



The use of a patient classification system in a medical/surgical intensive care unit : a pilot study
by Sue Anne Warren

A thesis submitted in partial fulfillment of the requirements for the degree of Master of Nursing
Montana State University

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Abstract:

The purpose of this investigation was to pilot test a patient classification tool to determine what levels of care exist in the Medical/Surgical Intensive Care Unit (MSICU) at Montana Deaconess Medical Center. The actual direct care staffing was compared to the nurse/patient recommended staffing ratios indicated by the Workload Management System for Nursing (WMSN), the patient classification system studied.

A descriptive exploratory design was used to answer the research questions. Patients admitted to the Intensive Care Unit during a selected time interval between March 14 and April 5, 1988, were classified according to critical indicators on the Patient Acuity Worksheet, the classification tool of the WMSN. One hundred thirty-seven patient classifications were completed on forty different patients.

The data analyzed indicated that patients in the MSICU during the selected sampling period were classified into Category III (Acute Care), Category IV (Intensive Care) and Category V (Continuous Care); the greatest number of patients were classified into Category IV. There was found to be no statistically significant difference between the WMSN method for identifying allocation of human resources and the actual staffing allocated by the shift charge nurse.

There is a need for use of a patient classification in a multidisciplinary intensive care unit because of the varying levels of care that exist within the patient population.

This study established a foundation for implementation of patient classification in the intensive care environment.

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IN A MEDICAL/SURGICAL INTENSIVE
CARE UNIT: A PILOT STUDY

by

Sue Anne Warren

A thesis submitted in partial fulfillment
of the requirements for the degree

of

Master of Nursing

MONTANA STATE UNIVERSITY
Bozeman, Montana

May 1988

APPROVAL

of a thesis submitted by

Sue Anne Warren

This thesis has been read by each member of the thesis committee and has been found to be satisfactory regarding content, English usage, format, citations, bibliographic style, and consistency, and is ready for submission to the College of Graduate Studies.

May 16, 1988
Date

Helen J. Lee
Chairperson, Graduate Committee

Approved for the Major Department

5-18-88
Date

Kathleen Ann Long
Head, Major Department

Approved for the College of Graduate Studies

10 June 88
Date

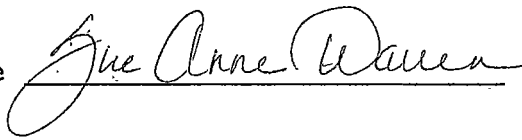
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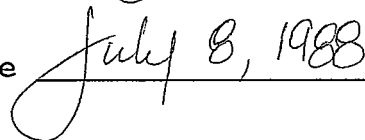
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ACKNOWLEDGMENTS

I would like to extend my thanks and appreciation to my advisor, Helen Lee, R.N., Ph.D., and to my other committee members, Julia Swager, R.N., M.S.N., Meredith Rowe, R.N., M.S.N., and James Novitzki, M.A.M., Ph.D., for their guidance, contributions and support. I would also like to acknowledge the assistance of Mr. Marty Melander, M.A. for his time and guidance in entering my data for statistical testing.

Additionally, I would like to thank the staff of the Medical/Surgical Intensive Care Unit at Montana Deaconess Medical Center and my supervisor, Sharon Dieziger, R.N., B.S.N., Director of Critical Care, for their continued support and encouragement. A special thank you and deep appreciation is extended to my husband Ed and daughter Rachel for their love, patience and understanding.

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ABSTRACT

The purpose of this investigation was to pilot test a patient classification tool to determine what levels of care exist in the Medical/Surgical Intensive Care Unit (MSICU) at Montana Deaconess Medical Center. The actual direct care staffing was compared to the nurse/patient recommended staffing ratios indicated by the Workload Management System for Nursing (WMSN), the patient classification system studied.

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There is a need for use of a patient classification in a multidisciplinary intensive care unit because of the varying levels of care that exist within the patient population. This study established a foundation for implementation of patient classification in the intensive care environment.

CHAPTER 1

INTRODUCTION

Rising patient acuity and declining length of stay are symptomatic of vast changes in the health care and delivery system. For nurse managers, these changes mean making increasingly difficult decisions in the determination and allocation of nursing resources. The primary management goal is to maintain the quality of nursing care in a period when hospital costs and the number of vacancies in hospital nursing positions continue to mount. Therefore, efficient use of available nursing personnel becomes imperative.

The need to provide quality nursing care in the most cost efficient manner and to monitor staffing patterns has been the primary focus behind the development of patient classification systems within nursing services (Curtin, 1983). Patient classification refers to the identification and classification of patients into care groups or categories, and the quantification of these categories as a measure of the nursing effort required (Jackson & Resnick, 1982). Patient classification systems (PCS) categorize

patients according to an assessment of individual nursing care requirements over a specified period of time (Dijkers & Paradise, 1986). Most systems consider only the quantity of care, although some also include the level of care (Registered Nurse (RN) versus Non-RN (NRN)) and thus consider one aspect of quality. An acceptable patient classification system must be simple, specific, sensitive, auditable, individualized, time-based, and revisable. These qualities in patient classification constitute a system which lends itself well to manual or computer documentation. Patient classification systems were originally used by nurse managers as staffing tools; they were used daily to assign float personnel to those units most in need or to admit new patients to those units with the greatest staff to patient ratio. Thus, a PCS helped prepare nursing department budgets as an aid in long-term planning. Based upon the expected census and patient mix, nurse managers projected the number of staff members needed for the coming fiscal year. Ultimately, patient classification systems were also used for special management reports, quality assurance, utilization review, and recently for charging for patient care (Dijkers & Paradise, 1986).

Only in recent years have research studies begun to explore patient acuity systematically. As more and more

intensive care units began to be formed in the mid 1960s, patients were grouped to concentrate both medical and nursing care on the needs presented by the special groups. Critically ill patients are cared for in a complex, labor intensive environment. They constitute a potentially vulnerable population as a result of physiological, psychological, pharmacological, and environmental influences. Therefore, it is important that the needs of the patients be quantified so that systematic methods of response to those needs can be employed (AACN, 1986). The use of patient classification systems in the critical care milieu is not widespread nationally. Although many general patient classification tools exist, most patient classification systems do not address the unique needs of the Intensive Care Unit (ICU) patients; most systems tend to quantify all critical care patients as maximal care. These systems fail to recognize that there are varying levels of care within the maximal care category (Ambutas, 1987).

Without a viable patient classification tool, control of staffing and budgeting could be removed from the hands of the nurse manager, and budget and/or staffing cuts would continue to be based on assumptions, or at best, imprecise data (Hamilton, 1983). Patient classification is a valuable tool that categorizes patients based on an

assessment of their nursing care needs over a period of time, and data collected from the use of a PCS tool can be applied by critical care nurse managers to maximize the use of available resources (AACN, 1986).

Patient classification systems hold the promise of providing nurse managers of critical care units with objective and scientific means to identify acuity levels and project staffing requirements. Nurse managers have an obligation to base nurse staffing on objective documentation produced from the tool (Ambutas, 1987).

Purpose and Research Questions

The purpose of this investigation is to pilot test a patient classification tool to determine what levels of care exist in the Medical/Surgical Intensive Care Unit at Montana Deaconess Medical Center. Questions to be addressed in this study include the following:

1. What are the levels of acuity of patients in the Medical/Surgical Intensive Care Unit (MSICU) according to the selected classification instrument?
2. How do the existing MSICU's direct care assignments compare with the nurse/patient recommended staffing ratios indicated by the personnel requirements produced by the selected tool?

Conceptual/Theoretical Framework

General Systems Theory is a study of wholes. The theory provides a theoretical framework to talk about structure and process. A system is any set of interrelated components that interact with each other within a boundary that filters inputs and outputs (Hamilton, 1983). The mechanism that systems use to correct discrepancies between actual and intended output is termed feedback, which allows systems to be self-directing. In systems, the whole is greater than the sum of its parts; change in one component leads to change in all other components.

Hamilton (1983) described health care in America as a system; however, subsystems of this whole would be innumerable. A hospital may be viewed as a system and the nursing department as one of its subsystems. The hospital provides a mission of service delivery through the interaction of three kinds of resources (inputs) into the system: human resources such as staff, technological resources such as methods and equipment, and financial resources such as the operating budget. Each subsystem within the hospital is allocated portions of these resources so that alterations in the amount and type of resources/input will lead to changes within the system as well as the subsystems.

The department of nursing, a subsystem of the hospital, is an open system influenced by a great number of internal and external environmental factors. The distal goal for this system is to provide nursing care to all health care demanders, and the proximal goal is to provide high quality nursing care to all patients admitted to the hospital (Torrez, 1983).

The objective for the nursing subsystem is to identify patient care needs for specific hospital units and to provide the qualified full time staff equivalents in their proper staff mix (RN versus Non-RN) to deliver this care. The objective must be quantitatively and qualitatively precise (Torrez, 1983).

Various nursing service departments have established standards of care according to a patient classification system which categorizes patients. The maintenance mechanism existing as the foundation for patient classification systems is diagrammed in Figure 1. The model pictured represents the four subsystems upon which a patient classification system is developed. This model was developed from the original model developed by Torrez (1983). The existing standards of care encompass the Belief System and consist of two parts. The Belief System for Health Care Standards is defined by the American Nurses

