific risk groups	(1) Same as for individual but with analysis focused on family as a unit (2) Look for ratios to measure change in health states and behaviour, i.e., number of members showing desired response number in family	(1) Examine change in health rates selected to determine the extent to which progress is being made in target groups, in community health generally (2) Survey community for extension or establishment of primary health and supporting services in accordance with community needs and programme plans (3) Look for influences that promoted or impeded desired change/community action Consider possible direct and indirect relationships between action taken and health outcomes (4) Draw inferences from findings and reported experiences for programming care to have increased impact on community health problems

Annex 2

An example of using the guide

This report by a project committee shows how one school of nursing used the guide to review its basic curriculum. Although the report has been slightly shortened, no deletions have been made with respect to the steps of the review process or the recommendations.

Phase 1

After carefully reading the introductory material, we held an initial meeting with the entire faculty of the school of nursing in order to introduce them to the basic concepts behind the desired curriculum change, and to assess their attitude towards the project. Fig. 1 on page 11 of the guide—"Comparison of traditional and community health orientation to nursing practice"—served as an excellent summary of the intended shift and was a most useful base for discussion, as well as an excellent teaching tool.

The first meeting was successful beyond our expectations, the entire faculty showing great interest and willingness to cooperate.

We gave a great deal of thought to the question of who should be involved in phase 1, in relation to the suggestions on page 15 of the guide. The heads of all educational programmes were actively involved from the beginning, since without their positive interest, the project would have been unfeasible.

We presented the project to senior students and were gratified by their interest and questions. When

Table A1. Results of examination of school objectives for characteristics of nursing in primary health care

	Characteristic	Explicitly stated	Implicitly stated	Not found
1.	Major health problems in the area		X	
2	Primary methods of prevention, treatment, and control of prevailing problems, together with the etiology, epidemiology, and pathology of the problems	X		
3	Maternal, infant, and child health care, individual and family growth and development, family planning	X		
4	Assessment, therapeutic and restorative processes appropriate for nursing practice in the region	X		
5.	Evaluation of care provided to individuals, families, and community groups	X		
6.	Clinical/practice settings for student experience in the community	X		
7	Health education at individual, family, and community levels		X	
8	Adaptation of health care to various social, cultural, and economic segments of the population	X		
9	Multidisciplinary experience	X		
10.	Means of assessing and modifying patterns of utilization of services by various groups		X	
11	Training for promotion of self-care			X
12	Training of and collaboration with community health workers			X
13.	Training for promotion of community participation and involvement in health care			X
14	Training for participation in health policy formulation and decision-making in primary health care		X	

we asked them to evaluate the educational focus of the curriculum in terms of Fig. 1 (page 11 of the guide), they very clearly expressed the view that the theoretical part of the curriculum included a great deal on primary health care but that the clinical experience focused on the traditional nursing role. (It was interesting to see that their informal evaluation was borne out by our formal one, as shown later.)

We first analysed the philosophy and stated objectives of the school, using the listings on page 16 of the guide as a base, with some modification (see Table A1). All items were classified as "explicitly stated", "implicitly stated" (if all mem-

Table A2. Modified data collection form for review of basic nursing curriculum

Course content relevant to primary/community health care	Theory					Community practice									Comments
						Assessment of needs			Implementation			Evaluation			
	Risk groups	Promotion	Prevention	Care	Rehabilitation	Individual	Family	Aggregates	Individual	Family	Aggregates	Individual	Family	Aggregates	
Community health problems															
1 Coronary heart disease															
2 Hypertension															
3 Accidental injuries															
4 Neoplasms															
5 Pneumonia															
6 Gastroenteritis															
7 Viral hepatitis A															
8 Dental caries															
9 Diabetes mellitus															
10 Mental health															
11 Smoking															
12 Dietary habits (overeating, junk foods)															
13 Sedentary life style															
14 Overuse of medication															
15 Upper respiratory infection															
16 Urinary tract infection															
Maternal and child care															
17 Antenatal and postnatal care															
18 Congenital abnormalities															
19 Delivery, care of the newborn															
20 Prematurity															
21 Growth and development															
22 Immunizations															
23 School health care															
24 Adolescence and sexual development															
25 Breast-feeding															
Adult health care															
26 Function, productivity															
27 Occupational health															
28 Acute illness															
29 Chronic illness															
30 Aging processes															
31 Health care in old age															
Family health care															
32 Family patterns and dynamics															
33 Social relationships															
34 Culture and health															
35 Family planning															
Community needs and participation															
36 Epidemiology, biostatistics, demography															
37 Health planning															
38 Primary health care															
39 Environmental health															
40 Health education															
Team care															
41 Nursing team															
42 Interprofessional team															
Intersectoral involvement															
43 Community development															
44 Education															
45 Welfare															
46 Voluntary agencies															

bers of the project team agreed), or "not found". It was found that items 11, 12, and 13 in Table A1 were not included in the objectives of the school, i.e., that the issues of self-care, training of primary health care workers, and community participation were not addressed.

The next task was to develop a data collection form, based on the example on page 18 of the guide (see Table A2). We made several modifications as follows:

1. We felt that it was not enough to check if theory in the various content areas was covered, but that it was important to examine certain elements of theory that are relevant to the primary/community health approach. We therefore divided the theory component into 5 subcomponents:

(*a*) incidence and distribution of the health problem or subject (risk groups);
(*b*) health promotion;
(*c*) prevention;
(*d*) care;
(*e*) rehabilitation.

We decided that, with regard to (*a*), it was essential that theory include the epidemiology of health and illness (as noted in the footnote to Table 1, p. 18) and that the incidence and distribution of various health problems and conditions should be specifically taught so that nursing practice can take account of these factors in terms of identification of risk groups and allocation of priorities. Therefore, epidemiological aspects were included as a theory subcomponent, and epidemiology was also included in the content areas under community needs/participation.

We also felt it was important to examine the extent to which prevention is included in the subject matter for each content area. For example, one of our common health problems is coronary heart disease. Although students may be taught about care of the patient who has had a myocardial infarction, such theory would have little relevance for primary/community health. The theory should include information about incidence and prevalence of this disease and its risk factors, and the value of intervention at all levels of prevention. Thus, by examining the curriculum for these aspects, we obtained a clearer picture of whether the theory taught was relevant to the desired approach, and were better able to pinpoint weak points in the theoretical aspect of the curriculum.

2. We also modified the community practice component of the data collection form.

We felt that it was important to determine whether students had the opportunity to carry out each step of assessment, implementation, and evaluation with individuals, families, and aggregates. (We use the word "aggregates" rather than "communities" because we feel it is less ambiguous.)

We are aware that these modifications of the data collection form make it more complex, but we think they make it more useful in pinpointing specific areas relevant to primary/community nursing that may be weak in the curriculum and require expansion.

Some of the members of our committee had reservations as to whether these categories were equally relevant to all content areas on the form. They seemed most useful for common health problems, maternal and child health, and adult health care, and hard to relate to family health care, community needs/participation, team care, and intersectoral involvement.

3. The next step was to adapt the list of common health problems to our local situation. We did this by examining our national vital statistics for major causes of mortality and hospitalization, in consultation with epidemiologists, maternal and child health specialists, primary care experts, etc.

4. In the content area of maternal and child health, we added breast-feeding, congenital abnormalities and school health care.

5. Under adult health care, we added occupational health and health care of the aged.

6. Under family health care, we changed health care patterns to family patterns and dynamics and added the item of culture and health. Our society is made up of people from different cultural backgrounds and the primary health care provider must be sensitive to the effect of culture on health and illness states and health beliefs and practices.

7. Under community needs and participation, we added an element covering epidemiology, biostatistics, and demography, since these subjects appeared nowhere else and we think they are essential components for primary/community health care in any setting.

8. We changed the items under intersectoral involvement to those relevant to our setting, and included education, welfare, and voluntary agencies.

9. We changed the order of the content areas to one that seemed more logical to us, i.e., maternal and child health and adult health after common health problems, followed by family and then community sections.

Pretesting of the data collection form with several teachers led to several additional minor changes, which are not detailed here.

Data collection

We used several methods to collect the data, based on the suggestions on pages 18-20 of the guide. Some personal interviews were conducted, but the bulk of the data was collected by direct reporting from teachers. We handed out the data collection form at a meeting and answered any questions at that point. The teachers were told that they could consult members of the committee at any time with further questions.

Data editing

We checked the returned forms against the written course objectives and whenever we found major discrepancies between objectives and content we interviewed the teachers to determine the reasons.

Summarizing the data

After the data collection forms had been completed by the teachers, the project team held several meetings to decide on how to summarize and analyse the data. It was decided that one point would be given for each check, thus, the maximum score for theory components was 5 and the maximum score for practice components was 9.

Table A3 summarizes theory and practice scores for each course reviewed, and shows the percentage of the total possible scores obtained by each course for each content area. It is immediately evident that, with very few exceptions, a higher percentage score is achieved for theory than for practice in each content area.

This table was used in meeting with each teacher to point out and clarify gaps that could be immediately remedied. For example, item 18 (congenital abnormalities) is not checked for the course "Nursing the individual and family in the community", although we know there is a country-wide programme for early detection and prevention of congenital abnormalities, this subject should certainly be included in this course.

There is no single item that is not checked at all, i.e., every subject considered relevant for primary health care received some attention in the curriculum. However, this table helps to pinpoint weaknesses in certain items, e.g., item 1, coronary heart disease, which is a major health problem in our society, scores very low in practice and could certainly be integrated into health education and acute and chronic disease. The same may be said for item 6, gastroenteritis.

The high theory scores achieved by course A may be explained by noting that this basic introductory course touches superficially on most subjects. This illustrates one of the shortcomings of this kind of curriculum review.

The fact that practice in family health care was checked for only one course may be explained by the observation that this subject is integral to other content areas, such as maternal and child health and adult health care.

Most surprisingly, item 38, primary health care, received only 4 practice points, which leads us to question the validity of this item as it stands, since most out-of-hospital practice takes place in primary care settings.

Table A3 is too detailed to allow generalization and served mainly to point out specific gaps to be reviewed with individual teachers. Tables A4 and A5 were thus prepared to summarize and elaborate on this information.

Table A4 shows the average percentage theory and practice scores achieved for each content area. The figures were computed by adding the scores achieved by each course for each content area and dividing by the number of courses reviewed (8). The weakness of community practice is immediately evident. The priority item in curriculum change seems to us to be the strengthening of out-of-hospital practice opportunities in the content area of common health problems, since this must be the basis for primary health care. The possible reasons for the low practice scores in family health care have already been mentioned, but the practice content of the other areas (except possibly team care) needs to be more closely examined and strengthened.

Table A5 is based on Table 4 on page 22 of the guide and summarizes the percentage theory score (for all content areas) for each course, and percentage practice score and practice component scores achieved by each course. The introductory and two fundamental courses (courses A and B) have little potential for increasing their practice components because of their specific nature. Course C has the highest percentage practice score and is well balanced in practice components, there is probably little potential for improvement. Course D needs to be strengthened in the area of community practice in general and for all components, there is potential for such change. Course E has almost no commu-

Table A3. Summary of course content relevant to primary/community health care

Course content relevant to primary/community health care		Individual course scores*																	
		Total possible score		Course A		Course B		Course C		Course D		Course E		Course F		Course G		Course H	
		T†	P†	T	P	T	P	T	P	T	P	T	P	T	P	T	P	T	P
Common health problems																			
1 Coronary heart disease				5	2	5				5				4	3			2	
2 Hypertension				5		5		4	2	5	2	3		4	3			2	
3 Accidental injuries				5				3	7	5				4	3			2	
4 Neoplasms				5						5	3			4	3				
5 Pneumonia				5		4				5	2			3					
6 Gastroenteritis				5		4				5	2			3				2	
7 Viral hepatitis A				5						5				3					
8 Dental caries				5		4		3	3					3	3			2	
9 Diabetes mellitus				5						5	3	3		4	3				
10 Mental health				5		4		3	2			3		3	3	4	7		
11 Smoking				5				2	2	2		3		2	3			2	
12 Dietary habits				5	2	4		4	2	5		3		2				2	
13 Sedentary life style				5	2			4	2	2				2					
14 Overuse of medication				5	2					4		3		2	3				
15 Upper respiratory infection				5	2	4			3	4	2			2					
16 Urinary tract infection				5		4				5	2			2					
Total	No	80	144	80	10	38		23	23	62	16	18		47	27	4	7	14	
	%			100	7	48		29	16	78	11	23		59	19	5	5	18	
Maternal and child care																			
17 Antenatal and postnatal care				5	2			4	6	5		5	2						
18 Congenital abnormalities				5	2					5		5		3	3				
19 Delivery, care of the newborn				5				4	6	5		5							
20 Prematurity				5	2			4	6	5		5		3	3				
21 Growth and development				5	2			5	7	5	1			2	3				
22 Immunizations				5	2			4	3	2				2				2	
23 School health care				5				4	4	5				3	3				
24 Adolescence and sexual development				5				5		3				3	3				
25 Breast-feeding				5				4	6			5							
Total	No	45	81	45	10			34	38	35	1	25	2	16	15			2	
	%			100	12			76	47	78	1	56	2	36	19			2	
Adult health care																			
26 Function, productivity				5		5		5	6			2		3	3				
27 Occupational health				5				5						3	3				
28 Acute illness				5		5				5	4	4	2	2		5	5		
29 Chronic illness				5		5				5	6	3	2	3	3	5	5		
30 Aging processes						5		1				1		3	3	5	4		
31 Health care in old age				5	2	5		4	2	5	6	2		4	3	5	3		
Total	No	30	54	25	2	25		15	8	15	16	12	4	18	15	20	17		
	%			83	4	83		50	15	50	30	40	7	60	28	66	31		
Family health care																			
32 Family patterns and dynamics				5				4	6	4		5		1					
33 Social relationships				5				4		4		1		1					
34 Culture and health				5				4		4		5		1					
35 Family planning				5				3	4	4		5							
Total	No	20	36	20				15	10	16		16		3					
	%			100				75	28	80		53		15					
Community needs/participation																			
36 Epidemiology, biostatistics, demography				5		4		4		4				2	3				
37 Health planning				5						4		1		4	3				
38 Primary health care				5				4		4	4	3							
39 Environmental health				5		4								3	3	4	6		
40 Health education				5		4		1	6	4		3		4	3	4	6	5	6
Total	No	25	45	25		12		9	6	16	4	7		13	12	8	12	5	6
	%			100		48		36	13	64	9	28		52	27	32	27	20	13
Team care																			
41 Nursing team				5	2	4			6	4	6			4		5	9		
42 Interprofessional team				5	2	4			6	4	6	4		4		5	9		
Total	No	10	18	10	4	8			12	8	12	4		8		10	18		
	%			100	22	80			67	80	67	40		80		100	100		

* Course A Introduction to nursing, Communications, Fundamentals of nursing 1
Course B Fundamentals of nursing 2
Course C Nursing the individual and family in the community
Course D Nursing in acute and chronic disease
Course E The woman in the fertility cycle
Course F Community health nursing.
Course G Psychiatric nursing.
Course H Health teaching and health education

† T = Theory, P = Practice.

Course content relevant to primary/community health care		Individual course scores															
		Total possible score		Course A		Course B		Course C		Course D		Course E		Course F		Course G		Course H	
		T	P	T	P	T	P	T	P	T	P	T	P	T	P	T	P	T	P
Intersectoral involvement																			
43 Community development				5															
44 Education				5		4		6		4						5			
45 Welfare				5		4		6		4									
46 Voluntary agencies								2		4						4	1	4	
Total	No	20	36	15		8		14		12						9	1	4	
	%			75		40		39		60						48	3	20	

Table A4. Average of percentage scores achieved for each content area

Course content relevant to primary health care	Theory	Practice
Common health problems	44.5	7 25
Maternal and child care	43.8	10 1
Adult health care	54 1	14 4
Family health care	40 4	3 5
Community needs/participation	47 5	11.1
Team care	60	31.9
Intersectoral involvement	30	5 3

nity practice and this bears some explanation. In the particular framework of services in the country, midwifery is hospital-based and midwives deliver most babies – virtually all deliveries are in hospital. Public health nurses are responsible for prenatal and well-baby care, so there is a strong maternal and child care component in course C (see Table A3). However, it seems to us that course E could still be strengthened in community practice, perhaps by the students following a family into the community after a hospital birth.

Course F focuses on assessment, intervention, and evaluation of a health problem in an aggregate, and there is no potential for increasing community practice, which is already maximal. Course G requires further assessment of both theory and practice content. The low score obtained by course H was unexpected, since one would expect the subject matter of health education and health teaching to contain a substantial amount of material relevant to primary health care, in addition, the teacher of this course has a public health background and orientation.

Tables A6 and A7 show the relative distribution of the theory and practice subcomponents. This was computed by dividing the score for each subcomponent by the total theory or practice score achieved for that content area (e.g., the incidence and distribution theory subcomponent for common health problems scored 76 points, this score was divided by the total theory score for that content area (286) showing that 26.6% of total

Table A5. Scope of instruction in courses reviewed for community health content

Component of instruction / Content items included in courses		Total possible score	Individual course scores							
			A*	B	C	D	E	F	G	H
Total theory	No	230	220	91	96	164	82	105	51	25
	%		95 7	39.5	41 7	71 3	35 6	45.6	22 1	10 8
Total community practice	No	414	26		111	49	6	69	55	6
	%		6.2		26.8	11.8	1 4	16.6	13.2	1 4
Practice components										
Need assessment	No	138	26	0	39	14	4	23	21	2
	%		15.8		28.2	10 1	2.8	16.6	15 2	1 4
Implementation	No	138	0	0	34	19	2	23	18	2
	%				24 6	13 7	1 4	16 6	13	1 4
Evaluation	No	138	0	0	38	16		23	16	2
	%				27 5	11 5		16.6	11 5	1 4

* For course names, see Table A3

theory in the content area was devoted to this subcomponent).

The relative distribution of total scores in Table A6 shows that the incidence and distribution subcomponent had the highest score (24%) followed closely by the prevention subcomponent (23.7%). The rehabilitation subcompone. scored lowest (12.8%) This trend was also seen for the common health problems, maternal and child health, and family health care content areas. In the adult health care area, the promotion subcomponent was slightly higher than prevention, but the trend was essentially the same. However, the picture is slightly different for the remaining three content areas. The implications of this are unclear since, as mentioned before, the applicability of these subcomponents to each specific content area is somewhat problematic.

Table A7 shows that, for practice components, the highest score was in the assessment component (41%) and the lowest in evaluation (27%). This pattern is seen in individual content areas whereas the intersectoral involvement area shows a variant pattern.

Examination of the individual, family, and aggregate subcomponents shows that the highest score in each component is at the individual level. In the intervention component, the family and aggregate subcomponents are similar, and for evaluation, the aggregate subcomponent is somewhat higher than the family one. It should be noted that in the family health care content area there is no practice at the aggregate level in any of the components.

Summary and additional comments on phase 1

In general terms the review showed that,

1. The school objectives needed revision. Only half of the desired characteristics were explicit in the school's philosophy and stated objectives. The areas of self-care and community participation needed special attention.

2. The theory content relevant to primary health care was relatively satisfactory and the theory subcomponents seemed to be fairly well balanced, including epidemiological elements and the different levels of prevention.

3. Out-of-hospital practice needed strengthening in almost all content areas, and particularly in primary care of common health problems. The practice subcomponent of evaluation was weakest, and practice at the aggregate level needed strengthening.

Individual courses with potential for change were identified. It is important to point out that this could not be done merely by looking at the data in the tables. Consideration had to be given to each course within the context of the entire curriculum. Finally, the potential for immediate change was determined by discussing the outcome of the review with individual teachers or heads of courses.

It may be relevant to point out that a process of review in itself may cause some measure of change at the level of individual courses as teachers' consciousness of the subject is raised.

Table A6 Distribution of total theory component scores in each major community health content area

Content area	Theory subcomponent	Incidence distribution (risk)	Promotion	Prevention	Care	Rehabilitation	Total score
Common health problems	No	76	55	73	48	34	286
	%	26 6	19 2	25 5	16 7	11 8	100%
Maternal and child care	No	37	33	33	30	24	157
	%	23 6	21	21	19 1	15 3	100%
Adult health care	No	29	28	24	25	24	130
	%	22 3	21 5	18 5	19 2	18 5	100%
Family health care	No	18	15	17	13	7	70
	%	25 7	21 4	24 3	18 6	10	100%
Community participation	No	19	25	25	17	9	95
	%	20	26 3	26 3	18	9 4	100%
Team care	No	11	11	11	11	4	48
	%	22 9	22 9	22 9	22 9	8 3	100%
Intersectoral involvement	No	10	11	11	11	5	48
	%	20 8	22 9	22 9	22 9	10 4	100%
Total		200	178	194	155	107	834
		24	21 3	23 3	18.6	12 8	100%

Table A7. Distribution of total practice component scores in each major community health content area

Content area \ Practice subcomponent	Assessment				Intervention				Evaluation				Total
	Individual	Family	Aggregate	Total	Individual	Family	Aggregate	Total	Individual	Family	Aggregate	Total	
Common health problems	15	8	11	34 40.9%	15	3	9	27 32.5%	11	2	9	22 26.5%	83 100%
Maternal and child care	14	11	7	32 48.4%	7	5	6	18 27.2%	6	5	5	16 24.2%	66 100%
Adult health care	12	9	5	26 41.9%	3	6	5	20 32.2%	8	3	5	16 25.8%	62 100%
Family health care	2	2	—	4 40%	2	1	—	3 30%	2	1	—	3 30%	10 100%
Community needs and participation	5	4	5	14 35%	5	4	5	14 35%	4	3	5	12 30%	40 100%
Team care	8	8	2	18 39.1%	6	6	2	14 30.4%	4	6	4	14 30.4%	46 100%
Intersectoral involvement	2	2		4 26 7%	3	3	1	7 46.7%	2	2	—	4 26.7%	15 100%
Total No	58	44	30	132	47	28	28	103	37	22	28	87	322
%	18	13.7	9.3	41	14 6	8.7	8.7	32	11.5	6.8	8.7	27	100

Phase II: Developing a plan for change

We have not completed phase II and can report only on the initial steps taken. In this phase, we followed the guide less closely than in phase I, since the curriculum review itself provided an impetus that we thought opportune to follow.

Teachers became aware of shortcomings in individual courses and some course-level changes are already in operation. At this stage we are still meeting with individual teachers to explore possible course-level changes based on the findings of the review.

As it was clear that the major general change required was to augment clinical practice in the community, and most specifically in the area of common health problems, it was decided to provide clinical experience in primary care clinics in the final year, at which time the students could function fairly independently. Service personnel were more than ready to accept students, since they were aware that having students raises their status, helps them to improve service, and may serve to attract recent graduates.

The first group of students recently finished this part of the course and a report at the last faculty meeting was most gratifying. Students stated specifically that they felt they really had a greater opportunity to practise what they had been taught than in most of their other clinical experiences. This again bears out the gap between theory and practice shown by the review. They also felt that it would have been helpful to have followed a specific family during this time, and it was decided to accept this suggestion, since the "family" component was shown by the review to need strengthening.

It was also decided to add a short theoretical introduction to this experience, which would serve to integrate and strengthen primary health care aspects of the curriculum.

We have begun cooperating with primary care services to upgrade nurses in the field through special in-service education sessions. It is hoped that through this process and formal higher education of service providers, certain nurses in the field will be able to guide and supervise students satisfactorily in primary health care settings.

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