

Implementing Quality Management in Psychiatry: From Theory to Practice—Shifting Focus From Process to Outcome

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With the increasing emphasis on the satisfaction of patient-clients balanced by the need for cost-efficient treatment, quality management is an ever-increasing concern for mental health care providers. It is now apparent that psychiatrists must follow treatment progress and outcome to assess and improve the quality of the care they provide. Most quality measurement and management programs to date have been carried out in research settings using process measures; however, it is clear that the focus must shift from research to practice and from process to outcome measurements. We discuss the notion of quality and outcome management and propose a model for selecting outcome measures. This model suggests 5 dimensions that are commonly assessed in outcome management. We successfully implemented a computerized documentation and quality measurement system in a psychiatric outpatient setting.

(Can J Psychiatry 2003;48:467–474)

Information on funding and support and author affiliations appears at the end of the article.

Clinical Implications

- Quality of care can be improved if treatment outcomes are systematically measured and compared with established guidelines or standards of care.
- Quality management will require the cooperation of all those involved in mental health care, especially psychiatrists and clinical administrators.
- Routine, computer-based outcome measurement and quality management will provide much needed data on “real-world” practices.
- Only through continuous quality management can we determine whether the care being delivered is resulting in the greatest clinical outcome for our patients, given our current medical knowledge and available resources.

Limitations

- The relatively high cost of outcome measurement, compared with process measurement, makes the former less enticing to clinical administrators or physician managers.
- Confusion between quality of care and good vs bad practice may make psychiatrists reluctant to adopt quality-management systems.

Key Words: *database, quality management, community psychiatry, outcome assessment, medical records systems*

Ten years have come and gone since Ellwood’s prediction that, to “move medicine forward as a sound applied biological and social science, adoption of a technology like outcome management is essential” (1). Clinical outcome

measures and databases have been developed for many medical specialties, but psychiatry continues to lag behind (2–5). Several reasons have been given to explain this delay, including the lack of concrete definitions of what constitutes good

quality care, a lack of valid and reliable outcome measures, and a historical assumption that the expert knows best in terms of changes in and improvements to patient health. Today, most clinicians do not need to be convinced of the importance of clinical outcome measurement and management (6,7) for continuous quality improvement (4,8–10), as well as analysis of treatment effectiveness (11) and cost-efficiency (12,13). However, the field of psychiatry encompasses a highly complex range of interacting services and diversified interventions (14). Further, mental health care differs from mainstream medical-surgical care (15) in that the relation between a patient's diagnosis and the type, intensity, and duration of care is not always straightforward (16). As such, the need to implement effective means of monitoring, evaluating, and improving treatment outcome is an overriding issue in today's mental health system (5). With the increasing use of evidence-based medicine and the welcome introduction of innovations such as computer technology into daily practice, the opportunity now exists to link these new approaches to quality measurement and assessment within psychiatry (9). The increasing emphasis on the satisfaction of patient-clients (17), balanced against the need for cost-efficient treatment, is another dimension that makes quality management an ever-increasing concern for mental health care providers (16): the growing tide of health consumerism is one of the most compelling forces for the implementation of mental health information management and quality-measurement systems (18). Successful functioning and participation in this new era of mental health care will be greatly enhanced by, and may even depend upon, the development and implementation of new and powerful management tools (19).

Advances in the use of computers have made data pooling and data management one of the most rapidly developing sciences (1). Properly programmed, computers are capable of dramatically enhancing information management in psychiatric care (20,21), yet it is still the most underutilized science for outcome management in psychiatry. A general principle should apply to developing and implementing computer-based management systems in the field of medicine: data collection should be exhaustive but simple, and systems should be user-friendly (3). When building up a system of information in psychiatry, a balance of simple, exhaustive, and valid data reflecting accurate activities according to a biopsychosocial model (22) should be the main goal (23). It is important that the system be flexible and easily modified to meet new requirements. The current state of ambulatory medical records (24,25) and the problem of moving reliable data from them into a computerized database are among the most serious technical barriers to computerized outcome management (1). Improving quality of care and patient outcome requires sophisticated systems for collecting comprehensive data on

patient populations and patient satisfaction, as well as on treatment costs, settings, modalities, and efficacy (26). At its core, a quality-management system will have information on individual patients (27). Thus, a process that focuses on medical record documentation (28) represents an initial step in implementing a quality-management system (29). According to Guze and associates (27), a quality-management system in a psychiatric setting must apply analytic methods to measure demonstrable improvement in quality over time (12) in health practice, policy, and research.

This paper discusses the importance of a quality-management program in psychiatry. We appraise the value of continuous quality management from the perspectives of clinical administrators, psychiatrists, and patients. We discuss the importance of shifting focus from the process measurement of treatment quality to outcome. We explore treatment outcomes and their measurement and present a model for selecting not only dimensions of outcome to measure but also the measurement tools themselves. We conclude with some remarks on our experiences implementing and using a computerized quality management system

The View for Multiple Perspectives

As Burlingame and colleagues state, "the age of treatment accountability in mental health care has arrived" (30). Further, Canadians have recently reaffirmed their desire for a national system of accountability (28). Those involved in psychiatric services need information and the means to manipulate and use it (20). Administrators need information to assess both the quality and the cost-effectiveness of treatment. Clinicians require outcome data to ensure rational decision making and to help them better understand the intricate relation of treatment, clinical course, and prognosis. As health care consumers, patients deserve tangible results outlining their treatment progress and improvement. Outcome management absolutely depends on the participation and cooperation of the entire health enterprise (1). As an ideal, Berwick notes that psychiatrists must establish and hold to a shared vision of a health care system undergoing continuous improvement (31). In the coming paragraphs, we focus on quality management from the perspective of the 3 most important partners: the administrator, the clinician, and the patient.

Clinical Administrator Perspective

Administrators in psychiatry are becoming increasingly accountable for both the cost-efficiency and the quality of care provided in their centres (29). When considering the patient population as a whole, administrators must be able to determine whether the availability and use of services accurately reflects patient needs. Only with information in hand can clinical managers turn to data to make program decisions and to empirically evaluate the efficacy of those decisions

(19). It is important that administrators view all outcome assessment data as informational, using assessed failure to achieve significant improvement or change as an opportunity to work with practitioners to improve treatment or assessment. In this regard, where perceived threats to employment and lowered incentives exist, deceptively derived positive outcomes rather than quality improvement may result (30). Indeed, for quality management to work, it must be viewed as a tool for positive change and not as a measurement of clinical performance (32).

Physician Perspective

In the past, psychiatrists, with the appropriate level of involvement from their patients, were the sole source of authority and legitimacy in the clinical decision-making process. Today, the psychiatrist–patient relationship is no longer unfringeable by the outside world (12). Because there is variance in our practice, some of it unsupported by scientific evidence (15,33,34), the question is no longer whether there will be intervention in mental health services to assure quality but who will intervene and what methods will be used (35). According to Ellwood, if psychiatrists want to remain in control of their profession, they must have the motivation to track and evaluate mental health outcomes routinely (1). Indeed, contrary to some suggestions (32), quality improvement has little chance of success in mental health care organizations without the understanding, the participation, and in many cases the leadership of individual psychiatrists (7,31), because it is psychiatrists who retain ultimate responsibility for the delivery of care (26). Further, psychiatrists are the only mental health professionals who can make a comprehensive biopsychosocial diagnosis. Psychiatrists need to be able to monitor their patients' treatment progress objectively by evaluating quantitative outcome data. Accordingly, psychiatrists need a powerful management tool to enable them to anticipate and evaluate the impact of medical care on their patients' quality of life (1). It is important that such tools be user-friendly, that they be integrated with patient care routines, and that they not disrupt the ongoing treatment of patients (2). Further, they must demonstrate advantages of empirically based, compared with feeling-based, decisions (30). Psychiatrists must not feel burdened with tedious documentation and paperwork or restricted in their professional freedom (4).

Patient Perspective

The patient perspective is even more important for outcome assessment, in part because many important outcomes (such as patient satisfaction, attitudes toward treatment, and quality of life) can be determined only by asking the patient (19,36). There is also growing recognition that patients, as consumers of care, are important health care partners (18). Several

studies have noted a relation between treatment compliance and patients' understanding and awareness of their treatment progress (37,11): patients who were presented with a graph representing their treatment progress displayed enhanced treatment compliance (37). Further, assessing patient satisfaction provides a particularly valuable reflection of the consumer perspective on quality of care (38); however, it would be wrong to conclude that individuals perceiving treatment more positively necessarily show better outcome (39). Thus, it is important to assess not only patients' subjective perceptions of treatment progress and outcome but also more objective perceptions. Murphy underlines the need for patient input by noting that even when "those who need help are in contact with mental health services this does not necessarily mean that their needs are being taken care of" and that "dissatisfaction rather than recovery causes patients to drop out of treatment" (40). Indeed, data on attitudes, satisfaction, and quality of life, for example, allow for examination of the interpersonal indicators of quality health care (41).

Quality Management—A Team Approach

Ideally, an outcome-management system will consider a range of perspectives, what each values about the operation of the mental health system, and what each wants to know about it (18). Change has become the rule, and the daily interplay between administrator and practitioner will be the fundamental driver of positive change (26). Psychiatrists and mental health care administrators who use outcome assessment to study and apply the principles of continuous quality management daily, will probably experience better efficiency, greater effectiveness, lower cost, and more satisfied patients. They will be able to make better decisions and carry them out more faithfully (31,42). As several authors have observed, the more patients improve, the more satisfied they are (43,44). In this regard, feedback from patient-clients provides the data needed to establish a reiterative process of continuous quality improvement (18): "efficient communications flow between all partners will be the energizing catalyst that elevates outcome measurement to outcome management, the process by which treatment practices will be continually measured, reviewed, tested, and redefined toward greater effectiveness, efficiency, and value" (26). Indeed, the regular feedback of information to participating stakeholders—especially treating psychiatrists and their patients—is perhaps the most important part of an outcome-management system (45,36). Apart from promoting continuous quality improvement, such feedback also keeps various partners enthusiastically involved in the initiative by giving them tangible results for their effort. It is important that the primary focus of any quality-management system be improved quality of care and treatment effectiveness, with cost-effectiveness a welcome and likely companion. Ethically managed psychiatry aspires

Figure 1 Interactive characteristics of quality in health care (McCarthy and others [6])

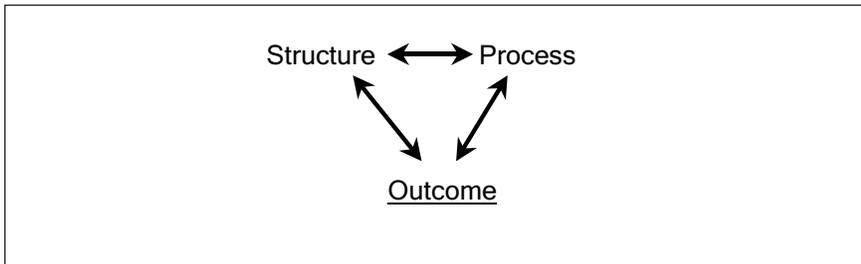
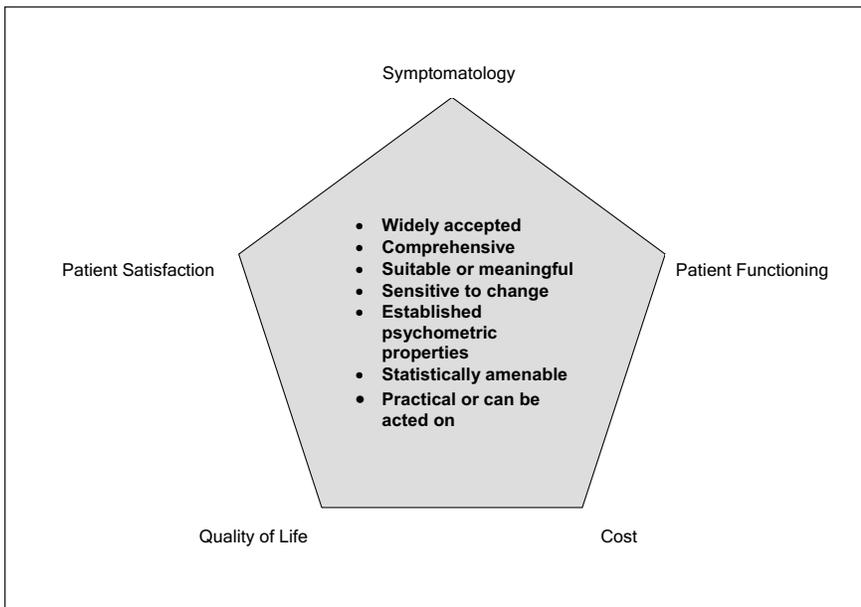


Figure 2 Conceptual model for selecting outcome measures and routine dimensions for outcome assessment in psychiatry



to assign important but limited resources to achieve the best use and not only to reduce costs (46). When available, outcome data help demonstrate the relative benefits of existing treatment alternatives. Ultimately, outcome management can generate facts and insights that help clinicians and administrators make sounder decisions (1). In the next section, we shift attention from process to outcome.

Shifting Attention From Process to Outcome

In 1982, Donabedian and colleagues presented a framework for better understanding the different aspects of quality in health care (46). Within this framework, the relation between resource expenditures and quality of care can be examined systematically. These authors distinguish among quality related to structure (that is, the provider’s physical, organizational, and technological resources), to process (that is, how care is provided to patients), and to outcome (that is, the results of care) (Figure 1) (4,33,46).

Structure, process, and outcome each relate to the overall quality of care. It has been assumed that these 3 types of

evaluation measures are highly related and that structure and process measures can serve as proxies for outcome measures. However, only when the relation between structure or process and outcome has been established is it legitimate to substitute measures of structure or process for measures of outcome. Often, both structure and process are at best indirect assessment measures (or indicators) of the most critical aspect of quality health care—its effect, or outcome, for the patient (6)—because only outcomes summarize all that has been achieved (4). To evaluate the overall quality and efficacy of health care, it is at minimum essential to assess measures of process and outcome (6). Process measures are relatively inexpensive and provide quick feedback; therefore, they have received the most attention to date (48). However, their correlation to long-term outcome cannot be determined without formally assessing outcomes (49). For these reasons, outcomes are a much more direct indicator of quality than are either structure or process (50). Experience has taught us how difficult it is to specify which variable from an interrelated array of variables is causally related to an observed outcome (39). Negative outcomes have been found to be associated with more severe psychiatric status, lower

quality-of-life ratings, and lower levels of care (51); positive outcomes are thus the strongest indicator of high-quality treatment (26). That said, quality measurement and management should focus on treatment outcomes. It is here that the gap between theory and practice is bridged: quality is ultimately improved through measurement (4) and subsequent comparison with established guidelines and standards of care (52–55). If one treatment costs 5 to 10 times more than another treatment, we must be able to demonstrate that the outcome varies significantly (42). The increased need for reliable data is balanced by the increased availability of outcome measurement tools and data management technologies; this will assist us to assess and refine professional performance (26).

Defining and Measuring Treatment Outcome

In the past, success was often measured in terms of physical location, with treatment failures occurring in the hospital and treatment successes in the community (56). Today, as the focus of clinical care has shifted from the inpatient setting—where quality assurance originated—to ambulatory

and community care, quality measures must assess care at a range of levels and in various settings (8). This, combined with the confusion and controversy regarding definitions (57) and recommended approaches for outcome evaluation (32), helps explain the hesitancy in initiating such quality-management systems. There are many dimensions of psychiatric treatment outcomes, such as social level of functioning (58), economic level of functioning, relapse rate, and patient satisfaction with treatment (2). Further, as attention to clinical outcomes has increased (59), it has been difficult to agree on what should be measured (37) and how this should be done (32,38). Clearly, patients are the central concern of outcome management and research (16). Accordingly, to understand the meaning of high quality, we must know something about the specific patients to whom it applies (60). For example, treatment outcome may need to be defined in limited terms for a patient suffering from long-term schizophrenia who experiences remission of positive symptoms but is left with negative symptoms and an inability to develop meaningful relationships. In such a case, improved treatment outcome could include the patient's ability to sustain good hygienic practices or engage in minimal social contact: "it is important that psychiatrists and other members of the mental health care team impress upon nonclinician administrators the fact that for some patients, progress is at times nearly imperceptible and that the quality of care cannot always be measured by dramatic results, such as employment status" (60). Thus, one must be sure that the chosen outcome measures are suitable for the patient population evaluated (30). Also, the outcomes that different stakeholders prioritize will depend on what each considers an essential area for improvement (18,59), as well as on each stakeholder's goals.

It is important that agreement be reached on the most significant dimensions for outcome management and on the attributes outcome measures should possess. To that end, we propose a conceptual model of outcome dimensions and minimum outcome-measure properties, based on recommendations cited in the literature (Figure 2). Goeree outlines the 5 most common and consistent dimensions that appear in the mental health field (49). These include symptomatology, patient functioning, quality of life, patient satisfaction, and cost. To this, we add 7 minimum properties or criteria that outcome measures should possess for both usefulness and consensus (4,8,30,49,61–64). First, a selected outcome measure should be widely accepted and clinically credible (49,61). Second, outcome measures should be comprehensive: the instruments should assess all important treatment variables. Third, outcome measures should be suitable and meaningful for the user's objectives (4,8,30). Suitability refers to the measure's appropriateness: is it measuring what the user intends it to measure? For example, if symptom improvement is the

goal, the measure must assess a clinically important dimension that is relevant to the underlying disorder. Meaningfulness is as much a quality of what is to be measured as it is of the instrument itself. Users must be sure that what they are measuring is useful in terms of what they are trying to accomplish. Fourth, measures should be sensitive to change (62). This will allow for the measurement of treatment progress and improvement over time, which may indicate the quality of care provided. Fifth, outcome measures should have established psychometric properties (8,30). These include high reliability (both internal and test-retest) and validity. Only then can one confidently base decisions on results obtained from outcome measures. Sixth, data obtained from a particular outcome measure should be amenable to statistical analyses (49,61). This will allow for accurate interpretation of outcome data. Finally, a selected outcome measure should be straightforward to administer and should provide results that can be acted upon. A practical measurement tool will be easier to integrate into mental health practice (30). Results that can be acted upon means that any deficiencies revealed by the measure will have solutions within the user's (that is, the clinician's) control (8).

The evolution of outcome measurement has resulted in multiple measures with good psychometric properties reflecting various sources, content areas, and measurement methodologies for assessing the complex and multidimensional nature of change (63). Our model is intended only as a guide to help psychiatrists and researchers wade through the murky and often crowded waters of outcome measurement. Examples of outcome measures include the Global Assessment of Functioning Scale (GAF) (65), the Sickness Impact Profile (SIP) (66), the Drug Attitude Inventory (DAI) (67), and the Positive and Negative Syndrome Scale (PANSS) (68). The American Psychiatric Association has published a more detailed list (69). Obviously, no single measure can comprehensively assess the quality of care being provided; which measures are ultimately used will depend on the type of patient population being managed and on the specific outcome dimensions prioritized by the various stakeholders.

Conclusion

In a climate of fiscal restraint and health care cutbacks, patient needs may not be met, or they may be met inadequately. Without evaluation, one cannot determine whether or to what extent patient needs are met, what patients' changing needs are over time, and how best to respond to these needs (49,61). As Kissling and associates point out, "regular evaluation of quality is the indispensable basis for continuous quality improvement" (4). The need to continually inform and improve care delivery by collecting and channelling treatment data is more apparent now than ever before. Although the

efficacy of some treatments is known under the special conditions of randomized controlled trials (RCTs), we seldom know how those treatments perform in everyday practice, wherein patient improvement is rarely rated (43). RCTs are less well suited to assessing clinical effectiveness (defined as actual results obtained by an intervention in unselected patient populations seeking care from routine clinical services) (70). Quality management through outcomes assessment will broaden our knowledge base (57) and provide much-needed data on underinvestigated, real-world practices (for example, combination antipsychotic therapy in the treatment of schizophrenia) (71,72). Techniques such as assessment of fidelity (32) provide important information on adherence to evidence-based practices; however, they rely solely on the currency and comprehensiveness of clinical practice guidelines (CPGs). In this regard, “no single CPG appears to address all treatment needs faced by practising clinicians” (52). Further, Montgomery recently made the important point that “prescribing-based evidence” provides data that “complement” data gathered from RCTs during the development of “evidence-based prescribing” guidelines (73). Accordingly, good management should be based on continuous and permanent collection of clinical data; it should not be restricted to elementary data, such as the psychiatric diagnosis, but expanded to the most clinically significant items, such as patients’ psychosocial characteristics (74). These include, for example, patient attitudes toward medication, their treatment knowledge, and their quality of life. Administrators and psychiatrists alike require a system to assess not only the need for but also the effects of various health care interventions—a system offering accurate and reliable data that psychiatrists and their patients can use to make better overall decisions about treatment (75,76). With the availability of accurate and detailed quality- and treatment-outcome data, there will be much progress in the quality of patient care (26) and, perhaps, lowered cost. It is important that outcome measurement and quality management not be viewed as simply just another research project but as integral and vital components of the overall mental health care system. How, then, do we incorporate such a quality-management system into the daily routine of mental health care providers without adding more cost and workload to an already overburdened system?

With the advent of computer technology, data analysis has become less labour intensive. Current statistical software does not require extensive training in statistical theory, only basic understanding of its procedures. While few programs to date have been introduced specifically for use in a psychiatric setting, we have recently incorporated one such program into our daily practice: the Psychiatry Quality Measurement (PQM), a computerized documentation and quality-measurement system (9). According to its developers, the PQM system has

been designed to document all aspects of a psychiatric patient’s treatment, admission, and subsequent follow-up; reduce the time spent on administration; and increase the availability of data from a physician’s practice. The system incorporates a program displaying descriptive statistics and can calculate a large range of quality measures, based either on the full population in the database or on preselected subgroups. Data can also be exported for more extensive statistical analysis. The system is designed to replace traditional paper-and-pencil charting systems, which promotes continuous and less time-consuming quality assessments. The program itself has been revised several times to incorporate advice from individual users. It is password-protected and can be networked through various computers, allowing both administrators and psychiatrists to monitor patient outcomes and treatment progress. Although we received no formal training, we found the system quite easy to implement and use. The biggest limitation is the amount of time required to enter patient data from clinic charts into the system. Even with this limitation, however, the ultimate benefits far outweigh the cost.

It is now apparent that mental health care providers must track treatment progress and outcome to improve the quality of care they provide. Even with the recent increase in outcome-measurement tools and computer technology, such management procedures have only been established in a few, research-based settings. For psychiatry to expand its knowledge base and better help patients, new methods to improve quality should be explored. Implementing a system like the one described will offer the opportunity to track the clinical effectiveness of underresearched practices and to identify which type of patient responds most favourably to which treatment. It will also help to determine whether psychiatric services meet or exceed consumer expectations and practice guidelines recommendations, as well as whether these services produce clinically significant outcomes.

Funding and Support

The present report was prepared without the financial support of any granting agency. The Lundbeck Institute is acknowledged for providing the PQM at no charge.

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Manuscript received October 2002, revised, and accepted February 2003.
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Résumé : Mise en oeuvre de la gestion de la qualité en psychiatrie : de la théorie à la pratique, mettre l'accent sur les résultats plutôt que sur le processus

Comme on insiste de plus en plus sur la satisfaction du patient-client, pondérée par le besoin d'un traitement économique, la gestion de la qualité est une préoccupation sans cesse croissante pour les fournisseurs de soins de santé mentale. Il est maintenant évident que les psychiatres doivent suivre les progrès et les résultats du traitement pour évaluer et améliorer la qualité des soins qu'ils prodiguent. La plupart des programmes de mesure et de gestion à ce jour ont été exécutés dans un cadre de recherche à l'aide de mesures du processus; cependant, il est évident qu'il faut passer de la recherche à la pratique, et des mesures du processus aux mesures des résultats. Nous discutons de la notion de gestion de la qualité et des résultats, et proposons un modèle pour choisir les mesures des résultats. Ce modèle propose 5 dimensions qui sont fréquemment évaluées dans la gestion des résultats. Nous avons réussi à mettre en oeuvre une documentation électronique et un système de mesure de la qualité dans un cadre psychiatrique externe.