Patient outcomes research: Seizing the opportunity

Nurses must take a proactive role in patient outcomes research. Because the patient, not disease, has always been the focus of nursing, nurses are sensitized to the rich but complicated context in which patient outcomes research will be conducted. Nurse researchers are experienced in using complex research models, dealing with ambiguous concepts, grappling with difficult measurement issues, and subscribing to methodological pluralism. These skills are important to success with patient outcomes research. In this article, the opportunities and challenges posed to nurses by patient outcomes research will be addressed. One of the benefits will be a stronger knowledge base for clinical practice and hence patient care.

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THE CURRENT FOCUS on patient outcomes provides an unprecedented opportunity for nurses to pursue research that will contribute to the scientific basis of nursing practice. Prodded by Congress, the health care community is struggling to curb spiraling health care costs through research that examines patient outcomes and the effectiveness of interventions. Nurses must seize the opportunity to become involved with outcomes and effectiveness research. In so doing, nurses can assure that the patient is represented as more than a composite of physiological variables and mortality statistics. In addition, patient outcomes research

This article was written while the author was an intragovernmental fellow with the Department of Health and Human Services through the US Army War College.

The views expressed in this article are those of the author and do not necessarily reflect the official policy or position of the Department of the Army, the Department of Defense, or the United States Government.

The author thanks Drs Claudia Bartz and Sandra Rogers, who provided invaluable critiques of earlier drafts of this article. The author also acknowledges the contributions of discussions with Drs Paulette Cournoyer, Mary Cummings, Karin Kirchhoff, and Patricia Moritz in stimulating thoughts related to this article.

affords to nurses opportunities to demonstrate how nursing practice contributes to patient outcomes, to build the scientific base for nursing practice, and to influence health policy decisions.

The purpose of this article is therefore threefold. First, an overview will be provided regarding contemporary events and patient outcomes research. Second, attention will be given to select conceptual and methodological challenges that are central to patient outcomes research. Third, the current status and directions for the future regarding nursing's role in patient outcomes research will be considered.

CONTEMPORARY EVENTS AND PATIENT OUTCOMES

Contemporary events have escalated the attention given to and the importance placed on patient outcomes. Health care economics, specifically the need for cost-effective care, is central to the current focus on patient outcomes.[1,2] A series of landmark reports,[1,3-5] published in the 1980s, identified an appreciable variation among medical interventions used to treat similar clinical conditions. It was noted that medical diagnoses and interventions were greatly influenced by where and when physicians were educated as well as by the habits and customs of the locale in which they practiced, rather than by rigorous scientific data. Thus, the variations in medical practice gave impetus to objective examination of efficacy and cost among procedures as well as of outcomes of health care. However, "The quality and cost of health care services are as tightly intertwined as fibers of fine silk."[6(p91)]

The Joint Commission on Accreditation of Healthcare Organizations (Joint Commission) and the Agency for Health Care Policy and Research (AHCPR) represent two contemporary forces that sustain the impetus to examine patient outcomes. In the late 1980s, the Joint Commission determined that consumers and third-party payors expected hospitals to conform to an industrial model of quality management, one that demonstrated a good ratio of quality and cost. The Joint Commission is concerned with a hospital-by-hospital analysis of outcomes.[7]

There are two caveats that must be heeded to assure that the Joint Commission's efforts provide a meaningful view of outcomes. First, institutional assessments must be conducted so as not to lose sight of the patient per se when patient data are aggregated to provide a facility-based analysis. Second, an institutional focus may obscure the effect of nursing care as a measure of quality. This would be inadvisable because of the assertion that the major reason for most hospitalizations is the patient's need for nursing care. As Lang and Marek underscored, ". . . indicators that are sensitive to the effect of nursing care must be included if the indicators are to be valid measures of the quality of hospital care."[8(p162)]

AHCPR, a second contemporary force, was established through the enactment of the Omnibus Budget Reconciliation Act of 1989. The charge to examine outcomes was shifted to AHCPR from the Health Care Financing Administration (HCFA). Through the Medical Treatment Effectiveness Program (MEDTEP), AHCPR is developing clinical practice guidelines and emphasizing research in three areas: medical effectiveness and patient outcomes, database development, and dissemination methods.[9-12]

Although nurses are making important contributions to AHCPR's research pro-

gram, it has a decidedly medical bent. Consequently, rather than rely on the AHCPR programs alone, it is imperative that nurses seize the opportunity to take a proactive position in examining patient outcomes. There would be many benefits of such an approach: the science for nursing practice could be strengthened; an integrative, multidisciplinary model of care in which the patient is the focus could be developed; and nursing's rich research repertoire that transcends experimental designs could be used to study patient outcomes.

CHALLENGES IN PATIENT OUTCOMES RESEARCH

Conceptual challenges

Theory development

In the late 1950s, the focus of nursing research shifted from studies of nurses, administration, and education to studies of patient care.[13] The emphasis on patient care created the opportunity for nurse researchers to establish linkages among theory, research, and practice. Because nursing theory did not begin to emerge until the mid-1950s, however, it was premature to tightly intertwine the theory, research, and practice threads. Consequently, the emphasis on patient outcomes affords to nurses an opportunity to renew the commitment to strengthen the cyclical process of theory building that is derived from research and tested in practice. In this way, nursing practice and hence patient care derive from a strong knowledge-base.

Not only is there an opportunity to strengthen the linkages among theory, research, and practice, but there is also the possibility to achieve a more advanced level of theoretical understanding. Although predictive and prescriptive theories are difficult to develop, these higher levels of theory are fundamental to patient outcomes research. In addition, prescriptive theory will advance nursing's metaparadigm by examining its elements from an integrative perspective. "Prescriptive nursing theories, in contrast to descriptive theories, include all four metaparadigm concepts, as they are addressed by the theme of the effects of nursing processes on health status."[14(p4)] Consequently, patient outcomes research affords nurses an opportunity to advance theory for practice.

Model clarity

Initially, the conceptual model involved in examining patient outcomes appears to be constituted of three components:

1. a clinical condition or diagnosis,
2. an intervention or treatment, and
3. a patient outcome.

This model is deceptive in its simplicity; it is also inaccurate and will contribute to spurious conclusions. It is impossible to measure or control all the variables that influence patient outcomes. Nevertheless, it is essential to choose a model to guide patient outcomes research that is sufficiently complex to ensure that these important questions are examined comprehensively. To this end, considerations relevant to model specification will be addressed. Hegyvary[15] recently commented on several of these points. The correctness of her view warrants reiteration as well as elaboration.

Conceptual definitions. Outcome and interventions are two terms that are germane to patient outcomes research. Outcome has

been used with considerable consistency and refers to the result of care. The focus, then, of patient outcomes research is to evaluate the patient. Outcome studies are patient driven, not provider driven. It is important to consider, nonetheless, whether patient outcomes are best viewed as the only outcomes, or whether it would be advisable to consider other outcomes as well. For example, system outcomes such as the cost of care and careprovider outcomes such as job satisfaction might actually have a reciprocal relationship with patient outcomes.[16,17]

Intervention or treatment refers to actions or techniques used in particular situations to elicit desired outcomes. Interventions, then, are usually considered by careprovider group. "The phenomenon of concern with nursing interventions is *nurse behavior*, those things that nurses do to assist client status or client behavior to move toward a desired outcome."[18(p152)] Although there is considerable evidence supporting the value of nurses,[19,20] "nurses' specific contributions to . . . improved outcomes have not been well documented. . . ."[20(p17)] Hence, nurses must seize the opportunity presented by patient outcomes research to empirically verify the relationships between nursing interventions and patient outcomes.

Careprovider effects. Despite the appeal of documenting how nurses contribute to desirable patient outcomes, such a model necessarily isolates nursing practice. Although the careprovider considerations of such a model are essential, they are not entirely adequate. The elegant simplicity and clarity of a model that focuses on one careprovider group must be balanced by the value of a more complex, multidisciplinary model of patient outcomes that addresses the effects of multiple careproviders.

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It is difficult to conceive of interventions that would be protected from the effects of other careproviders. In other words, it is highly probable that there may be some overlap or interaction with other careproviders insofar as the efficacy of interventions is concerned. Consequently, to address adequately the question of patient outcomes, a multidisciplinary model must be used, one that examines careproviders across disciplines. It would therefore behoove nurses to step back and take in the broad view. There should be a balance in patient outcomes research programs between studies that examine the patient from the standpoint of nursing interventions and studies that cut across multiple careprovider groups.

Relationships among quality components. Another conceptual consideration concerns the isolation or integration of the structure, process, and outcome components of the quality assurance (or quality management, according to current terminology) framework. Some research programs focus exclusively on outcomes or the results of care delivery.[11] Although isolation of a specific component of quality can be useful in addressing particular questions, distinguishing among structure, process, and outcome is basically an abstraction.[21] A more integrated model that examines the relationships among quality assurance components might be better suited to the complex reality of patient care.

Bloch,[22] for example, acknowledged that a focus on outcomes alone might be too parochial and therefore proposed a model in which both process and outcome could be examined. This model might be expanded to assess the effects of structure or of the care delivery environment on patient outcomes. For instance, how does the nursing practice model used to organize care delivery affect patient outcomes? Or, how does the use of nonnursing personnel to assist nurses contribute to improved patient outcomes? Such an approach would require using sophisticated research techniques. But a more integrated model that incorporates all components of quality would ensure more thorough answers to important patient care questions.

The outcome continuum. Another challenge regarding model clarity for patient outcomes research concerns the longitudinal nature of outcome. Donabedian[21] was among the first to discuss the outcome continuum. Nurses have referred to this continuum as the timing of measurement.[15,23] Some outcomes, for example, vary over the course of a hospital stay. Inzer and Aspinall[24] demonstrated that many outcomes can be broken into increments, each of which represents advancement toward more long-term outcomes, some of which may be achieved by the time of discharge. Not only do outcomes change over the course of hospitalization, but they change throughout the illness trajectory after discharge. A study of men following prostatectomy revealed that 1-year mortality rates were as high as 6%; this finding was surprising as postdischarge mortality had not previously been evaluated.[25]

By a consideration of outcomes over the course of illness episodes rather than through discrete hospital encounters, patient outcomes can be more accurately portrayed. "A given illness may span several hospital admissions and require large amounts of outpatient care."[6(p93)] Therefore, the totality of an illness episode must be considered to be reflected by short-term, intermediate, and long-term outcomes. The current emphasis on case management as a nursing practice model may afford considerable opportunity for the evaluation of outcomes over the course of an entire illness experience. Patient outcomes model clarity mandates the consideration of when outcomes should be measured.

Common goal. A final point related to model clarity is the potential for patient outcomes research to serve as a unifying framework for all nurses. By the sharing of a common goal, contrived differences and barriers among nurses can be erased, thereby enabling collaborative goal setting and decision making. As Jennings and Meleis asserted, "A common core of knowledge relevant to the nursing discipline in general affords a mechanism by which the various factions of the profession may be unified."[26(p58)] This is not to suggest that other avenues of research should be abandoned, but a focus on patient outcomes research affords the opportunity to demonstrate that nurses from all backgrounds and specialties influence patient outcomes. The patient is the primary benefactor of a common goal that focuses on outcomes; nurses and nursing benefit secondarily.

It is suggested then that the model used to guide patient outcomes research be a carefully conceived blend of comprehensiveness and parsimony. Nurses have the opportunity to develop, use, and collaborate with others by following a multidimensional model that takes into account the many complex con-

ceptual challenges that surround patient outcomes research.

Methodological challenges

Variable parameters

Outcomes. Although outcomes are conceptualized as the result of care, three methodological challenges exist regarding outcomes. The first is perception: outcomes according to whom? There may be incongruous expectations on the part of careproviders regarding acceptable patient outcomes. There also may be incongruities between patient outcomes as defined by careproviders and as defined by the patients themselves. Families and significant others may have yet another set of perceptions regarding outcomes. Who determines which patient outcomes are acceptable?

The second challenge is the indicators: outcomes as reflected by what? It is important to consider the vast number of indicators that can be used to reflect outcomes, as they portray different aspects of the result of care. In a paper[27] published before the current outcome movement, 348 outcome measures were identified. Commonly suggested outcome indicators include mortality, readmission, patient satisfaction, and incidence of complications.[17,23,28,29] Behavioral, knowledge, physiological, and psychosocial outcomes have also been identified.[22,23,30,31] Broader indicators such as rehabilitation potential[32] and functional status or quality of life[23,33] are also gaining attention.

Although they are all outcomes, it is important to specify which outcomes are most pertinent to particular patient populations. With the aging of our population and the increased incidence of chronic disease, the selection of appropriate outcome indicators becomes even more complicated. Without attending to the array of possible outcome indicators, it is conceivable that the patient outcomes knowledgebase could be very fragmented and thus lacking in meaning.

The third challenge is the degree: outcomes to what extent? A simplistic assessment of outcome might be a determination whether the desired outcome was achieved. In such a case, the variable could be dichotomized into achieved or not achieved. In reality, patient outcomes range from acceptable and good to not acceptable and bad with countless variations and permutations between. Capture of outcomes in their fullest sense requires a careful approach to measurement, one that uses Likert scales at least (eg, always, sometimes, never). Similarly, measurement of differences in outcomes within and between groups will provide another important dimension to the evaluation of patient outcomes.

Interventions. The most pressing methodologic challenge surrounding intervention from a nursing standpoint concerns the lack of a standardized operational definition of a nursing intervention. Defining nursing intervention is far from a moot point. A clear sense of what constitutes a nursing intervention is a prerequisite to a demonstration of the amount of variance in outcomes that is attributable to nursing care.

Bulechek and McCloskey proposed what may be the most commonly used definition: "A nursing intervention is an autonomous action based on scientific rationale that is executed to benefit the client in a predicted way related to the nursing diagnosis and the stated goals."[34(p8)] Carpenito[35] took issue with this definition by noting correctly that not all nursing interventions are autono-

mous; some are independent and others are delegated, and judgment is inherent to both types of nursing interventions. In an even more general explanation, Marek[23] discussed nursing as those activities performed by nurses that affect outcomes. It is implicitly stated that nursing, in this sense, refers to intervention. It is explicitly stated that the focus is on who does the activity, not on the activity itself. The problem with this view is that a nursing intervention is then inextricable from who performs the intervention.

Central to a definition of nursing intervention is an appreciation that it is a multidimensional construct. The definition and hence the measurement must tap into various aspects of intervention. For example, the degree of autonomy spans the spectrum from independent to interdependent to dependent. The complexity ranges from being reflexive and mundane to higher-order actions that require critical thinking. The need for the intervention relates to how essential the intervention is to the patient's well-being, progress, or comfort; its scope extends from absolutely critical to "nice to have." The purpose of the intervention can also be represented on a continuum that ranges from life sustaining to comfort enhancing. The challenge to establish the full range of parameters pertaining to nursing interventions is almost overwhelming in its complexity; the imperative to do so is undeniable.

Structure. If a comprehensive model is used to examine patient outcomes, the structure component of the quality equation must be considered from at least four perspectives, two of which pertain to the care environment and two of which pertain to the careproviders. First, it will be important to discern if outcomes vary with the setting in which care is delivered. This evaluation could establish similarities and differences among patients in like care settings: patients in hospital A compared with patients in hospital B, for example. This evaluation could also determine whether patient outcomes differ if care is delivered in different settings: an acute care facility versus a skilled nursing facility versus the home, for instance.

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Second, it has already been demonstrated that the dynamics within the care setting make a difference in outcomes. For example, Hegyvary and Chamings[36] found that postoperative patient outcomes were more closely associated with the hospital environment within which nursing was practiced than with a preoperative nursing intervention. Similarly, outcomes for intensive care patients were more strongly related to staff interaction than other factors.[37] In an ambitious effort, the Medical Outcomes Study (MOS) collected data from chronically ill patients over 2 years to assess how aspects of the care delivery system affect patient outcomes.[38] Reports from this study will continue to be published. They will address, for instance, the relationships among the structure of care as depicted by system, careprovider, and patient characteristics and multiple patient outcomes.

A third aspect of structure concerns variations within careprovider groups. Rather than focusing on what the careprovider does, the issue here is how the careprovider performs. For example, the competence of the

careprovider may well influence outcomes. It is possible that differences between the care provided by novice and expert practitioners are related to differences in outcomes. Intertwined with competence is the therapeutic use of self, a provider effect that transcends interventions themselves. Specific to nurses is the need to address possible differences in the educational preparation of the provider. This would make possible the detection of the impact of registered nurses (RNs), practical nurses, and nursing assistants. It would also allow for an assessment of the extent to which various educational programs for RNs make a difference in outcomes. These aspects may be particularly salient to nursing, as nursing care is provided by groups of practitioners rather than by single providers.

Fourth, it will be important to examine interactions among careproviders. It may be difficult to pinpoint the effects of a particular group of careproviders: careprovider interactions may influence the amount of variance in outcomes attributable to any specific group. This important possibility was raised in a study of perioperative teaching.[39] Depending on the patient outcome examined, the investigators were able to account for only 5% to 14% of the variance. They indicated that the low variance could be due to model specification error, measurement error, extraneous variables, or the actual influence of perioperative nursing care. The last explanation derives from the belief that the explained variance could remain low in outcomes studies because of the number of careproviders involved with patients during any clinical experience. If that is the case, what degree of variance is then sufficient to retain variables in models of patient outcomes?

Design

Because causality is implied in studies of patient outcomes, thoughts are evoked of quantitative investigations based on the classic experimental design, particularly clinical trials. However, Hinshaw[40] underscored the importance of logical consistency among theoretical, design, and analysis structures. Logical consistency affords a special opportunity for nurses who have espoused and effectively used methodological pluralism that covers the qualitative/quantitative spectrum. Without benefit from the full design repertoire and attention to logical consistency, advancements in patient outcomes research will be impeded.

Qualitative designs. "Patient care outcomes reflect a number of uncontrolled variables—such as the client's state of health, his coping ability, therapy, the effect of interventions by other health care providers, and the client's value system."[31(p365)] Outcome data may also be misrepresented if they are considered independent of other patient variables such as comorbidity, severity of illness, and age.[41-43] They may also be inaccurate if the patient's desire for information and participation in the care process are not considered. Furthermore, the variability that is normative among patients must be taken into account in outcomes measurement. Even if all possible confounding variables are controlled, variation among people is the rule.

Consequently, qualitative methods might be useful to capture the reality of patient outcomes from an inductive perspective. Although qualitative techniques beg the issue of causality, they may provide a clearer sense of the dynamics of patient outcomes,

which in turn, would provide scientific rationales for model specification and testing. Furthermore, certain parameters such as age, comorbidities, and severity of illness, although important outcomes predictors, are beyond the influence of health careproviders. Hence, qualitative studies might help to target the key patient outcome-influencing variables that can be altered by careproviders.

Quantitative designs. Depending on the research questions or hypotheses, a variety of quantitative designs would also be useful in examining patient outcomes. Central to a discussion of quantitative methods is the tradition of regarding randomized clinical trials as the scientific gold standard. Given the dynamics of the clinical setting, however, it is important to question whether clinical trials are the sine qua non of patient outcomes research. The prestige of this design must be balanced with a respect for the clinical complexity and all its attendant uncontrollable variables, a strong sense of the research questions being pursued, and an understanding of alternate quantitative approaches that may be less regarded but nonetheless more appropriate to the setting and the question.

For example, quasi-experimental, causal modeling was used to test the effects of perioperative teaching on a variety of patient outcomes.[39] An important point raised in that study was that indirect processes must be explicated and studied because they may be as important as direct relationships. Similarly, Loomis and Wood[44] cautioned against fitting clinical practice into a simple linear model; a multivariate model is more appropriate for capturing the complex relationships inherent in the clinical setting.

Data sets and instrument development

Data sets. Paramount among patient outcomes research challenges is that of data sets and the kinds of variables that are retrievable to reflect outcomes. As Mallison stated so clearly, "If physician-centered software is used as a guide, we will find that the impact of nursing care . . . will remain largely unmeasured and therefore invisible."[45(p7)] It is an issue not only of software, but also of the actual data used by the software. Data sets must include indicators of care that can be influenced by nurses.

Developing meaningful data sets from which information can be retrieved is the quintessence of patient outcomes measurement challenges. Because data in existing databases are inadequate for comprehensive study of patient outcomes, nurses must seize the opportunity to identify variables that will better reflect the scope of patient outcomes, particularly the less traditional outcomes such as quality of life and functional status, which may be highly associated with the effects of nursing. Concurrently, data sets must be developed to reflect nursing interventions, to facilitate the analysis of nurses' contributions to patient outcomes. Achieving consensus about these data elements will take considerable effort. Consensus must, however, be achieved with some immediacy, so that the data sets can be put in place and the research can be done.

Another aspect of data sets is the need for both a standard way to organize the data and a common data language. Grobe[46] is working to develop an automated system based on a lexicon and taxonomy of nursing interventions. When completed, this work will represent an important contribution to the organization of intervention data and the

facilitation of retrieval of such data from clinical records. Similar efforts are needed for outcomes data.

Instruments. Instrumentation is also fundamental to measurement. Basic concerns about the psychometric properties of instruments may sound hackneyed, but they are indispensable to confidence in research findings. Measurement error must be reduced to the greatest extent possible. And yet, the armamentarium of instruments that measure constructs relevant to outcomes research is limited both in number and in psychometric precision. Therefore, along with the studies themselves, an important contribution to patient outcomes research is the development of instruments with strong reliability and validity.

Despite the appeal of verifying the linkages between interventions and outcomes, it is essential that researchers approach these studies with a healthy respect for the numerous variables that must be taken into account. Researchers must ensure that findings from studies are not contaminated by variables that might affect the outcomes and lead to their misrepresentation. Findings will be weakened if studies are not based on the sophisticated conceptual models and designs that are essential to proper exploration of the array of phenomena involved with outcomes. Results will be vacuous if data sets and instruments pertinent to all aspects of patient outcomes research are not developed.

CURRENT STATUS AND FUTURE DIRECTIONS

Existing research efforts

Nursing's involvement in patient outcomes research is demonstrated in a synthesis of 164 studies conducted between 1974 and 1982 that examined the quality of nursing care.[47] Of these studies, 71 (43%) investigated outcomes independently or in relation to the other quality components. In a meta-analysis of 84 experimental studies conducted between 1977 and 1984,[30] it was concluded that outcomes were improved when nursing interventions were research-based. This conclusion gives strong support to verification of the efficacy of nursing interventions. There will be a better chance of showing improved outcomes, as well as better documentation of the impact of nursing care, if interventions are research-based. With research based in practice, the empirical basis for practice can be solidified.

The absence of nurses in one identifiable patient outcomes research effort serves to heighten an awareness of funding opportunities for future patient outcomes studies. More specifically, of 11 Patient Outcomes Research Team (PORT) projects funded through September of 1990 by AHCPR, none involved nurses as principal investigators.[48] While nurses are active investigators in studies funded by private foundations and other federal programs such as the National Institutes of Health, it is important to seize the opportunity for funding from all possible sources.

Outcome and intervention typologies

Considerable work has been done in developing typologies to classify outcomes and nursing interventions. Using Orem's self-care model, Horn and Swain[27] collapsed the 348 outcome measures they had identified into 18 broader categories. More recently, Marek[8,23] identified 15 outcome categories. Both of these efforts move well

beyond the more simplistic approach of focusing on mortality as a measure of outcome. As Watts stated, ". . . measuring death rates as outcomes in patient care misses the mark. . . . it can only turn out to be yet another unduly simplistic approach to a very complex problem."[29(p330)] Nurses have clearly taken a more comprehensive approach to the identification of patient outcomes. Nurses must capitalize on the opportunity to lead other health careproviders in ensuring that outcomes are measured in their fullest sense.

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Nurses have also invested considerable effort in identifying nursing interventions. Particularly well known for their work in this area are Bulechek and McCloskey,[34] who have related nursing interventions to nursing diagnoses. Along with identifying the interventions themselves goes the need to devise a common language for discussing nursing interventions. With a uniform lexicon and taxonomy, information about nursing interventions becomes retrievable and thus more useful. As previously noted, Grobe[46] has contributed substantially to this difficult effort by working toward the development of an automated system of nursing intervention statements that can be used by nurse practitioners and nurse scientists. There are compelling reasons to move forward in this realm, both to ensure that there is clarity regarding the composition of a nursing intervention and to ensure that nursing interventions are not delimited too parochially.

It is imperative to merge the independent efforts regarding outcomes and interventions. Outcome and intervention typologies and data sets must develop in tandem, not as parallel structures but as an integrated system. With an integrated system, it will be possible to examine the critical patient outcome questions; it will be possible to evaluate which interventions are most strongly associated with which outcomes. Nurses are faced with myriad opportunities to develop retrievable outcomes and interventions data, based upon a common language, that are related to one another.

The scope of outcomes

Another point related to the current status and future directions of nursing and patient outcomes research concerns the scope of the outcomes continuum that nurses are exploring. Whereas physicians are predominantly concerned with outcomes related to acute care institutions, nurses are forerunners in evaluating the full spectrum of care; they are pioneers in exploring outcomes beyond the hospital experience. For example, nurses are examining community health[49,50] and home care[51,52] outcomes. This work not only provides an invaluable dimension to the patient outcomes picture, but it also underscores new issues that must be resolved. One such issue concerns the use of groups as the unit of analysis, which poses several challenges related to the analysis of aggregate data.

Because nurses are on the cutting edge of the development of knowledge of outcomes in the broadest sense, it is essential that the opportunity to contribute to the understanding of patient outcomes is exploited to its

fullest. Nurses have a solid sense of the illness trajectory, because it is primarily nursing care that is delivered in community settings and the home. Nurses must continue to pioneer this essential dimension of patient outcomes research.

Nurses in the policy arena

The importance of nurses to patient outcomes research has been recognized at the policy level by AHCPR. "Nursing representation . . . is needed at all decision making and authority levels of AHCPR activities."[10(p3)] Nurses are members of the organization's national advisory council. In addition, an ad hoc nursing advisory panel was convened to ensure that nursing's voice was heard regarding the guideline development that is in progress under the auspices of the MEDTEP.[10]

The purpose of practice guidelines is to provide a systematic basis on which practitioners and patients can make decisions. The decision-making focus of guidelines is different from review criteria, quality standards, and performance measures, the purpose of which is to evaluate practice.[53] Of the seven existing guidelines panels, a nurse chairs the panel on pressure sores, and nurses cochair the panels on pain management and urinary incontinence.[12] The potential impact of AHCPR and the MEDTEP is considerable. Nursing's involvement with this national policy-making group signifies that nurses are using the opportunity to ensure that nursing's voice is heard, that nursing's imprint is made.

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Carpe diem! Seize the day! Nurses must capitalize on seizing the opportunity provided by the current emphasis on patient outcomes research. With the increasing cadre of nurse scientists and with nursing's heritage of dealing successfully with the complexities of clinical research, nurses are well-suited to meet the challenges of patient outcomes research. Although much of the course for patient outcomes research remains uncharted and is mind boggling in its complexity, nurses must move forward cautiously but intrepidly in spearheading patient outcomes studies.

It is evident that future studies of patient outcomes must necessarily deal with a variety of challenges, imperfections, and difficult decisions. But nurses bring to this arena an aptitude for dealing with complicated conceptual challenges, grappling with the imperfections in measurement, and using multiple appropriate methods to address patient-oriented questions. Furthermore, the emphasis of nursing has always been the patient, not the disease. Because nurses have long been the patient's advocate and have considered patients in their entirety, it is only proper that nurses lead the way in patient outcomes research to ensure that the patient is indeed the focus of the studies. In return, the scientific basis of nursing practice will grow.

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