

Planning and Evaluating Curricula for the Humane Practice of Medicine

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There has been growing interest in broadening the content of medical curricula to include humane considerations for the practice of medicine. Contributions from the Humanities and Social Sciences often are called for. While there have been many eloquent statements of the need for such curricula, (e.g., AAMC, 1983) there remains a need to improve methods of development and evaluation in this area. All too often, humane curricula appear to students as disparate experiences drawn from many disciplines, each with vague or misleading learning objectives and an evaluation/feedback strategy which fails to emphasize the most important goals. The critical task of synthesizing this knowledge for practical application in clinical settings is left largely to the student.

The result is that students often master only the technical facts of medicine. Diagnosis of problems and formulation of intervention strategies often occurs in only the narrowest perspective. Lessons learned from humane curricula are of little help beyond the classroom.

The alternative is to develop an integrated curriculum designed from the start to deal with the problem of clinically-oriented synthesis and application. It would focus on the patient. Its central structuring question would be "how should the complete range of factors which comprise the identity of our patients as humans be reflected in the practice of medicine?" rather than, "how can these (social science, humanistic, etc.) disciplines contribute to physician education?"

By focusing on the former question, chances may be improved for achieving the commonly-stated goal of teaching the student clinician to treat the "whole

patient." By posing this central question, an integrated humane medical curriculum may be achieved. This is not a new idea; it has been an ideal of many patient or case centered curricula. The problem has been in implementation: getting faculty to see beyond their disciplines, plan the curriculum and evaluate accordingly. The structure presented here may help to resolve this problem.

The Dimensions of Learning in the Humane Curriculum

To attain integration, it is appropriate to think of the human experience simultaneously in a number of dimensions. For instructional purposes, A. W. Foshay (1975) defines six:

The Intellectual: The symbolic interpretation of experience and symbol manipulation. Many symbol systems are verbal, although others also are common (e.g., mathematics and music). The ability to articulate and manipulate symbol systems is the subject of Bloom's (1956) Taxonomy of the Cognitive Domain. In medical curricula, most of the content related to the identification and treatment of disease is in this dimension of human experience.

The Emotional: Not only the experience of emotions, but also "the ability to examine (and perhaps rejoice in) one's own feelings—and those of others." An extreme (but commonly occurring) example of experience in this dimension is the progression of emotional states in the terminally ill patient, each with corresponding emotional responses by the clinician. A more mundane (and perhaps less commonly studied) example of this dimension might be the clinician's ability to recognize and deal with the emotional components in the clinician-patient relationship, even in routine outpatient practice. Many now consider emotional states of both patient and clinician significant in the formulation of treat-

ment strategies. Some curricula even include direct instruction in the identification and accurate interpretation of behavioral cues to emotional states, as a basic skill in this dimension.

The Social: The development of social organizations (e.g., the family), and corresponding moral development. An example of clinical skill in this dimension might be the ability to make accurate inferences about roles assumed by the patient in various settings, and to develop treatment plans which are consistent with these roles. Awareness of various professional roles in the health care team also would be an example, as would the identification and description of underlying professional values.

The Physical: "Growth in the realization of one's self as a physical being." Examples of curriculum content in this domain might include the development of skills of physical examination or surgical technique. As such skills develop and are integrated, sophisticated pattern perception probably occurs. These perceptions may be seen to merge eventually into what is commonly called "body image," so that the boundaries become blurred between tools in use and the physician's own limbs, or between procedures and their effects. In medicine, this dimension might also involve realization of others' physical being. For example, the physical dimension is familiar when it involves planning the treatment of obese or deformed patients. It may also have application to treatment of athletes and dancers.

The Aesthetic: The range of sensuous, formal, technical, and expressive responses to an object of contemplation (including other humans). When a clinician admires the skill with which a surgical procedure was executed, the response might be viewed as an aesthetic one at the technical level. Additional examples might involve learning appropriate clinical responses to patients with deformities or disfiguring injuries.

Similarly, when teaching the genital examination, clinically appropriate aesthetic responses should be taught. Learning new aesthetic responses also is an appropriate goal in the anatomy dissection laboratory and the surgical residency.

The Spiritual: Relating to the search for ultimate meaning; discovery of a sense of awe and wonder over the phenomena of existence. Examples of this in clinical curricula might include learning to respect human life and the integrity of the patient. Also included might be the development of appreciation for the astonishing complexity and sophistication of the mechanisms of the human body. One might also speculate that the component of clinical medicine described as "the laying on of hands" could be taught as a manifestation of this dimension. Perhaps one reason certain faculty members seem to be charismatic role models is because of their ability to demonstrate knowledge in this dimension.

The Role of the Dimensions in Curriculum Development and Evaluation

If human experience is modeled in these six dimensions, then it follows that any learning experience carries the potential for being taught and evaluated in relation to each. Curricula that fail to address all dimensions probably omit some aspect of humanness. Similarly, curriculum evaluations should be sensitive to learning in all six dimensions, if they are to be complete. Of course, this does not mean that each dimension must carry equal weight in every learning experience. However, if the multidimensional nature of human experience is ignored when planning instruction, then there is a substantial risk that graduates will perceive patients and the provision of health care along only a few dimensions.

Another, more subtle risk exists, however: failure to plan in all dimensions can result in delivery of implicit lessons in the ignored dimensions. These may be inconsistent with the lessons which have been explicitly included in the curriculum. Thus, for example, the conventional medical curriculum risks producing superb technicians who emerge from their training with in appropriate values, attitudes, and social skills. Thus, curricula which fail to include plans in all six dimensions are inhumane (or dehumanizing) because they

ignore the full complexity of human experience. Each dimension can be considered a domain in which to specify and assess learning outcomes.

Developing Goals for the Six Domains

In developing goals for curricula in all six domains it may be helpful to keep in mind a progression of "levels" of achievement, much as is now done commonly with the Intellectual (Cognitive) domain. While much developmental work remains to be done in this area, some initial characterizations are presented in Table 1. For the Emotional, Social, Physical, and Spiritual dimensions, the basic progression is from perceiving experience by recognizing experience patterns in others or one's self, to generalizing patterns beyond single individuals, and finally to evaluating or predicting from such generalizations. This progression corresponds to increasing sophistication in the self/other discrimination. For the Aesthetic domain, Broudy's (Broudy, Smith, & Burnett, 1964) characterization of four discrete levels of aesthetic response seems useful for instruction. However, in some applications, viewing the four levels of response as a progression seems reasonable.

Writing Objectives for the Six Domains

When reducing the goals of the curriculum to specific objectives, one could use Table 1 to analyze any topic by asking for each of the six domains: (1) "What are the significant cues in relevant clinical situations which apply to this domain?" (2) "What responses to these cues should one expect to observe in the proficient student?" (3) "What

criteria for judging a student's assessment of his/her own response will indicate that the student is attending to the appropriate cues and criteria of judgment?" (4) "What criteria can be used to judge the appropriateness of the student's inferences about others in this dimension?" These four questions can be answered quite well in many areas by the conventional techniques of behavioral analysis. However, in some cases the student's responses will not be directly observable (as required by question (2)). In such cases, question (2) must be answered by specifying appropriate verbal or nonverbal behavioral responses which are correlates of the response itself. Where such correlates cannot be found, it may be necessary to leave question (2) unanswered, and to specify only the criteria for question (3). This is admittedly an indirect approach to measurement, but it may be worthwhile in some cases to sacrifice some of the reliability of a direct behavioral analysis for improved validity of the objective. Examples of objectives for each dimension are given in Table 2.

An example may help to demonstrate the multidimensional approach. In developing a curriculum to teach medical interviewing, it might be reasonable to develop goals and objectives for gathering the required types of content (chief complaint, present illness, etc.) in the Intellectual dimension. In addition, however, the skillful clinician also is proficient at detecting and interpreting the emotional cues emitted by the patient, and in identifying the cues he/she emits to the patient (the Emotional). Furthermore, the clinician should be able to govern his/her own behavior—both verbal and nonverbal—so as to achieve the goals of the in-

A humane curriculum would train physicians to think of people simultaneously in six dimensions: the intellectual, the emotional, the social, the physical, the aesthetic, and the spiritual.

Table 1
Progressions Within Each Domain

The Intellectual

As in the Taxonomy of Educational Objectives: Cognitive Domain (Bloom, 1956)

The Emotional

1. Minimal experience of emotion

2. Recognizing emotional states in others and oneself

3. Identifying the mutually causal relationship of emotional states and social experiences, in others and oneself

4. Predicting the emotional impact of a social action on others and oneself

The Social

1. Conforming to social norms and roles

2. Identifying social norms and roles

3. Questioning social norms and roles; identifying moral standards underlying them

4. Evaluating the consistency of social acts with recognized norms and moral codes, for oneself and others

5. Predicting impact of overt interventions on social norms, role definitions and moral codes, of oneself and others

The Physical

1. Minimal sensory experience

2. Sensuous experience: awareness of the perceptual process as a separate experience, in one's self and others.

3. Recognizing physical self concept, in oneself and others

4. Evaluating the effects on physical self-concept of physical experiences, in oneself and others

5. Predicting the effects on physical self-concept of physical experiences, in oneself and others

The Aesthetic

(not a continuum—see text)

1. Sensuous response: Recognizing one's own

perceptual experience of the object (which may be another person)

2. Formal response: Recognizing the design or composition of an object

3. Technical response: Recognizing the skill used to produce that object

4. Expressive response: Assessing the import of one's total reaction to the object

The Spiritual

1. Reacting to changes in the environment

2. Recognizing patterns in the experiences of life

3. Recognizing the experiences of life as organic wholes; hypothesizing meaning of those experiences

4. Awe, or wonder over the phenomena of life's experience

5. **Mysticism:** "knowing" (of meaning), underlying daily experience

ing the multidimensional model is essentially an integrated one. When teaching the above curriculum, a separate unit for each domain could be constructed. Separate lecture times for the resident sociologist, ethicist, psychologist, clinician, etc., to talk about interviewing could be scheduled. But it would probably make more sense to the student if instruction in interviewing was done as a unified experience, with implications emphasized in each dimension. At some point in clinical training, it would certainly make sense to assess simultaneously the student's proficiency in each of the areas described above.

Using the Model for Evaluation

Even where the existing curriculum has not been formulated by the multidimensional model described here, the model may be useful for evaluation. In assessing the learning outcomes of a curriculum, it is common to search for unintended (incidental) learning, as well as achievement of stated objectives. This sometimes takes the form of an attempt to discover the "hidden curriculum." The scope and precision of such an evaluation can be enhanced by application of the multidimensional model to the design and analysis of questionnaires, observation protocols, and other data-gathering instruments and procedures. Furthermore, the model can be of use in developing and refining the questions or hypotheses which serve to structure the evaluation.

Potential Advantages of the Multidimensional Approach

A medical curriculum planned in six dimensions is likely to include many unfamiliar components. However, the approach has five potential advantages which may facilitate incorporation of these components into a medical curriculum, thus realizing its humane goals.

First, it can help to establish the relationship of the humane concerns to the conventional curriculum content, without slighting either. The multidimensional representation carries to a detailed level the principle that the two areas of content are complementary, and not contradictory.

Second, it can provide a means by which the goals and objectives of the humane curriculum can be specified with sufficient precision to give faculty clear guidelines for implementation.

Third, it can provide a structure by

interview (the Social). These goals are in turn defined by requirements for information relevant to the medical problem (the Intellectual) and by the social norms, roles, and professional values governing the clinician-patient relationship (the Social). In interpreting the information gathered during the interview, the proficient clinician should be able to make accurate inferences about the way the patient carries out his/her roles in the home, workplace, and hospital, and should be able to predict and/or assess the appropriateness of a given treatment strategy in light of these roles (the Social). The clinician also should be able to make inferences about the relationship of the patient's physical self-concept to his/her current condition, and to assess implications for treatment strategy (the Physical).

Similarly, the clinician should be able to identify the patient's concerns about the significance of his/her diseased state and the (perhaps) heightened awareness of his/her own mortality (the Spiritual). Finally, the clinician should be able to identify and assess the appropriateness of his/her own responses to the patient in terms of the respect for human life and preservation of the patient's integrity (the Spiritual), and in terms of appropriate clinical norms for response to the patient's body and person. This would include not only maintenance of an objective stance toward the patient, but also recognition of conditions under which this is impossible and clinical judgment may be influenced (the Aesthetic).

The example demonstrates that the approach to curriculum development us-

Table 2
The Six Domains (Dimensions) of
Human Experience,
With Sample Objectives From Each

*The sample objectives are drawn from a variety of "levels" within each domain, and thus are not of comparable complexity.

DOMAIN	DEFINITION	SAMPLE OBJECTIVE*
The Intellectual	similar to Bloom's cognitive domain	Given a case history of UTI, the student states a rationale for treatment which is justified by relating it to underlying pathophysiological principles.
The Emotional	feelings, emotions, and emotional development	In an interview, the student identifies the emotional content conveyed by the patient's facial expressions.
The Social	development of social organization; moral development	In an interview with a patient who emits cues suggesting needs beyond those normally within the clinical relationship, the student identifies those needs.
The Physical	psychomotor skills; physical self-concept	Given a case history of a patient who has just undergone a radical mastectomy, the student describes a plan for assisting the patient in modifying appropriately her physical self-concept.
The Aesthetic	formal, technical, sensuous and expressive response to an object of contemplation	In a physical examination of a disfigured patient, the student evaluates the appropriateness of his/her response to stated professional values.
The Spiritual	relating to the search for ultimate meaning; awe, wonder	In an interview with a patient who has a chronic condition, the student questions patient to determine the effect of the condition on his/her self-concept.

which faculty from a variety of disciplines can relate the lessons of their specialties to the clinical experience, as in the interpersonal skills example above. In this way, a single, unified framework can be created for curriculum planning across disciplines.

Fourth, it provides a framework for evaluating humane curricula and providing feedback to students about their achievement. Existing curricula can be evaluated for the lessons taught in each dimension, and new curricula can improve the precision of their program and student evaluation procedures by basing them on objectives formulated according to the six-dimensional model.

Fifth, it can provide a structure which recognizes the contributions of all health care professionals. For example, recent

reforms of some nursing curricula place considerable emphasis on goals which might be best interpreted within a multidimensional model such as this one.

Conclusion

The model described here implies very little about the details of topics to be included in a humane curriculum of medicine. Such decisions are at base value judgments, and consequently they lie beyond the scope of this model. Instead, the model is useful for operationalizing such value judgments by providing a framework for specification of goals, objectives, and evaluation procedures. Thus, the model could be applied productively to the development and/or evaluation of many different

curricula, each with different aims. Its utility is as an analytic tool, not a prescriptive one.

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References

AAMC Project on General Professional Education of the Physician and College Preparation for Medicine. (1983). *Emerging perspectives on the*

- general professional education of the physician: Problem, Priorities and Prospects.* Washington, DC: Association of American Medical Colleges.
- Bloom, B. S. (Ed.). (1956). *Taxonomy of educational objectives handbook I: Cognitive domain.* New York: David McKay.
- Broudy, H. S., Smith, B. O., & Burnett, J. R. (1964). *Democracy and excellence in American secondary education.* Chicago: Rand McNally.
- Foshay, A. W. (1975). Toward a humane curriculum. In R. Leight (Ed.), *Philosophers speak of aesthetic experience in education.* Danville, IL: Interstate Printers and Publishers.
- Foshay, W. R. (1978, Spring). An alternative for task analysis in the affective domain. *Journal of Instructional Development*, 1 (2), 22-24.