SERVICE UTILIZATION:
A REVIEW OF
PSYCHIATRIC NURSE PRACTITIONERS
IN CASE MANAGEMENT POSITIONS

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A manuscript submitted in partial fulfillment of
The requirements for the degree of

MASTER OF NURSING

WASHINGTON STATE UNIVERSITY
College of Nursing
Intercollegiate Center for Nursing Education
May 2000
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ACKNOWLEDGMENTS

Many people have assisted in the pursuit of this degree. I would like to thank my co-workers for adjusting their work schedules to accommodate my class schedule. The Administrators at St. John Medical Center (SJMC) have been supportive with work schedule flexibility, encouragement and have provided an opportunity to access continuing education benefits. To SJMC’s Employee Council, a special thanks for awarding me the Sister Anne Hayes Scholarship. Barbara Sherry, SJMC librarian, put an extra effort into obtaining requested resources for my project. Each and every one in my family has cheered me on. Most of all I would like to thank my wife, Cathy, without whose support and encouragement I would not have been able to make it through the program.

TO:

Dr. Elizabeth LeCuyer-Maus my manuscript chair:

Your patience, support, and positive attitude have been most encouraging.

Your advice was most helpful in completing this project.

Dr. Renee Hoeksel:

You have always been there when encouragement was needed. You have been a knowledgeable resource giving the right direction when questions arose. The enthusiasm that you bring to the profession has been a great inspiration that championed me on.

Becky Cherrier:

Your role as a clinical instructor sparked my interest in returning to school. My gratitude for your review of my project.
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ABSTRACT

Chair: Elizabeth LeCuyer-Maus

Significant advances in psychiatric nursing science have been made in the 1990s. While a limited amount of nursing research has been published, those in print indicate the advanced practice psychiatric nurse provides quality and cost-effective care that is realizing substantial savings for treatment of the severely mentally ill population. Advanced psychiatric nurses are in a strategic position to respond to the paradigm shift in mental health care, exemplified by increased patient acuity and decreasing funds for treatment, by combining their services in the role of case manager. Further research on the role of the psychiatric nurse practitioner as case manager, and defining patient populations where they are most effective is indicated, in order to develop more cost-effective mental health case management models in the current health care arena.
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Introduction

From the 1960s to the present we have witnessed radical changes in providing mental health services as a result of deinstitutionalization, advancements in the field of psychobiology, and pressure to contain spending while providing cost-effective quality care. Case management models emerged as a method of providing community based mental health services. Kanter (1989) identified case management as a modality of mental health services that focus on the biological and psychological functioning of mentally ill clients within their physical and social environments. Case management is a coordinated strategy on behalf of clients to procure and provide services that are needed when they are needed and for as long as they are needed (Solomon, 1992).

Until the 1990s most of the literature about case management models had been generated by disciplines other than nursing. Findings indicated an improved quality of life, yet cost savings were not usually realized, as delivery of mental health services remained labor-intensive with costs being transferred from inpatient to the outpatient settings (Borland, Mcrae, & Lycan, 1989). Nursing had either been absent in these studies or simply invisible as part of the team. Research articles often lacked role definitions for the advanced practice psychiatric nurse in case management settings. In the Cochrane database, studies of case management models for people with severe mental disorders lack role definition and function of the advanced practice nurse (Marshall, Gray, Lockwood, & Green, 1998).

Advanced practice psychiatric nurses, however, provide clinically specialized services in the case management setting. Increasing literature includes nursing
involvement in the delivery of care through case management. The role of these nurses continues to evolve as state and federal laws are passed that determine scope of practice. The American Nurses Association (ANA, 1994) recognizing this problem issued a statement and standards publication that clearly outlines the professional role responsibilities, functions, and interventions for the nurse as a primary care provider. Haber and Billings (1995, p. 157) also attempted to define the role, stating, “Advanced practice psychiatric-mental health nurses provide the broadest range of primary mental health care services.”

Utilization of services and cost-effectiveness have great potential to be realized as the nursing profession makes a paradigm shift, moving from provision of direct care to providing mental health case management. The paradigm shift will require early recognition of symptoms, referral for assessment, education, medication management and counseling support services. The application of scientifically grounded information is being incorporated into the nursing process showing strong evidence of positive patient outcomes that not only improve quality of life but are also cost-effective. Research on nursing models in case management over the last four years has shown cost-effectiveness, especially when at-risk populations, those with a high rate of relapse, recidivism and high utilization of costly services are targeted for inclusion in the assigned case load. The research question then becomes: What is the range of the targeted populations advanced practice psychiatric nurses are treating in case management models?

Literature Review
This section will review relevant literature. Following the literature review, a critique of existing studies will be provided.

**Case Management**

There are many different views and definitions of case management. In reviewing the literature case management models vary greatly in individual characteristics and may be unique to their specific community or population served. This fact has created controversy about which population is best suited for inclusion in the advanced psychiatric nurse’s case load.

Kanter (1989) described the goal of case management as facilitating physical survival, personal growth, community participation, and recovery from or adaptation to mental illness. These are common themes seen in the literature, and have been applied consistently in case management models.

Mental health case management with its many models has demonstrated that each healthcare discipline brings a unique set of skills to a team that can be drawn upon to best serve clients. The team may be composed of psychiatrists, medical doctors, registered nurses with various skills and degrees, psychologists, social workers, occupational therapists, vocational counselors, and a wide range of individuals with training in the social or behavioral sciences of which many will have counseling degrees.

Kanter (1989) also defined components of clinical case management as consisting of four categories containing thirteen separate aspects of service. These components are part of most case management models and are:

Initial phase
- Engagement
- Assessment
- Planning

Environmental interventions
- Linkage with community resources
- Consultation with families and other caregivers
- Maintenance and expansion of social networks
- Collaboration with physicians and hospitals
- Advocacy

Patient interventions
- Intermittent individual psychotherapy
- Training in independent living skills
- Patient psychoeducation

Patient-environment interventions
- Crises intervention
- Monitoring (p. 363).

Anderson-Loftin’s (1997) review of mental health nursing case management found outcome measurements in the areas of program costs, utilization of service for both amount and level of service utilization, client functioning, and client satisfaction. While there was disagreement about the most cost-effective case management model, agreement did exist in the studies reviewed later in this paper that case management enhances the quality of life for the mentally ill population served.

The literature revealed that until the 1990s studies on case management have been conducted by disciplines other than nursing. The role of the advanced practice nurse has remained poorly defined in case management models for mental health. Very few studies about nursing models in mental health case management have been published that contain
statistical data supporting cost-effectiveness; however, as discussed later in this paper, the few studies that exist indicate that the care was quite cost-effective.

As the role of the advanced psychiatric nurse practitioner evolves, it is clear from the literature that a standard definition of this role has yet to be completed. This fact alone may be the cause of confusion in case management models when trying to determine the duties of the advanced practice psychiatric nurse. In recognition of this problem the American Nurses Association Council on Psychiatric and Mental Health Nursing, American Psychiatric Nurses Association, Association of Child and Adolescent Psychiatric Nurses, and the Society for Education and Research in Psychiatric-Mental Health Nursing collaborated in writing a statement and set of standards for psychiatric-mental health clinical nursing practice (ANA, 1994). This document has become the backbone for psychiatric nursing practice in this country. All of the nursing research literature in this review on nursing models in mental health case management included the components of the ANA guidelines. The ANA set the standard for education, certification, continuing education, licensure, clinical competence, and services that the advanced psychiatric-mental health nurse provides.

Another common thread in the literature was the rich and broad knowledge base that nursing brought to the case management setting. This is not to say that the other disciplines don’t have value; they too hold special skills that contribute effectiveness when delegation for service utilization is appropriate. Because of this knowledge and experience nursing sits in a unique position to apply the nursing process, and as part of that process, collaborate with other disciplines in planning and delegating for appropriate
levels of service utilization. Evans, Huz, & McNulty (1993) noted having a broad
knowledge base gives the advanced practice psychiatric mental health nurse an ability to
holistically assess the client needs, a service that a non-nurse cannot equally fill. Haber &
Billings (1995), similarly see the development of a primary care model for psychiatric
nursing. This model provides care to those at risk or individuals already in need of
mental health services. The model would give the practitioner the ability to provide
direct services, educate, make referrals, and to delegate in a collaborative effort that
facilitates the delivery of quality services at the appropriate level of care based on client
need.

Over the last twenty years there has also been explosive advancement in the field
of psychobiology. McEnany (1991) and Lowery (1992) acknowledged that
psychobiological discoveries must be incorporated into the psychiatric mental health
nurses' knowledge base to better serve patients regardless of the setting. It is clear that
many of the mental illnesses have a psychobiological basis. The application of this
knowledge through the nursing process is essential for the delivery of care at the
appropriate service level.

**Advanced Psychiatric Nurse Role in Case Management**

Atkinson (1996) combined Kanter's (1989) goals for case management along with
the application of the nursing process and reported clients received more appropriate care
at a less costly service level. Services were provided in a more timely fashion thus
preventing relapse, lower rates of hospitalization and preservation of a higher quality of
life. Atkinson (1996) reported cost savings were realized when an appropriate level of
service was provided yielding reduced lengths of hospital stay and decreased recidivism. In examining how cost-effectiveness was achieved the patients served as their own control group. Cost and utilization of services before case management was compared with outcomes obtained utilizing psychiatric clinical nurse specialists as part of the case management team.

Buchanan (1994) applied case management concepts to the nursing process showing where advanced practice nurses can make a contribution to mental health case management.

Interventions are directed at:
• treating acute illness,
• alleviating illness related symptoms,
• promoting human adaptation to acute illness during acute and transitional phases of recovery,
• rehabilitating during chronic illness and disability over the life span,
• preventing illness, and
• supporting individuals and families during terminal or end of life transitions. (p. 190).

Haber and Billings (1995) identified nursing process interventions that focus on case identification and treatment protocols for known mental health problems. These concepts were applied to Kanter’s (1989) mental health case management theory. For the two categories they gave the following list of interventions:

• Identify the mental health problems as early as possible
• Reduce the time the mental health problem exists
• Halt the progression of severity and coexistence of other mental health problems
• Decrease the likelihood of relapse (p. 156).

Bushy (1997) states, “Ultimately, regardless of the setting—rural or urban—accomplishments depend on the extent to which we can document
whether or not case management is achieving its multifaceted, system-focused, and client-focused goals” (p. 35). The mechanics of nursing case management are much the same regardless of location, population served or discipline providing services. As part of the nursing role it becomes essential to be aware of system-focused goals, client-focused goals and assessment measures for evaluating outcomes as applied through the nursing process.

Bushy (1997) listed the system-focused goals that can be applied to nursing case management as:

- Facilitate development of an array of community/home base services.
- Enhance efficiency in the delivery of care.
- Ensure quality services.
- Coordinate delivery of needed/appropriate services.
- Target at-risk individuals.
- Prevent admission to institutions and/or acute care facilities.
- Contain costs by controlling access to specialized and high-cost services.
- Improve the quality of life for case managed client systems (p.28).

Bushy (1997) identified client-focused goals that can be applied to nursing case management as:

- Ensure appropriate and acceptable services.
- Provide a seamless continuum of care.
- Facilitate access to needed services.
- Prevent duplication/unnecessary care.
- Support informal social support systems.
- Bridge institutional-based, community-based, and home-based care giving systems.
- Avoid acute and emergency care situations.
- Involve the client system in the plan of care (p. 29).

Bushy (1997) described the assessment measures that can be applied to nursing case management outcomes as including:
• Utilization patterns of health care/social services (e.g., reduced fragmentation of services)
• Health status indicators (e.g., client specific)
• Severity of health problem (e.g., functional health status, job autonomy, length of remission, attainment of goals, prevention of complications)
• Compliance with negotiated regimen of care
• Satisfaction with continuum of care (e.g., client, client system, case manager)
• Expenditures on health care/social services (e.g., reduced length of stay, level of self-care)
• Perceived quality of life for the client system (e.g., family, extended family, community) (p. 30).

**Populations Served**

Case Management Advisor (1996) noted the advanced practice psychiatric nurse delivered effective care in the psychiatric home care setting. The psychiatric home care patients had an Axis I diagnosis and a co-morbid medical condition.

Bowers (1997) advocates that a wider array of diagnostic categories qualify for inclusion in the advanced practice nurse’s case load. Clients other than Axis I often have serious social crises causing psychological breakdown that may precipitate admissions to the hospital. This population has a history of continuous or intermittent contact with psychiatric services on average of approximately five years. The argument made is: those suffering from non-psychotic mental disorders deserve appropriate treatment to alleviate suffering, to preserve, and promote enhancement in quality of life.

Two studies recognize the need for tools to assign clients to different levels of service; however, no studies were found about the consistent use of such tools and the prevalence of their use in the clinical setting. Barker, Barron, McFarland, & Bigelow (1994) developed the Multnomah Community Ability Scale (MCAS) to assist case managers in the delivery of appropriate services by matching the intensity of services to
the level of consumer functioning. The randomly chosen sample of 240 was selected from chronically mentally ill patients receiving services in their geographical area. The sample clients completed a screening tool that was in the development phase. They were followed for 18 months for local hospitalizations and 24 months for state hospitalizations. From the pilot study results the MCAS was developed. It was found that the MCAS was a valid predictor, based on the client score, of subsequent state and local hospitalization admissions. The MCAS was administered to clients and based on the score, they were assigned to one of two levels of case management services. The MCAS was found effective in efficiently managing the mental health resources by making it possible to match intensity of services to the client's level of functioning. The study describes the assessment tool, but does not give details for making case load assignments to different disciplines in the health care system.

Francis, Merwin, Fox, & Shelton (1995) describe a case management model in which teams of masters prepared psychiatric nurses and social workers compose a team. The nurse case manager is the coordinator for the team, and cases are regularly discussed to facilitate provision of services. In this model a flow sheet has been developed that delineates clear job duties. Appropriate level of service is provided as the result of collaboration and good communication. The population studied, \( n = 446 \), were severely mentally ill individuals receiving services from an aftercare clinic. The study indicates that assessment of patient characteristics and use of community services can be used as predictors for use of inpatient services. The study also indicates being able to
access medical and psychiatric care through the team approach decreased the likelihood of being hospitalized. Clients not hospitalized were in the program a mean of 1.6 – 1.8 more years than those hospitalized, (hospitalized $m = 4.4$ years in the program; not hospitalized $m = 6.0 – 6.2$ years in the program).

**Cost-Effectiveness of Psychiatric Nurse Practitioners as Case Managers**

Atkinson’s (1996) study linked diagnosis and service utilization to cost-effective care. The results of these studies indicated that the greatest cost-effectiveness can be realized when the advance practice nurse provided service primarily to the severely mentally ill. This represents a population with an Axis I diagnosis that may be on medications to manage symptoms of their illness.

Anderson-Loftin (1997) summarizes several studies providing support for inclusion of a wider array of diagnostic categories empowering nursing case managers to improve the quality of health care by increasing access, and reducing costs for high-risk, high-cost, and high volume clients by identifying members of that population and providing the necessary services in an expanded nursing role using the nursing process. Research results demonstrate providing services for this population achieved cost savings as a result of decreased lengths of stay, reduced readmission rates, lower numbers of visits to emergency departments, and fewer intensive care unit days (see Anderson-Loftin, 1997, for a review).

Saur and Ford (1995) demonstrated significant cost savings utilizing a nurse-physician collaborative model in a case study, ($n = 1$), of a complex psychiatric client with co-morbid medical disorders. Cost savings were realized as a result of reduction of
physician time and the use of less expensive health care providers. In this collaborative model the psychotherapy was provided by the advanced practice psychiatric nurse. The nursing process was applied in this study and supported by clinical outcomes. Outcomes for this patient included competent self-care enhancing quality of life and also patient satisfaction. Costs for hospitalization were reduced from $40,000 to less than $4,000 per year for the client as a result of appropriate service utilization.

Research (Kurz-Cringle, Blake, Dunham, Miller, & Annecillo, 1994) on nurse case-managed inpatient psychiatric units attributed cost savings to reduction of physician time, reduced polypharmacy practice, and easier ward milieu management as patient quality of life improved. The stable population of 54 male patients was divided into two groups on different wards at Perry Point Veterans Affairs Medical Center in Maryland. Group A received the services of a psychiatrist and group B had services provided by a psychiatric nurse clinical specialist. Nursing process was clearly described. Outcomes obtained included reductions in medication dosage, frequency of dosing and the use of polypharmacy. The use of cloth and locking restraints decreased. Preventive care had a significant impact in reducing the use of specialty clinic services and transfers to medical or psychiatric wards. The findings strongly supported advanced psychiatric nursing practice. This study demonstrated clinical significance, and indicated more study needs to be conducted to determine if the results are sustainable over time. Replication of this study would help advance the role of the psychiatric mental health nurse in directing the treatment on an inpatient unit.
Chiverton, Tortoretti, LaForest, & Walker (1999) demonstrated impressive cost savings in transitioning an at-risk population of hospitalized patients back into community care using nursing case management based on the Neuman model. In this study random assignments were made to two groups. The 121 subjects in the intervention group received transitional case management provided by psychiatric nurse case managers. The 122 subjects in the control group received traditional care, which was not described. Outcome measures were based on level of functioning, patient satisfaction, visits to the emergency department and readmission rates. The transitional case management services not only maintained quality and reduced costs but also had a high level of consumer satisfaction. This study strongly supports the role of advanced practice psychiatric nurses in case management, and demonstrates research utilizing nursing process applied using the Neuman model as its theoretical framework to achieve quality and cost-effective outcomes.

Francis et al., (1995) also attributed cost savings as a result of easy access to medical and psychiatric care thus reducing hospitalizations for the severely mentally ill. In this model the nurse is a case manager coordinating the delivery of needed services. The population studied was composed of 446 chronically mentally ill individuals treated at an aftercare clinic. The clients served as their own controls. Services utilized in the year prior to coming to the clinic were compared to data collected for the year period in which they received clinic services. The nursing process was detailed in the study. The study reinforces the need to know the characteristics of the population, anticipating service needs, recognition of risk factors for hospitalization, developing successful
hospital diversion plans, and developing treatment programs for special needs such as substance abuse.

**Critique of Existing Research**

Although some of the studies reviewed here demonstrated rigor and validity of research methods, in many studies, the methods of research were found to be unclear, lacking detail, or not addressed by the authors. Many of the articles supporting the belief that advanced mental health psychiatric nurses provided quality cost-effective care were based on a broad knowledge base giving an advantage for providing service, but were not substantiated by empirical data, and the research process was not clearly demonstrated. Treatment modalities and measurable cost-effective quality outcomes must be clearly described in studies to aid in comparison of findings across programs and settings if the expectation is advancement of nursing practice under the managed care system. These studies clearly indicated a need for improved reporting of research methods, statistical analyses, and conclusions of findings to add robustness, validity, and reliability for application to nursing mental health case management practice.

**Summary of Significant Research Findings**

The goal common to all the reviewed nursing studies was provision of nursing and other services that increase quality of life, increase access to appropriate services yet remain cost-effective. Many studies have been conducted, and refer to the nurse as part of the team. In these studies, the lack of role definition for the advanced practice psychiatric nurse is evident. The nursing research studies, however, indicated that nurses do provide
cost-effective care, associated with increased patient satisfaction and positive patient outcomes. The literature indicates at-risk populations are well served by nursing case management. The need to identify at-risk populations is frequently mentioned in the nursing case management studies. The use of screening assessments are noted to be helpful in matching level of service to client functioning. The findings suggested that having a broad base of scientifically grounded knowledge applied through the nursing process yielded positive outcomes in aspects related to quality of life, cost savings for health care, and improved appropriate utilization of services. Conflict remains for which diagnostic groups the advanced practice psychiatric nurse may best serve. Nursing is, however, very united and consistent in the use of the nursing process and standards of care as outlined by the ANA (ANA, 1994).

Conclusion

The limited published research on nursing models for mental health case management was impressive in terms of maintaining quality of life and at the same time showing cost-effectiveness. The ability to make generalizations, however, cannot be done without further data. Further study is required, and replication of the studies would add strength to the limited findings. A useful way to approach further study would be to identify practice settings where psychiatric nurse practitioners are functioning as case managers, and collect data about their role responsibilities, clients served, quality outcomes and cost-effectiveness. If psychiatric nursing practice is to advance, nursing must take the lead in conducting studies and educate other health care professionals as well as the public about the role of the advanced practice psychiatric nurse.
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