Teaching History-Taking: Where Are We?

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Knowledge in history-taking has increased rapidly over the last twenty years. Currently the principles to be taught include “conduct,” “content,” and “diagnostic reasoning.” However, inattentiveness of medical schools, reluctance of busy faculty to be involved, and increasing enrollments have resulted in difficulties in teaching these skills. Studies have shown a beneficial short-term effect of teaching these materials on interview performance but it is unknown whether this effect is long-lasting. The methods for instruction include the bedside and videotape models utilizing the concept of the fifteen-minute interview technique, programmed instruction, patient instructors, and direct student feedback. Future research should focus on identifying strategies in diagnostic reasoning, developing graduated competency criteria for trainees at different levels of their education, refining methods to evaluate large numbers of students, measuring outcomes of effective training such as compliance, and comparing costs and effectiveness of various methods. In addition, there remains the need to establish an association of course directors.

INTRODUCTION

The teaching of history-taking in American medicine can be traced to the era of William Stokes, the father of Anglo-Irish bedside teaching, one profoundly influenced by Hippocrates.

Let us lastly revert to the opinion of the Hippocratis... they believe that great advantage is to be derived from the careful study of symptoms, even in cases whose pathological nature is not revealed by the knife [1].

Osler, Cushing, Stead, Lewis, and Engel, among others, have contributed greatly to this tradition. Most recently, the American Board of Internal Medicine has endorsed the importance of acquiring interviewing skills as they pertain to the desirable attributes of the certified general internist [2-4].

Over the past two decades significant advances have occurred in the art and science of teaching history-taking. Prior to that time instruction was focused on data gathered, thus “content” oriented (Fig. 1) [5]. With the introduction of videotechnology, popularization of the bedside teaching model, the development of programmed

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FIG. 1. Concepts in History-Taking. Conduct: Those procedural aspects that pertain to the physician's ability to communicate and interact effectively with a patient. Format: Introduction—includes greetings, exchange of names, identification of interviewer's role in health care system, and communication regarding seating arrangements and patient comfort; explaining purpose—interviewer reviews expectations, time commitment, and allows patient to comment about appropriateness; obtaining data—actual patient–doctor interaction concerning data gathering; termination—interviewer summarizes content, asking the patient to correct any errors and to add other data that patient feels important. Techniques: Verbal—appropriate questions and responses utilizing facilitation, attending to leads, and avoiding jargon, leading questions, and multiple questions; non-verbal—attending to and responding with facial expressions, posture, and gestures; control—appropriate questions and responses utilizing confrontation such as encouraging relevance, encouraging precision and clarification . . . also refers to non-verbal interaction such as touching or gesturing; listening—allows time for reflection by the patient and physician, promotes acceptance of the physician on the part of the patient, and facilitates flow of information. Content: Those aspects of information gathering that provide for the translation of symptoms into relevant medical data. It is the basis for symptom characterization. Meaning of Symptoms: Information listed in textbooks and resource materials. Symptom Characterization: Iatrotropic stimulus—the specific reason that caused the patient to seek medical attention at that time; chronology—onset, progression, and current status of disease process; influential factors—precipitating events, alleviating elements, exacerbating stimuli, and associated symptoms. Organization: The framework for the case history presentation and written workup which includes introduction, informant, chief complaint, present illness, past history, social history, and review of systems. Diagnostic Reasoning: Involves the analysis of symptoms including evaluation of the data and formulation of hypotheses. Organ Systems Potentially Diseased: The localization to one or more organs as suggested by a particular symptom or symptom complex . . . requires knowledge and use of the pertinent review of systems. Pathophysiology: Involves basic fund of accumulated knowledge as it applies to mechanisms of disease as well as causes and consequences of disease. Personal Experience: The body of information which involves past observations and the testing of hypotheses that may not yet be substantiated scientifically. Reprinted with the permission of The Annals of Internal Medicine [5].
instruction, and investigation of clinical problem-solving, emphasis has been directed to the "conduct" and "diagnostic reasoning" aspects of the interview.

There are sufficient data to indicate that both trainees [6-11] and practitioners [11-13] are deficient in history-taking skills. Multiple factors are responsible for these deficiencies in performance. First, patient evaluation courses are no longer considered high priority by curriculum committees and the time allocated to teaching skills is insufficient [14]. Second, a recent survey by Reuler et al. of patient evaluation course directors revealed that most are junior faculty, not salaried for that position, who are eager and enthusiastic but lack political clout. Most felt they were chosen by default and that they received very little protected time, academic recognition, and institutional support [15]. Third, it is unusual for a medical school to require evaluation of interviewing skills for promotion at various levels of training or for certification prior to graduation. Fourth, the structure of the curriculum favors the teaching of signs over symptoms [16]. Fifth, faculty, in general, are not supportive of this aspect of the teaching process. Reichsman et al. while critiquing clinical teaching sessions at several medical schools, learned that the faculty did not observe the students' clinical skills 90 percent of the time, and they did not verify the students' data in 50 percent of the situations [17]. Furthermore, another of Reuler's findings was that at only 48 percent (59 of 122) of United States and Canadian medical schools was there an expectation of faculty to participate in the course [15]. Certainly institutional demands such as housestaff and fellow teaching, research, administrative duties, and private practice play a significant role. Finally, additional problems include increasing enrollments without commensurate increase in numbers of clinical teaching faculty, decreasing numbers of available patients, declining federal support [18], and the inadequacy of most current textbook discussions regarding the concepts of history-taking.

Our purpose is to review the teaching of history-taking. We will address several interrelated questions: (1) What needs to be taught? (2) How should it be taught? (3) Can it make a difference? and (4) What are the needs for the future? In this manner we will emphasize the innovations in teaching the concepts and techniques of interviewing, the problems impairing their effectiveness, and offer recommendations for further improvements and research.

WHAT NEEDS TO BE TAUGHT? THE MATERIALS

Content

The basic principles of interviewing are summarized in Fig. 1 [5]. Symptom characterization ("content") requires that the physician be unbiased, translating patient complaints into medically significant terms [19]. He must, in addition, have a command of language [20] which is appropriate for and acceptable to the patient. Feinstein [21] cautions that physician and patient errors are frequent in the perception and description of complaints. The organization of the "content" is generally overemphasized. Its primary relevance is in the logical structuring of the written history [22] and oral case presentation.

Conduct

Since 1960 there has been heightened interest in the study of the patient-physician interaction ("conduct"). As a result, much has been learned about the techniques and format of interviewing [23-24] (Fig. 1, Appendix A) and the application of these
concepts to teaching [25–30] and evaluating students and houseofficers. The monograph edited by Bennett [31] is one of several excellent texts [32–33]. It is a compendium that emphasizes the many facets of communication as applicable to patient feelings, the patient-doctor relationship, the techniques of interviewing including examples of questions, and the training of medical students.

However, certain aspects of the “conduct,” specifically the development of a symptom list (Table 1), the difficulty in controlling the interview (Table 2), and the value of the doctor’s touch, are not well appreciated. Developing the patient’s symptom list is a basic format skill that can easily be mastered by the beginner even with a minimal fund of knowledge. The proper use of control is a challenge even to the best of clinicians because the interview setting necessitates a significant deviation in behavior from that to which we are accustomed in polite society. In the latter situation we do not cut our friends short, request specific details, or tell them we are confused. In the former we must, when indicated. Touching or laying-on of the hands traditionally implies healing. When used effectively it is helpful in facilitating the flow of data and even in controlling the interview [34].

**TABLE 1**

Developing a Symptom List

| A. Appropriate openers |
|------------------------|
| B. Encouragement by facilitation |
| 1. To continue... |
| 2. To summarize... |
| 3. To explore... |

**Diagnostic Reasoning**

The term “diagnostic reasoning” in history-taking is synonymous with diagnostic process and clinical problem-solving. Feinstein [35–36] has described it as the logical sequence of intermediate stations which link the manifestation of the disease to a pathophysiologic mechanism (Fig. 2). Dudley [37–38] refers to the “minimal diagnos-
MANIFESTATION
(PERIPHERAL EDEMA)

DOMA IN (CARDIOVASCULAR SYSTEM) → FOCUS
(HEART)

DISORDER
(HEART FAILURE) → DERANGEMENT
(HEART DISEASE) → PATHOANATOMIC
(MITRAL STENOSIS) → PATHOGENETIC
ENTITY
(ANTECEDENT ) → ENTITY
(STREPTOCOCCAL) → ENTITY
(INFECTION )

FIG. 2. Process of Diagnostic Reasoning. Manifestation: A symptom with medical importance. Domain: The body part implicated by the symptom . . . it may be an organ (discrete structure—heart), region (anatomical portion—chest), channel (connected organs—arterial tree), or system (structures functioning together—cardiopulmonary system). Focus: A subset of a domain. Disorder: An abnormality of a specific domain. Derangement: Pathologic condition responsible for a disorder. Entity: Causing or predisposing to a derangement or disorder. Consolidated from Fig. 3 (p. 224) and 7 (p. 226) from reference [35] and reprinted with the permission of The Yale Journal of Biology and Medicine.

tic pathway” in which the clinician relies on stored patterns and inference lattices of disease(s) from prior experience to generate and test hypotheses. Elstein et al. [39–40] and Kassirer and Gorry [41] observed the diagnostic process skills of physicians during history-taking from simulated patients. The physicians “thought aloud” concerning their hypotheses as the data were collected. From their observations, Kassirer and Gorry have defined three strategies: (1) the focused approach—uncovering the core; (2) the exploration method—systemic probing of a variety of aspects in the case; and (3) the chronological style—stepwise progression from beginning to end. Other features of hypothesis generation have also become apparent. First, physicians typically generate few hypotheses. This fact may be surprising but is well supported in psychological research. Miller [42] attributes this phenomenon to the limit of one's capacity to process “bits and chunks” of information at any given time. Second, hypotheses are generated early in the interview, the remainder of the time being devoted to testing them. Third, physicians are biased in testing hypotheses because they focus on common disease, life-threatening disease, treatable disease, and treatable consequences of disease. It seems logical that identification of cognitive strategies will be the framework for further investigation, and teaching models, possibly utilizing computers, will be devised and evaluated [43].

Transcending the three individual concepts of instruction in history-taking is integration which is the intellectual process that coordinates interaction with the patient (“conduct”), collection of meaningful data (“content”), and clinical problem-solving (“diagnostic reasoning”) simultaneously. Integration of concepts, however, is the most difficult for the interviewer to master and the literature regarding this process is sparse [5,21,44].

HOW SHOULD IT BE TAUGHT? THE METHODS

The methods for teaching history-taking are outlined in Fig. 3 and Table 3, each permitting a different emphasis depending on the level of competency to be addressed (Appendix B). The course may be taught in the basic science years [67–70], during a separate block of time between the pre-clinical and clerkship years [61,71–73], in the clerkship [47,55–56], or during postgraduate training [60,65]. Traditionally the
course content includes a series of didactic lectures and large group demonstrations based on the concepts. Subsequently, practice sessions are conducted with variable preceptor input. In most cases, hospitalized patients are utilized for teaching purposes and at least three types of arrangements are possible depending on the level of trainee experience. A prearranged visit indicates that the preceptor has negotiated with the patient participant in advance of the teaching exercise and may even preselect a patient with a particular disease entity. The random visit implies that neither the preceptor nor trainees have any prior knowledge of the patient and necessitates that permission for participation be obtained by a member of the group. Observing and performing this task, in itself, is a learning experience. A patient care visit is part of the regular rounding procedure.

Engel [51] and Wiener [52–53] have challenged the efficacy of the case presentation teaching method which focuses on “content” and “diagnostic reasoning” but not on the “conductor” of the interview. They have popularized the bedside model (Table 3), which is more appropriate because it includes role model review, direct supervision, evaluation of progress, active participation by all members, and the adherence to a timeframe. The interview lasts from fifteen to thirty minutes and the commitment per session is from thirty minutes to one hour (Table 3). This time limitation [30,48,51,54] is practical even as a once weekly session during ward or clinic rounds with housestaff. It requires a minimum commitment from the patient and a more realistic one from the faculty. Furthermore, the trainees have more opportunities to interview.

Frequently, there is a mistaken impression that a complete history must be obtained in the prescribed time. However, it is not unusual to end the exercise at the fifteen-minute mark when the interviewer is still gathering a symptom list, characterizing the first symptom, or analyzing just one aspect of the patient’s complaint. Again, the goal of a particular fifteen-minute session is determined by the level of competency to be emphasized. The process, for instance, may begin with a brief summary of the symptom list and a description of a complaint, presented by a trainee or preceptor who is familiar with the patient. Thus most of the time available would be devoted to practicing the skill of symptom analysis.
TEACHING HISTORY-TAKING: WHERE ARE WE?

PREPARATION

PROGRAMMED INSTRUCTION

Didactics

PRACTICE

LOCATION

CLINIC

WARD

(27, 45-46)

(27, 46)

(25, 30, 54-55)

(47-50)

(28-29, 51-53)

(61-65)

CLINIC

STUDIO

WARD

PATIENT SIMULATORS

PATIENT INSTRUCTORS

PATIENTS

(25, 28-29, 48-49, 51-53, 60)

(25, 30, 47-49, 54-55, 56-62, 66-67)

(28-29, 68)

VIDEOTAPE

Audiotape

BEDSIDE

FIG. 3. Methods of Teaching History-Taking. Training manual: Written discussion of learning material and techniques including examples of questions and responses. Didactics: Lectures on material and techniques primarily for large groups. Programmed instruction: Stepwise learning approach with well-defined objectives utilizing a training manual and didactics but, in addition, small group discussions, live demonstrations, and videotape review. Patient simulator: A medical student, actress, actor, or relative who assumes the role of the informant and can provide feedback to the trainee. Patient instructor: Either a patient with chronic disease or a patient simulator who assumes the role of the patient and who is trained to provide feedback.

Although the bedside approach is an excellent teaching model, Kahn et al. reported that only 58 percent of the preclinical and 65 percent of the clinical medical school programs utilize live observation as a teaching method [74]. No doubt such factors as a lengthy time commitment from the faculty and coordination of patient, trainee, and preceptor schedules account in part for these findings. However, several innovations have been developed that offer exciting alternatives and potentially obviate the need of direct trainee observation by large numbers of faculty.

The major advance in the preparation of trainees has been in the development of programmed instruction to teach the “conduct” of the interview. Each segment of a program is designed to demonstrate a particular technique or set of techniques.
Froelich [45] utilized written programs and Enelow et al. [27] combined the written scripts with review of videotapes. Adler et al. [46] compared the programmed instruction method with that employing review of videotapes in class discussions. The former was more effective in promoting behavioral and attitudinal changes.

The advent of videotaping has had a powerful impact in the practical application of teaching interviewing. This method [75], although distracting, requiring personnel, expensive equipment and maintenance, and potentially necessitating a move in location, has a number of advantages [76]. It permits recall of personal thoughts in more detail [77–78], self-observation of performance [79] and repeated playback, easier identification of deficiencies, active probing of the patient-physician interaction, creative thinking [80], and fosters a productive exchange between trainee and preceptor [77,80]. Furthermore, coordination of participant schedules is more easily attained since faculty need not be present for the actual interview period and the patient can report at a time that does not conflict with a procedure or visit.

During the last decade the use of informants other than actual patients for practicing the interview has become popular and proven to be very successful. The impetus for such a modification stemmed from the declining number of available hospitalized patients, the need to conserve faculty time or obviate the involvement of more than a few core faculty, and, most important, the desire to provide feedback to the trainees. Helfer et al. [61] compared the quality of feedback given pediatric clerks by thirteen patient instructors and thirteen physicians. The patient instructors initiated more comments during feedback, devoted more time to the trainee experience, and deviated from the teaching protocol to a lesser extent than their physician counterparts. Johnson et al. [59] have developed a training program for patient instructors which has been shown to be beneficial in cutting costs, conserving faculty time, and providing information to patient instructors regarding communication and evaluation. A study to address the effectiveness of improving patient instructor skills by such a program is under way.

From the above and the conclusions of Carroll and Monroe [81–82] who have recently reviewed the empirical research in this area, several attributes of the successful and effective interviewing programs can be cited. These include identification of specific competency levels to be learned and evaluated, preparation with programmed instruction, practical experience by direct observation and feedback, and the use of adjunct preceptors.

**CAN IT MAKE A DIFFERENCE?**

From the data in Table 4, two points can be made. The first is that training has a beneficial effect on performance [29–30,62–63,83–84]. The second is that partial training may be as effective as complete training [63,83]. Rutter and Maguire [83] demonstrated little difference in "content" performance when using the training manual alone. Stillman et al. [63] when implementing the patient instructor method found that the scores of the two groups were not statistically different. These findings are somewhat unexpected but may have particular significance for course coordinators with small budgets and few faculty instructors.

Engel [85] surveyed graduates of their general clerkship program who had been exposed to the bedside model. Eighty-eight percent (113 of 129 respondents) felt better prepared than their intern colleagues in observation, interaction with patients and family, handling the difficult patient, and data collection.

An important issue not yet resolved is whether there are long-term positive effects of a teaching program [29–30]. The data are conflicting. Ware et al. [86] reported a
negative correlation between understanding of interviewing principles in the second year patient evaluation course and performance of skills in the third year psychiatric clerkship. However, Stillman et al. [63] performed a one-year follow-up study of their students who were then clinical clerks. They found no significant difference in their performance from the course to the clerkship. They concluded that the beneficial effect of training was retained for at least one year.

### TABLE 4

| Author Year | Training Categories | Didactics | Plus | Comparison | Skill Evaluated | Performance Categories Improved | Improvement Significance |
|-------------|---------------------|-----------|------|------------|-----------------|--------------------------------|------------------------|
| Rasche [29]\textsuperscript{a} 1974 | ? | Textbook, bedside small groups | Pre vs. post training | Conduct | 2 of 5 |
| Werner [30]\textsuperscript{b} 1974 | Special | Videotape, small groups | First vs. fourth interview | Conduct | 2 of 4 |
| Rutter [83]\textsuperscript{c} 1976 | Traditional | Training manual, videotape | Untrained vs. trained | Content | 5 of 9 |
| Rutter [83]\textsuperscript{d} 1976 | Traditional | Training manual | Part-trained vs. trained | Content | 1 of 9 |
| Stillman [62] 1976 | Traditional | Patient/instructor feedback | Untrained vs. trained | Conduct | \( p < 0.01 \) |
| Hutter [84] 1977 | Special | Individualized teaching, role playing | Untrained vs. trained | Conduct Content | \( p < 0.01 \) \( p < 0.01 \) |
| Stillman [63] 1977 | Traditional | Patient/instructor feedback | Untrained vs. trained | Conduct Content | \( p < 0.001 \) \( p < 0.01 \) |
| Stillman [63]\textsuperscript{d} 1977 | Traditional | Patient/instructor feedback | Part-trained vs. trained | Conduct Content | Not significant |

\textsuperscript{a}Categories: Understanding, evaluative, reassuring, hostile, probing; categories improved: understanding, evaluative

\textsuperscript{b}Categories: Exploratory, affective, listening, confronting; categories improved: exploratory, affective

\textsuperscript{c}Categories: Symptoms, course, effect on adjustment, other problems, treatment, previous episodes, family history, previous personality, current supports; categories improved: symptoms, course, effect on adjustment, treatment, previous episodes

\textsuperscript{d}Evaluates effects of "partial" training

WHAT ARE THE NEEDS OF THE FUTURE?

The next decade will be one of intensive and continued research both in teaching the materials of interviewing and in evaluating the methods. As for the former, the description, interpretation, and formulation of the strategies of "diagnostic reasoning" will assume the importance afforded the "conduct" of the interview in the 1960s. Another priority is the development of graduated competency criteria for the undergraduate medical student and junior house officer. For instance, interview control is more difficult to master than facilitation. Likewise, symptom characterization is a prerequisite for symptom analysis. Appendix B and evaluation scales published by Hinz [87], Jarret et al. [88], and Stillman [89] represent such examples. The American Board of Orthopedic Surgery [90], the American Board of Pediatrics [91], and the American Board of Internal Medicine [92] have provided criteria for
their respective fully trained candidates, but these are not applicable for those at lesser stages of clinical learning.

There are basically three additional major questions to be resolved regarding methods of instruction and evaluation. First, who should be the instructors? Ideally, there should be an interdisciplinary cadre of faculty who assume responsibility. This differs from the traditional philosophy that interviewing is considered solely an art, and of necessity the responsibility of the role-model physician. But as physician commitments increase in other areas and as newer methods continue to be described and refined, the involvement of physicians in large numbers may not be necessary. In fact, it should not be assumed that physicians per se are familiar with the teaching concepts and methods. For instance, Bazuin and Yonke learned, prior to developing their program to improve clinical skills at their institution, that the faculty had no formal teaching to rely upon, they lectured to students instead of creating an atmosphere of profitable discussion, and that the faculty's professional experiences in patient care, research, and administration differed widely [93]. The program has been successful to date but its evaluation is not completed. Ultimately, it appears that each institution must answer this question with consideration given to institutional expectations for faculty commitment to teaching clinical skills, to the capabilities of performing these functions, and to rewards for participating faculty who excel. This last issue has been studied recently by Gjerde and Colombo [94]. They found that faculty perceive institutional recognition for promotion to be highly dependent on research, publications, and fulfilling the department chairman's expectations. Teaching specifically received a low rating in their opinion. Thus, faculty incentive to participate and excel might very well change if academic recognition for teaching was given meaning. Finally, the recruitment of practicing clinical faculty, as preceptors, should be more thoroughly explored. This has the potential of expanding preceptor numbers, exposing students to role-models whose professional activity is one of continual interaction with patients, and increasing the patient population from which to teach.

Second, are there effective methods of evaluating large numbers of students? A written examination will not suffice entirely for testing data gathering and interpersonal skills. Harden et al. [95] have even questioned the validity of the traditional clinical examination of a patient as an evaluation method. A traditional clinical examination includes observation of the trainee's performance of the history and physical examination by one or possibly two preceptors. A potential disadvantage is variability in preceptors and patients. They correlated the performance scores of students who completed a written examination plus either a traditional clinical examination or a structured one. A structured clinical examination includes student rotation through a series of "stations" where he is asked to perform different tasks of history-taking, the physical examination, or laboratory assessment at each one. More opportunities for patient contact are possible. They demonstrated that the structured clinical examination, but not the traditional clinical examination, correlated to a high degree with the written examination. They concluded that the structured clinical examination was a more objective measure of a student's clinical skills than the other two. The remaining concerns are the time required for such an evaluation, the feasibility of modifying the approach to concentrate on the different levels of interviewing competencies, and whether it can be included as part of the National Board examination for licensure.

An additional mode for evaluation of many trainees is the computer. Although it is not possible to evaluate skill in technique of interviewing, it could be useful in assessing data gathering and symptom analysis capabilities.
Third, are there other measures of the long-term effects of interview training? Instead of re-evaluating trainees in a longitudinal fashion, one might look at cost effectiveness of patient care and readdress the issue of compliance. Both of these desirable outcomes are felt by many to be a reflection of clinical competence. The former may be of interest to private health insurance carriers who could be a source of funding for research projects.

Fourth, what will be the costs of these programs? Since medical school class sizes have increased almost as rapidly as advances in methodology, money expenditures are a major consideration. Conceivably the best teaching and evaluating methods may not be feasible financially. Certainly a comparison of costs and effectiveness of various programs would be of help. Cline and Garrard [68] offer a one-week course involving 21 preceptors and 210 students. This type of program taught over a shorter period could be compared to one that extends over longer periods in the curriculum. Newble et al. [96] have utilized a modification of Harden's method to evaluate the clinical skills of 18 students in a 90-minute period. This might be extended to the entire class with emphasis on tabulation of money and time expenditures. One could easily cost-account for equipment, computer use, and simulated patients. However, accounting for faculty time, especially for time spent in recruiting and preparing for the course, is formidable.

Beyond training techniques, other needs are evident. First, recruitment of competent and enthusiastic program directors is imperative since success of this clinical course, more so than any other, is directly dependent on these characteristics [97]. This person should be salaried full time for this position and have appropriate administrative, financial, and faculty support in implementing the course, and preferably a research interest in this area. Second, editors of patient evaluation, psychiatry, and internal medicine textbooks might more aggressively foster the dissemination of innovations and advances in teaching history-taking. Third, an association of program coordinators should be formed, the nidus of which could be the Technical Resource Panel on Introduction to Clinical Medicine, a body appointed by the Association of American Medical Colleges. This organization might facilitate evaluation procedures and cost accounting of existing programs, advise directors about content of courses, methods of teaching, guidelines for competence, and determine priorities for research. Another value of such an association is that its collective opinions might permit each course director to negotiate more favorably for support in his own institution.

APPENDIX A

VERBAL AND NON-VERBAL TECHNIQUES OF INTERVIEWING:
EXAMPLES

I. Verbal

   A. Openers
      1. Inappropriate
         a. . . . Are you sick?
         b. . . . Tell me, what's wrong with you?
         c. . . . What's the problem?
      2. Appropriate
         a. . . . What brings you here today?
         b. . . . What caused you to seek medical attention today?
c. . . . Well, Mr.——- , what is it that is bothering you?
d. . . . How are things going for you?
e. . . . How have you been feeling?
f. . . . Well, sir, how can I be of help to you today?
g. . . . Can you tell what has been bothering you?

B. Encouragement by
1. Facilitation
   a. . . . Go on.
   b. . . . Tell me more about it.
   c. . . . What happened then?
   d. . . . You said you felt a pain.
   e. . . . You're doing fine.
2. Relevance
   a. . . . That's interesting, but could we return to your problem with dizziness?
   b. . . . Maybe we can discuss that problem later, let's continue with your headache.
   c. . . . That is important, but could we continue with the discussion of your fever?
3. Asking for actual examples
   a. . . . What were you doing when you first had that funny feeling?
   b. . . . Tell me what you had to eat yesterday.
   c. . . . What could you do before, that you can't do now?
   d. . . . In what way does this leg numbness interfere with your work?
4. Precision
   a. . . . You say you take propranolol. What color is the pill?
   b. . . . When did you last feel perfectly well?
   c. . . . Can you think back for a moment? What time of day was it when these symptoms started?
   d. . . . What were you doing when you first felt the pain?

C. Avoiding
1. Jargon as interviewer
   a. . . . What about bronchospasm (wheezing)?
   b. . . . Have you had tinnitus (ringing or buzzing in the ears)?
   c. . . . Do you have dyspnea (shortness of breath)?
2. Jargon from patient
   a. . . . Seizure? Can you tell me about it?
   b. . . . Pneumonia? What symptoms did you have?
   c. . . . You mentioned nephritis. How were you feeling then?
3. Leading questions
   a. . . . You weren't wheezing, were you?
   b. . . . You don't smoke, do you?
   c. . . . Do you suppose you lost consciousness?
4. Multiple questions
   a. . . . Have you had fever, chills, sweats, or weight loss?
   b. . . . What about chest pain, shortness of breath or cough?
5. Confusion
   a. . . . Let's see now, which did you notice first, the nausea or the pain?
   b. . . . Can I get this point straight, you say it began . . .
   c. . . . You are doing fine, but I'm not certain about a few things.
d. . . . Could you clarify that? The diarrhea was not bloody.

e. . . . I'm confused a bit. The dizziness began before or after you started
the blood pressure medication?

f. . . . Do I have this right? You had pain before vomiting!

D. Attending to cues

1. . . . I'm scared to death!
2. . . . If I can't work, I am in real trouble!
3. . . . Oh, I could be pregnant?
4. . . . I can't seem to get anyone to understand.
5. . . . You are going to admit me to the hospital, aren't you?

II. Non-Verbal

A. Facilitation

1. Listening
2. Leaning toward
3. Head nodding
4. Facial gesturing
5. Touching

B. Attending to cues (patient)

1. Arms folded
2. Body position
3. Sweating
4. Tears
5. Eye contact

APPENDIX B

COMPETENCY IN HISTORY-TAKING

I. Level One: Conduct

1. Format—the first fifteen minutes
   a. Introduction
   b. Explaining purpose
   c. Obtaining data—develop symptom list
   d. Termination

2. Verbal techniques
   a. Openers
   b. Encouragement by facilitation
   c. Avoiding
      1) Jargon
      2) Leading questions
      3) Multiple questions

3. Non-verbal techniques: Facilitation
   a. Listening
   b. Head nodding

II. Level Two

A. Content

1. Meaning of symptoms
2. Symptom characterization
3. Organization: Written history and case presentation
a. Introduction
b. Informant
c. Chief complaint
d. Present illness—symptom characterization
e. Past history
f. Social history
g. Review of systems

B. Conduct
   1. Verbal techniques: Attending to cues
   2. Non-verbal techniques
      a. Facilitation and control
         1) Leaning toward
         2) Gesturing
      b. Attending to cues

III. Level Three
   A. Conduct: Verbal techniques and control
      1. Encouragement by
         a. Relevance
         b. Asking for actual examples
         c. Precision
      2. Avoiding confusion
   B. Diagnostic reasoning: Symptom analysis—organ systems potentially diseased

IV. Level Four
   A. Conduct: Non-verbal facilitation and control by touching
   B. Diagnostic reasoning: Symptom analysis—pathophysiology
      1. Etiologies suspected
      2. Complications suspected

V. Level Five
   A. Content: Organization—written history and case presentation
      1. Introduction
      2. Informant
      3. Chief complaint
      4. Present illness
         a. Symptom characterization
         b. Symptom analysis
      5. Past history
      6. Social history
      7. Review of systems
   B. Integration of concepts
      1. Content
      2. Conduct
      3. Diagnostic reasoning

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