

Designing A Family Medicine Clerkship Based on Faculty And Student Opinion

Jack Parlow, Ph.D.

Earl V. Dunn, M.D.

Toronto, Canada

There is increasing agreement in medical education that curriculum design should be based upon defined educational objectives. The goals and design of the family and community medicine clerkship at the University of Toronto have been developed through a process involving broad-based faculty and student input. General goals concerned with knowledge, skills and atti-

tudes relevant to family and community medicine were rated by both groups. Clusters rated high by both faculty and students were incorporated into the family medicine clerkship. This paper describes the planning procedures as well as the resultant clerkship as a possible prototype for development of other educational programs in family medicine.

There is growing agreement that curriculum design should be based on predefined educational objectives. In a paper on this subject for the World Health Organization, Miller outlined four different organizing principles which have been used as the basis for drawing up a list of objectives.¹ This paper will describe one system for producing a curriculum based on educational objectives, a system which seems to have general applicability.

Introduction

In conjunction with the recent establishment of a Department of Family and Community Medicine at the University of Toronto Medical School, Family Medicine was assigned a share of the eight-week Ambulatory Care period in the clinical clerkship. The Department therefore had the responsibility of developing a curriculum for a program which was to occupy approximately 22 half-days spread over the eight-week period.

A curriculum committee of nine was established: one representative of the Department of Family and Community

Medicine in each of the seven teaching hospitals, a senior member of the Departmental executive as chairman, and a member of the Division of Studies in Medical Education as educational consultant. The committee's starting point was a set of five key aims of the Department, expressed in terms of competencies the student was to achieve, rather than content of instruction. These five broad aims, shown in Table I, became the basis of all subsequent curriculum development, a strategy adopted in preference to modification of existing Family Medicine objectives or programs.^{2, 3, 4, 5, 6}

Methods

Three subcommittees were assigned to develop general goals for each of the five key aims concerned with knowledge, skills, and attitudes respectively. This process generated 54 general goals which were grouped into 15 clusters. To determine which of these goals should be given priority, a survey was done of the two groups chiefly concerned: faculty instructors in the Family Medicine clerkship, and medical students about to enter the clerkship year. Faculty members were asked to rate each of the 54 goals on Priority ("how high a priority you feel the topic should be given . . . in the Family Medicine clerkship"), using a five-point scale. Students were asked to do two ratings, the first being Competence in that area ("how competent you now are with respect to the topic"). The student was informed

From the Division of Studies in Medical Education and the Department of Family and Community Medicine, University of Toronto, Toronto, Canada. Requests for reprints should be addressed to Dr. Jack Parlow, Division of Studies in Medical Education, University of Toronto, Toronto, Canada, Postal Code M5S 1A8.

that, if he chose to identify himself, his protocol would be forwarded to his eventual preceptor in the clerkship, who would then take these ratings into account in arranging the student's program.

The results of this survey were used to eliminate the low-rated goal clusters. The remaining clusters were regrouped into eight themes, one for each week of the clerkship, and used in the next phase of the project to generate specific behavioral objectives. The final task, not yet completed, is conversion of these behavioral objectives into curriculum content. Figure 1 summarizes the steps reported above. This procedure is now being employed to develop objectives for a residency program.

Results

The mailed survey elicited responses from 56.5 percent of the 92 faculty members and 40.2 percent of the 209 students; 70 percent of the responding students opted to identify themselves. Statistical procedures are described below, with respect to three issues:

1. How did faculty and students compare in their ratings of Priority of the general goals?
 - a. The mean Priority ratings for all 54 goals were 3.89 for students and 3.64 for faculty, on the 1-5 scale. Univariate t-tests were done on each of the 54 goals, comparing faculty with student ratings. The students' ratings were significantly higher than faculty's on 19 of the 54 goals, whereas faculty ratings

exceeded students' on only 2 of the goals. When t-tests were done on the 15 goal clusters, student means were significantly higher than faculty's on 7, while the faculty mean exceeded students' on 1 cluster.

- b. Since in general students were more generous than faculty on Priority ratings, it was decided to rank order all goals and clusters, and compare the rank order correlations (see Table II for goal cluster ranks). For the 54 goals, the student-faculty correlation (Spearman's Rho) was .738; for the 15 goal clusters the correlation was .634. This indicated that students and faculty rank ordered the goals similarly on Priority, even though as reported above their absolute ratings differed widely.
2. Was there a relation between students' Competence and Priority ratings?

Correlations were done between the Competence and Priority ratings, for each of the 54 goals. Only 3 of the 54 correlations were significant at the .05 level, the mean correlation being .095. In absolute size, on the 1-5 scale students' Priority scales (mean 3.86) were significantly greater than their Competence scores (mean 2.39), $p < .001$.

3. How did students perceive their Competence and Priorities on those goal clusters which concerned psychosocial activities, as compared to the goal clusters which concerned medical activities?

In Table III the 15 goal clusters are divided into two

Steps in Designing Clerkship Program

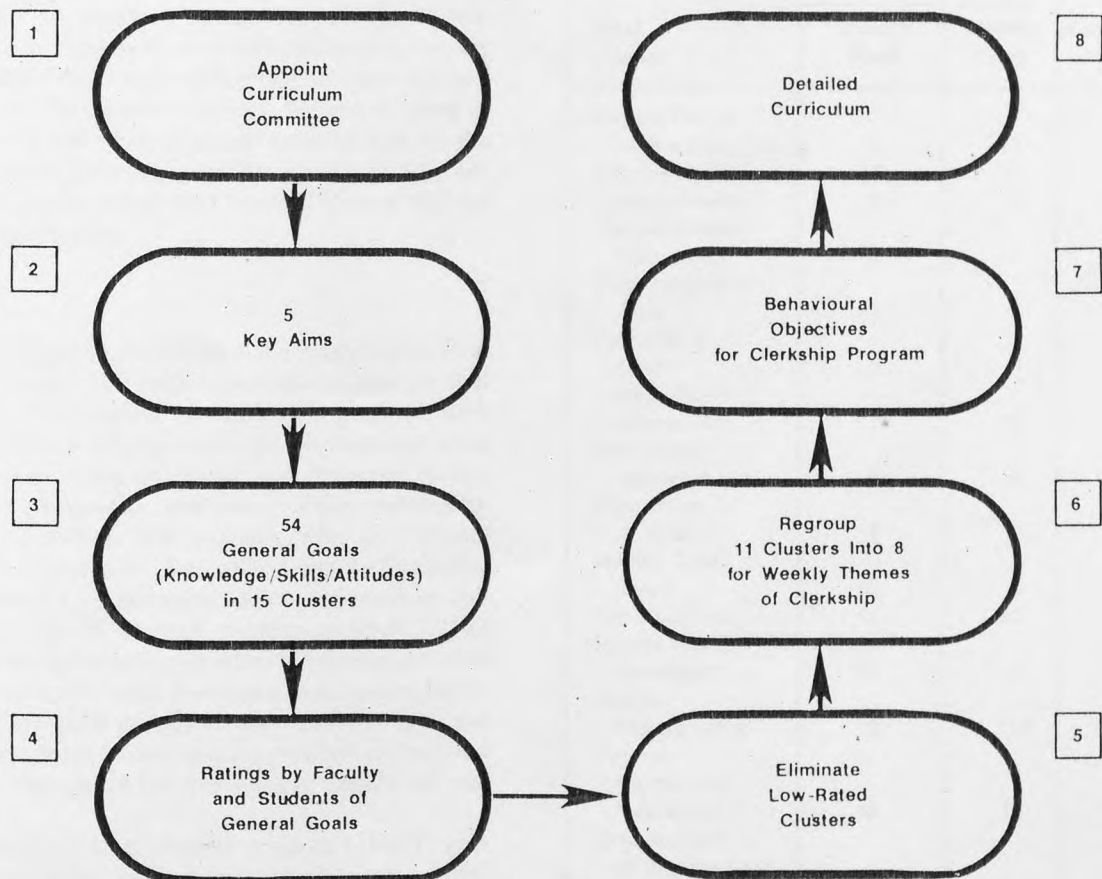


Figure 1

TABLE I

Key Aims of the Clerkship in Family and Community Medicine

1. The student should acquire knowledge of the patient, the family and the community and their interrelationships in health and disease.
2. The student should acquire skill in the continuing comprehensive care of the patient, especially in the ambulatory setting. The student should acquire knowledge in appropriate depth of the various fields of medicine encompassed by Family and Community Medicine.
3. The student should become knowledgeable in the methods of prevention of illness, health maintenance and rehabilitation with special emphasis on patient and community education.
4. The student should become familiar with the health care team, the functions of the individual members of the team and the appropriate method of consultation and cooperation within the team.
5. The student should become knowledgeable in the function and uses of the community resources available for patient care including the Family Practice Office and the Community Health Centre. He shall learn how to incorporate their unique contributions into the total management of the patient.

groups, one related to *psychosocial* activities such as Patient-Doctor Interaction and Patient-Family Interaction, the other to substantially *medical* activities such as Patient-Disease Interaction and Primary Care. While there is no difference between the two groups in Competence ratings, the mean rating of Priority for the medical group exceeds that for the psychosocial group ($p < .05$). Faculty Priority ratings for psychosocial and medical groups did not differ significantly.

Discussion

Although in general students rated the goals higher than did faculty, the large rank order correlations indicate that students and faculty assigned Priority to the goals in much the same order. Those discrepancies which occurred were on goals that concerned essentially psychosocial factors such as attitudes, personality, and responsibility, rather than strictly medical activities. For example, the goal cluster "Patient-Doctor Interaction" was ranked first in Priority by faculty, but eleventh by students. This is reflected by the comparisons in Table III. Overall, students assigned higher ratings to the goal clusters concerned with medical activities than to those concerned with psychosocial activities. Faculty, however, rated both groups about equally. Third-year students' interests were biased toward medical as opposed to psychosocial aspects of the curriculum; faculty did not show this bias.

Comparing student/faculty Priority rankings of the 15 goal clusters, although there were sharp student-faculty differences on which clusters should be ranked high, there was general agreement on which clusters should be ranked low

(see Table II). It was decided to retain those goal clusters ranked eighth or higher by either faculty or students, and to eliminate the remaining four clusters. Regrouping the surviving 11 clusters into eight groups produced the eight weekly clerkship themes shown in Table IV. These eight groups of goals were used in the next phase of the project to generate terminal behavioral objectives for the new clerkship program.⁷ A student handbook was produced, organized around the eight weekly topics.⁸ The handbook's eight sections each comprised these components:

1. An introduction to that week's topic.
2. The general program objectives for that week.
3. An annotated bibliography of suggested readings on that week's topic.
4. Two questions representing major issues related to the topic, for the student's consideration.
5. A patient register where the student could record cases related to the topic as an indicator of his clinical exposure to the topic.

Overall, students' generally low ratings of their Competence suggest a considerable insecurity immediately prior to entry into the clerkship year. However, their Competence ratings were surprisingly high on some goals which seem to represent the more difficult aspects of patient care, e.g., "Recognition of the psychological components of the pa-

TABLE II

Rankings of Goal Clusters by Faculty and Students

Goal Cluster	Faculty	Students	
	Priority Rank	Priority Rank	Competence Rank
Patient-Doctor Interaction	1	11	1
Primary Care Consultations	2	1	13
Patient-Disease Interaction	3	6	7
Comprehensive Care	4	7	2
Continuing Care	5	3	8
Patient-Family Interaction	6	4	10
Community Agencies	7	12	4
Prevention of Illness	8	5	9
Health Care Team	9	2	12
Rehabilitation	10	8	11
Health Care Research*	11	10	15
Health Maintenance*	12	9	3
Patient-Community Interaction*	13	13	5
Organization of Health Care Delivery	14	14	6
* Eliminated	15	15	14

TABLE III

**Mean Ratings of Psychosocial Versus Medical Goal Clusters,
by Students and Faculty**

	Psychosocial Goal Clusters			Medical Goal Clusters			
	Faculty	Students			Faculty	Students	
	Priority	Priority	Competence		Priority	Priority	Competence
Patient-Doctor Interaction	4.10	3.77	2.96	Patient-Disease Interaction	3.94	3.93	2.86
Patient-Family Interaction	3.79	3.76	2.59	Primary Care	4.08	4.35	2.09
Patient-Community Interaction	3.07	3.14	2.41	Continuing Care	3.82	4.00	2.27
Health Care Team	3.59	3.92	2.27	Comprehensive Care	3.94	4.13	2.35
Community Agencies	3.73	4.08	2.33	Prevention of Illness	3.69	4.14	2.26
Organization and Economics of Health Care Delivery	2.78	3.10	1.98	Health Maintenance	3.36	3.75	2.42
MEAN	3.51	3.63	2.42	Rehabilitation	3.51	3.82	1.92
MAX. RATING = 5				Consultation	4.05	4.02	2.36
				Health Care Research	3.39	3.92	2.79
				MEAN	3.75	4.01	2.37

tient's illness" was ranked seventh of 54 in Competence.

Students' ratings of Priority and Competence were clearly unrelated, as seen from the low correlation between these ratings (.095). That is, students did not show a tendency to assign high Priority to those goals on which they assessed their Competence low, or vice versa, indicating that these ratings were performed independently of each other.

Conclusions

The approach used to produce a new clerkship in Family and Community Medicine appeared practicable, and permitted consideration of both faculty and student opinion. It also permitted a student's preceptor to take the student's ratings into account in arranging that student's program. The system comprised five major steps:

1. Agree on a small set of key aims.
2. Generate from these a larger set of general goals.
3. Obtain ratings of these goals by faculty and students.
4. Retain high-rated goal clusters, and regroup into eight themes (one theme for each week of the clerkship).
5. Produce behavioral objectives based on these themes.

Students tended to favor goals concerned with clearly medical activities over psychosocial activities. The procedure used to develop curriculum, together with the student/faculty opinion survey, appear applicable to any department wishing to design a program with both faculty and student input.

References

1. Miller G. Educational Objectives. Geneva, World Health Organization, 1971.
2. Witten CL, Johnson AN, Michaelson J, Lotterhos W. The core content of family practice. *GP* 34:225, 1966.
3. McAuley RG. Educational Objectives for Certification in Family Medicine, Part One. Toronto, College of Family Physicians of Canada, 1971.
4. Hansen MF, Reeb KG. The outline of a curriculum. *J Med Ed* 45:1007, 1970.
5. Vandervoort HE, Ransom DC. A basic course in family medicine. *J Med Ed* 47:908, 1972.
6. The Future General Practitioner: Learning and Teaching. London, Royal College of General Practice, 1972.
7. Family and Community Medicine Goals Expressed as Terminal Behavior. University of Toronto, Department of Family and Community Medicine, 1972.
8. Clerkship Student Handbook. University of Toronto, Department of Family and Community Medicine, 1972.

TABLE IV

Eight Weekly Themes Developed from Survey

WEEK 1	Doctor-Patient Relationships
WEEK 2	Patient-Family-Community Interaction
WEEK 3	Community Resources
WEEK 4	Primary Care
WEEK 5	Continuing Care
WEEK 6	Comprehensive Care
WEEK 7	Prevention of Illness
WEEK 8	Psychosocial Aspects of Illness