Anticipatory Care as Problem Solving in Family Medicine and Nursing

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Increasing emphasis on health promotion presumes that problems can be clearly anticipated and goals in functioning defined for the patient. However, existing methods may not be adequate to the task. The major elements of anticipatory care which remain to be developed are concerned with preparation for encountering and adapting to stressors, particularly those which derive from the "normal" and the "exceptional" events of life.

Anticipatory care is not well delineated either conceptually or technically, making rigorous study and practice difficult. The anticipatory care process must be more precisely specified if outcomes within the clinical encounter are to be evaluated.

This paper presents a conceptualization of anticipatory care as a form of problem solving. The model relates to preparation of the patient to deal with problems or accomplish goals at some time in the future, and lends itself to more rigorous study and precise practice. This model of clinical problem solving characterizes seven separable phases of the process, in which the behaviors of both clinician and patient are of interest, and extends an observational methodology previously developed for the study of clinical primary care processes. Within each phase, the actions of the clinician or client result in specific data, recognizable decisions, and feedback to the other participant. Profiles of problem-solving activities for patient encounters can be structured and the sequence of processes analyzed relative to outcomes of interest. Intercoder agreement of 86 percent has been achieved, and a validity study of the observational methodology is underway.

Physicians and nurses generally accept that it is "good" to do "anticipatory guidance." Exactly what is meant by anticipatory guidance, however, is not clear. Anticipation of potentially detrimental results is inherent in the concept of informed consent. Anticipation of favorable outcome supports the successful completion of any treatment plan. Increasing emphasis on health promotion presumes that we (clinician and patient) can clearly anticipate problems and define goals in functioning for the patient. We expect that if goals are established, the patient will be more able to meet them and enjoy better "health." While we hope that health can be promoted in this sense, there is much reason to be skeptical about whether our existing methods are adequate to the task.

Attention to "health" demands attention to the future. Health care makes sense only in terms of *becoming* or *remaining* healthy. The outcome of interest is always in the future. The need to anticipate and focus on the circumstances which may be a threat to health or which must be overcome if health is to be improved have led us to think increasingly of *anticipatory care* – a broadened and enriched "preventive medicine" in which the notion of "health" comprises a more diverse set of issues than the prevention of disease or illness as such. "Health" in this context means simply the capacity of the individual to adapt successfully and to maintain function despite whatever stressors he or she may encounter.

The major elements of anticipatory care which remain to be developed and refined have to do with issues that relate to aiding a specific individual (or family or community) to prepare for encountering and adapting to particular anticipatable "stressors." These stressors can be purely physical (such as a poisonous environment) or biological (such as a pathogenic organism or agent). We are particularly interested in stressors which derive from both the "normal" and the "exceptional" events of life – new relationships, new expectations, new responsibilities or roles, or the need to adapt to crises or loss. These personal and interpersonal stressors are the traditional focus of what has been called "anticipatory guidance" – guidance, direction, or advice to the patient by the clinician and "preparatory communication" prior to a diagnostic or treatment procedure. In this paper we will critique the available concepts of anticipatory care, suggest a broader notion, and propose a method of study.

The authors believe that this area of clinical work is the most important area in which the discipline of nursing complements the discipline of medicine, and offers the most productive opportunity for collaboration and partnership in the development of clinical family medicine.

Concepts of Anticipatory Care

Anticipatory care originated long ago when it was first observed that a person who had undergone a difficult experience could help an unseasoned individual prepare to deal more competently with a similar ordeal. In this informal, non-professional sense, anticipatory care has been offered by groups of volunteer workers established to support people through specific difficult times: breast-feeding (LaLeche League), becoming temperate in use of alcohol (Alcoholics Anonymous), and overcoming dependence on drugs.[1] When given in a more "professionally" organized manner (though not necessarily more systematic, deliberate, or effective) anticipatory care may become a modality of health care wherever health

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maintenance, or acute, chronic, or rehabilitative care is provided.

Traditional Anticipatory Guidance

"Anticipatory guidance" is a rubric that has been used for over 50 years to denote a version of anticipatory care that originated in maternal-child health clinics.[2] The clinical technique of anticipatory guidance was defined in a 1955 American Public Health Association monograph as "teaching the mother what to expect before she begins to worry or make mistakes."[3] Anticipatory guidance includes listening to the parent for cues of worries or fears concerning issues that are problematic for a parent of a child of a specific age, conveying a certain point of view about the issue or circumstance, and advising about what to do when the circumstance occurs. For example, the clinician may choose to give every inexperienced parent a specific point of view about the new baby's crying and ways of handling it before the crying gets on the parent's nerves and family living is disrupted.

This anticipatory guidance model, however, is inadequate in several ways. It does not include a concept of problems or issues that are unanticipatible by the clinician for a specific patient until some cue is given by the patient. Any patient can be expected to have some future circumstances that are idiosyncratic to him/her and cannot be anticipated on the basis of the patient's membership in a population group that is known to be susceptible to specific risks, threats, and challenges. An adequate concept of anticipatory care must provide means of eliciting, specifying, and preparing the patient for circumstances which the clinician cannot anticipate and which may not be fully specifiable in advance of the actual event.

The traditional model of anticipatory guidance has an episodic character about it. Each issue tends to be addressed as an isolated event and the patient is informed about what to expect and do for that occurrence alone. In fact, events and occurrences may need to be treated in terms of an underlying logic, derived from goals for patient care which must be achieved over a period of time.

In traditional anticipatory guidance, the patient is told what to expect and given advice or protocols, but is not equipped with the means to make independent decisions and create problem-solving strategies. The patient who has only been advised about what to expect and what to do is likely to be more dependent on the clinician than one who is oriented to the conceptual features of an event and methods by which to approach them. Knowledge about what to expect and what to do is not necessarily translated into effective action without attention to points of decision making and strategies of problem solving.

Preparatory Communication

"Preparatory communication" is the term used by Janis[4,5], and Johnson and Leventhal[6] to denote an aspect of anticipatory care that is given to patients to prepare them for surgical operations and for other diagnostic and treatment procedures. Janis' model of preparatory communication is directed towards development of expectations that are realistic vis-à-vis an expected "dangerous" event and that are reassuring to the individual in the sense that he/she will feel confident in his/her ability to cope and obtain aid at the time the stressful event occurs. Realistic expectations are developed by means of precisely describing the event of concern in personalized terms and correcting erroneous beliefs and anticipations. Reassuring expectations are fostered by means of optimistic statements which call attention to the positive side of the situation and hopeful recommendations which encourage the patient to prepare for the event.[7]

Johnson and Leventhal are concerned with helping patients to develop expectations about diagnostic and treatment procedures that are congruent with the experience of people who have already undergone the procedures. These experiences are assumed to be "valid" and predict the experiences of others undergoing these procedures. The focus of the preparatory communication is the potential discrepancy between expected (ie, invalid or inaccurate) and experienced physical sensations during a threatening procedure. The aim is to reduce distress by informing the patient about sensations that patients typically experience as well as by describing the steps of the procedure. Johnson, Kirchhoff, and Endres[8] describe the application of this approach to the preparation of school age children for cast removal.

The work of Janis, Johnson, and Leventhal clearly demonstrates the importance of those components of anticipatory care that deal with feelings and sensations. However, neither Janis' nor Johnson and Leventhal's model of anticipatory care has been applied in primary care settings to issues which are part of the fabric of everyday life and concern ongoing responsibilities.

There are other issues which help to characterize the deficiencies of our current conceptualization and practice of anticipatory care. One of these is the lack of an epidemiology of issues which need to be managed through anticipatory care for individuals from birth through old age. The content of anticipatory care has been formulated primarily on the basis of clinical impressions rather than through careful documentation of frequency and outcome. A conceptual basis is not available for selecting the issues which are important to discuss with a specific patient, and types of expected outcomes of anticipatory care have not been delineated. The outcomes of anticipatory care are likely to vary depending on the issues of concern and point of view taken towards them.

Existing methods of anticipatory guidance do not adequately address the necessity of determining whether a patient is interested and willing enough to participate in anticipatory care, nor has the problem of how to develop such willingness or readiness been examined closely. The clinician may know only the technique of arousing fear to stimulate willingness and interest. The work of Leventhal and Rosen[9] indicates that arousal of fear does not necessarily stimulate active coping or problem-solving behavior.

Clinicians do not know whether anticipatible problems are most effectively approached as risks or threats, or as tasks or challenges to be mastered or achieved. Does the outcome vary if an issue is presented as a risk rather than as a challenge? We do not have a means of identifying patients for whom anticipatory care is most effectively offered in the form of developing problem-solving skills and strategies, rather than in the form of giving advice or guidance.

The methods and techniques of doing anticipatory care are undeveloped. The tutorial method is prob-

ably the method most commonly identified with anticipatory care. (See, for example, the paper by Brazleton.)[10] However, little attention has been paid to the processes involved, or to how the tutoring might be evaluated and made more effective.

Determination of the most effective timing and organization of anticipatory care in relation to expected events is barely touched upon in the literature and has been dealt with experimentally only occasionally.[11] Wolfer and Visintainer[12] learned that for children undergoing operative procedures, systematic anticipatory guidance (preparation, rehearsal, and supportive care) conducted sequentially prior to each stressful procedure was more effective in reducing the number of behavioral upsets and in increasing cooperation than was one session that dealt with all anticipated stressors.

Anticipatory care also raises ethical issues for the clinician. It has a shaky empirical base which poses problems related to the human "experiments" which are needed to improve our knowledge. As anticipatory care is practiced, decisions are continually made and frequently not shared with the patients. One such decision is whether or not "anticipatory care" about a certain issue will be offered. Is it right to inform and otherwise prepare an individual for what may happen if he/she has had no prior thought of it, and there is likelihood of dread or fear? When one believes that the consequences if the preparation is not done are more severe than the arousal of some fear in the patient, is it not best to provide the anticipatory care?

Difficulties Which Must Be Overcome in the Rigorous Study and Practice of Anticipatory Care

We have presented the viewpoint that anticipatory care is not well delineated either conceptually or technically. We suspect that inadequately conceptualized models of anticipatory care are responsible for the frequently observed (and probably inefficient) practice of routinely covering a list of topics and telling a parent, in standard terms used for every parent of a child that age, what should be expected and done. Hansen and Aradine[13] suggest that rather than being a routine task, structured and systematic preparation is necessary for the clinician to develop skills required in anticipatory care. Such preparation depends on the development of a theory of anticipatory care.

Anticipatory care has to date not been amenable to a rigorous approach, either in study or in practice, because the component variables and their interrelationships have not been specified. Broussard's[14] study of anticipatory guidance for primiparas, using closed circuit television – one of the few studies of anticipatory care which is available – exemplifies the problem of investigating a clinical methodology or process that is not well specified. The guidance was directed towards fostering a point of view about newborns and mothering, and developing skills in child care techniques. Although the groups that received the televised guidance were more positive in their perceptions of their infants at one month than the control group, it is not clear that the mothers who saw all three of the televised sessions had greater skill or competence than the mothers who saw only one or two sessions. Neither is it clear whether or not one aspect of the anticipatory guidance (ie, development of a point of view, or acquisition of technique) was more effective than the other or whether both were necessary. We believe that with more adequate conceptualization of the process, anticipatory care can be more rigorously studied and precisely practiced.

Empirical evaluation of anticipatory care and its outcome is complicated by the fact that many of the events which test the adequacy of the patient's preparation are months or years away. However, the efficacy of many approaches to anticipatory care can be tested in relation to the ordinary or frequent and reoccurring events of life: caretaking of newborns and elderly people, the process of recovering from a life-threatening illness, and grieving – with real outcomes over shorter time periods. In addition, if a process is precisely enough specified, outcomes within the clinical encounter itself can be evaluated with respect to identification of issues by clinician and patient and the participation by both the patient and clinician in achieving preparedness.

Anticipatory Care as a Problem-Solving Process

We propose that anticipatory care can be studied most rigorously and practiced most precisely and effectively if conceptualized as a form of problem solving that relates to preparation of the patient to deal with problems or accomplish goals at some time in the future. If anticipatory care is thought of as a problem-solving process, the behaviors of both clinician and patient are of interest and can contribute to problem solving. Indeed, the patient's role becomes critical and must be represented in any acceptable model.

To develop a suitable model of problem solving in clinical care, we have analyzed the clinical process and modified and extended Boyd's* model of interpersonal problem solving in instructional settings to characterize the phases of the process in clinical settings.

An important stimulus for the development of a methodology for characterizing interpersonal problem solving in the clinical setting was the fact that the observational methodology for the study of clinical primary care processes developed by Smith, Hansen, and Golladay[15] lacked a means of characterizing in sufficient detail the verbal processes of clinical care. The methods which we have derived to describe and evaluate anticipatory care can be utilized to characterize clinical problem solving (diagnosis and treatment) more generally, and complement the methods we have previously used.[5] In this paper we emphasize applications in characterizing, evaluating, and teaching anticipatory care.

How the Concept is Turned into a Methodology

A model with seven separable components in problem solving has been developed and used to describe and analyze clinical care. The model was tested on recorded patient care episodes and, consequent to analysis, was revised, refined, and subjected to further testing. The testing has allowed more precise definition of the behavioral and information content of each major phase. Each phase has been further characterized as composed of operations specific to it. Each operation addresses characteristic process issues. Within each phase or operation,

*Boyd RD: The relationships between the molar and molecular models. Available from Robert D. Boyd, Teacher Education Building, 225 North Mills Street, University of Wisconsin – Madison 53706.

the actions of the clinician or client result in specific data, recognizable decisions, and feedback to the other participant. The phases are as follows:

1. *Scanning.* The scanning phase is directed towards discovering problems or goals important to the patient. The clinician may ask the patient about a range of stressors that are pertinent to a specific population group, or may ask the patient to tell about what has been happening as a means of discovering issues that are idiosyncratic to him/her. In scanning, potential problems are sought.

eg, "Tell me how things have been with the baby these last three weeks."

2. *Formulating.* The formulating phase includes exploration of an issue that is of concern (as recognized in scanning or presented directly by the patient), specifying it, and naming it. A goal of some kind is implicit in the formulation of the problem. This phase may also include examination of the significance of the problem to the patient.

eg, "Well, it's been pretty rough. I'm wondering if I should really be someone's mother. I just feel like I don't know what I'm doing most of the time and the baby cries so much."

3. *Appraising.* The clinician and patient must make decisions as to whether the formulated issue is important enough to work on. The readiness and willingness of both patient and clinician to go ahead with problem solving must be determined.

eg, "Would you like to see if we can iron out some of your concerns?"

"Well, I don't know what good talking will do – I'm just stuck I guess."

4. *Developing willingness or readiness to problem-solve.* If either clinician or patient thinks the issue is important enough to problem-solve, but the other for some reason is not ready or willing to do so, work must be directed towards developing readiness and commitment.

eg, Clinician to patient: "If we talk about some of your specific worries it may not only make you feel a bit better, but we might also find that there are ways to change the situations that are troublesome to you, or we might be able to teach you some ways of handling those situations more successfully."

Patient to clinician: "I know this problem seems complicated, but I'd really feel better if you could take enough time to help me with it."

5. *Planning.* Planning involves decisions about the division of labor and the mechanics of problem solving: Who will do the problem solving and when? What strategies or techniques will be used? What issues will be dealt with and in what order? In general, the clinician will be more knowledgeable about the options.

eg, "When can we meet again? Will next Tuesday be convenient?"

"Yes, I think Tuesday would be a good day. Be sure to make an appointment with the receptionist."

"We'll plan to discuss your problem with breast-feeding then."

"Yes, that would be good."

6. *Implementing.* The solution phase of the problem solving may include one or more sub-phases. In general, the clinician expects to provide leadership and direction to the problem-solving process. These sub-phases are as follows:

a. Orienting. This sub-phase is directed to developing or changing specific understandings or feelings about a problem, or expectations about the future, for the purpose of resolving the issue or problem.

eg, "A lot of new mothers feel much the same way you do. It may take a while for you to learn how to interpret your baby's moods, and it will probably take your baby a while to develop some regular eating and sleeping patterns. So don't be too hard on yourself or the baby – you're both learning about each other gradually and things will probably get better and better from now on."

b. Guiding. In guiding, the decisions are concerned with what actions the individual should or could take to solve the problem. The patient may be instructed in how to take the desired steps, or patient and clinician together may examine alternative approaches.

eg, "What can I try to make the baby stop crying after she's been fed and put to bed?"

"When the baby is still crying and won't sleep in the crib after a feeding, try just holding her calmly for a few minutes. Sometimes babies just need to feel secure and holding them for a time satisfies that need. Don't bounce her, though – that may only agitate her. Gentle rocking may be soothing."

c. Developing Decision Rules and Problem-Solving Strategies. In this phase, the clinician and patient link expectations to a plan of action by clarifying and developing policies and strategies that the patient will use in the anticipated stressful circumstances. The strategies focus on the learning of means to identify problems more precisely and arrive at more general approaches to solving them.

eg, "Think about your observations of the baby as you go through that mental process that you were talking about – you know she's not really hungry, she's had her diaper changed, she's just awake and working through some of those overtired, overstimulated feelings. Then you'll have learned how to interpret her behavior better. You'll have a plan for dealing with those kinds of situations."

d. Practicing. The patient may practice with the clinician carrying out a plan of action or developing and utilizing skills towards that end.

eg, The patient may breast-feed in the office, or practice settling techniques she has learned from the clinician during that session.

7. *Evaluating.* The evaluating phase is concerned with establishing whether or not the preparation provided in implementing phases will enable the patient to adequately cope with or solve his/her problem.

eg, "Do you have any questions about the breast-feeding techniques and strategies we've discussed today? Do you think they'll be sufficient to help you continue nursing when you go back to work?"

Or, at the next visit:

"How did the breast-feeding ideas we talked about last time work out when you went back on the job?"

The problem-solving model outlined above is clearly an interpersonal, interactive process. Both clinician and patient have active complementary roles.

The Coding Procedure

The procedure for coding the verbal interaction includes use of an audio tape-recording of the clinical encounter as primary "data." A tone is superimposed at ten-second intervals to serve as a time marker. Up to three problem-solving operations may be coded for any ten-second interval. We also have a means of indicating who (the clinician or patient) initiated a problem-solving operation and who participated in it. The major content areas dealt with during an encounter

are also recorded and classified as either a health risk, a stressful life event, a developmental challenge, or a responsibility to be assumed. Delineation of the type of content permits study of variations in anticipatory care processes as these relate to the kind of orientation taken by different clinicians toward different patients or different kinds of issues.

The interpersonal problem-solving methodology, linked with the Smith, Hansen, and Golladay methodology, permits structuring of profiles of problem-solving activities for patient encounters and analysis of the sequence of processes. These are necessary tools if the relationship of process to outcomes is to be studied. The methodology provides a framework for further specification of operations within phases, depending on the particular research objective. For example, the kinds of issues to which a specific clinician or patient attends and responds, and the character of the response, whether encouraging or not, can be identified.

The reliability of the methodology, in the sense of extent of intercoder agreement, is being studied for a range of health maintenance, and acute and chronic illness encounters for patients of all ages in both primary and secondary settings. Agreement for phase for 342 ten-second intervals, including 478 operations, coded independently by two coders, was 86 percent. Agreement for operations within phases was 78 percent.

A validity study has been pretested and will be implemented shortly. It utilizes a structured process recall by the clinicians and patients who participated in the problem solving. The participant is given a randomly scrambled listing of the problem-solving phases, described in non-technical language, and is asked to select the phase that is most appropriate to tape-recorded material of predesignated segments.

We have begun preliminary study of anticipatory care within a range of clinical settings. To date, our study suggests that anticipatory care is practiced as a highly variable and limited process. Frequently, there is no real attempt to focus the process on the specific patient. Both the subject matter, purpose, and individual patient and clinician seem to be factors that influence the character of the anticipatory care. Empirical study of outcomes (eg, the result of the clinician's anticipatory guidance) is necessary to determine the effectiveness of methods of anticipatory care. Such a study is beginning, and will relate to preparation of new mothers for care of their infants.

Conclusion

The attention directed to anticipatory care in this paper is based on the following assumption: the outcome of health service is improved if clinician and patient are able to anticipate events or situations of importance and if the patient succeeds in mobilizing a capacity to cope more effectively with potentially harmful situations or those which prevent achievement of a desired goal. An assessment of this assumption requires empirical evaluation of the process of anticipatory care and its outcomes. Since many outcomes can only be appreciated after passage of time – sometimes months or even years in the future – empirical evaluation will not be simple. It seems clear that one must first test the efficacy of anticipatory care in its most "ordinary" applications such as preparation for child bearing, or recovery from life-threatening illness.

When anticipatory care is liable to elicit fear or discomfort, the most important requirement for effective care may be for the clinician to be available to the patient to work through anxieties aroused by the anticipation in such a way that constructive thinking and planning can occur. The clinician's availability is likely to be contingent on the intention of being supportive and of remaining so. A long-term continuing relationship may be the necessary condition for anticipatory care which is given for other than immediate and acute crises. The relevance for family practice (both medicine and nursing) of these conditions is obvious.

We believe that two steps of the anticipatory care process are of especially great interest. How does the clinician (or patient) identify or recognize the situation in which anticipatory care should be offered or requested? Closely related is the decision – by the clinician and patient – that a more or less formal problem-solving process will be carried out. That is, is the effort of doing anticipatory care for a particular problem or problems "worth it?" The issues are not simple or trivial. The anticipatory care process must of necessity take time. Often the greatest need may be among those patients least able to pay. The responsibility to make the process efficient and worthwhile is a rather heavy one – and one for which clinicians are not well prepared. Most clinicians have little experience in other than didactic, authoritarian warning or advising. Much remains to be developed before anticipatory care models become acceptable, sophisticated, and well-utilized clinical tools. The outline of a formal, planned, and empirically observable process is presented in this paper to contribute to a clearer understanding of both the complexity and the rational orderliness of this facet of clinical care.

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