Implementation of ANA's Quality Assurance Program for Clients with End-Stage Renal Disease

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ACCOUNTABILITY is a concept receiving widespread attention within the nursing profession. Although no one disputes nursing's accountability to society for quality care, the fact remains that putting this concept into practice continues to present a challenge to the profession. One empirical means of establishing accountability is to develop and implement quality assurance programs that relate structure, process, and outcome standards and criteria.

The American Nurses' Association (ANA) model for quality assurance was utilized by the authors as the framework within which a program for ensuring high-quality nursing care was designed.[1,2] The program focused on the relationship between client outcomes and nursing interventions. The selected setting was an outpatient dialysis center, and the subjects were persons with end-stage renal disease (ESRD) who required maintenance hemodialysis. The quality assurance program was developed and implemented; it

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utilized the seven components of the ANA model (See Figure 1).

THE ANA MODEL FOR QUALITY ASSURANCE

Identifying Values

Identification of values is an integral component of the quality assurance model. Values are critical, as they influence both an individual nurse's practice and an individual client's compliance as well as professional and societal activities in relation to health care.

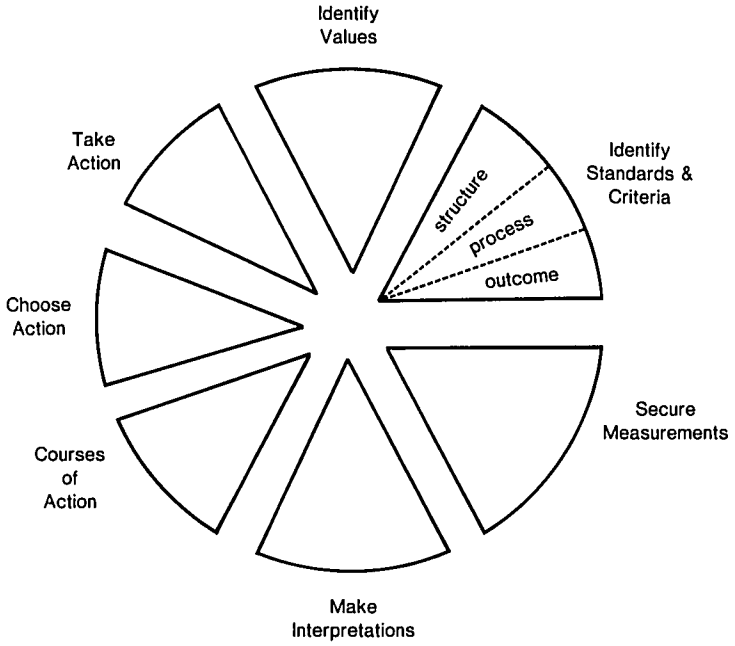
Zimmer explained the primary role of value identification in the process of quality assurance: "Quality of care is determined by identifying the observable characteristics that depict the desired and valued degree of excellence and the expected, observable variations. This becomes the standard for the optimal achievable degree of excellence."[3(p307)]

The sources that yielded the values guiding the program development included society, the nursing profession and science. The values of the individual nurse and client stem from these sources, but may be expressed in diverse ways.

SOCIETY

Society is increasing its demand for high-quality health care for all its members. A particularly vulnerable segment of society is the growing number of persons with chronic illness whose life

FIGURE 1. THE ANA MODEL FOR QUALITY ASSURANCE



Adapted from Lang, N. *A Model for Quality Assurance in Nursing,* reprinted from American Nurses' Association. *A Plan for Implementation of Nursing Practice* (Kansas City, Mo.: ANA 1975) p. 15.

spans have been extended because of increased technology. Included in this segment is a large number of persons with ESRD requiring maintenance hemodialysis. The size of this population and the complexity of their problems were influential in the selection of this population for inclusion in the program. Society's concern with the escalating costs of (in particular inpatient care) health care and the disruption in normal lifestyles imposed by hospitalization led to the identification of well-designed programs of outpatient care as another societal value.

NURSING PROFESSION

While nursing shares some goals for health care with other health care professions, nursing's unique contribution is to help clients to maximize their health potential. The profession has the full responsibility for ensuring quality nursing interventions that have a salutary effect on client outcomes. Emphasis on this interaction relates to nursing's need to clearly articulate and document the relationship between the care given and the client's health status. While the evaluation of client outcomes alone can point to strengths or weaknesses in the care system, unless these are related to specific interventions the benefits of such programs will be negligible. Haussmann, Hegyvary and Newman clearly illustrated this in a study relating the nursing process to patient outcomes. Their data suggested that "limiting quality assessment to either process or outcome measures may be inappropriate because of the inconsistency of the relationship and the lack of conclusive evidence of causal effects and because of the condition of the patient and consequent nursing priorities."[4(p63)] Barba, Bennett and Shaw also advocated a program of quality assurance focused on nursing interventions (based on the ANA Standards of Nursing Practice) and client outcomes. "We believe that the means are as important as the ends and that both should be equally evaluated."[5(p42)] This is in opposition to the Joint Commission on Accreditation of Hospitals (JCAH) methodology, which focuses only on client outcomes.

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The quality assurance literature and the authors' clinical experience point to the value of evaluating client outcomes in relation to nursing intervention. This value led to the selection of the ANA model as the basis for program development. Utilization of the Johnson behavioral systems model reflects the nursing profession's value of the use of conceptual models to guide nursing practice.[6] The authors' belief that the goal of nursing is to promote, maintain or improve the client's behavioral stability was instrumental in their selection of this model.

SCIENCE

A review of the scientific literature revealed the area of fluid and electrolyte balance to be crucial to the health status of

persons with ESRD. In addition, the quality assurance literature revealed a paucity of nursing standards and criteria pertinent to fluid and electrolyte balance. The ANA model's dynamic, systematic approach to the implementation of standards and criteria reflects the value the authors place on the use of scientific methodology.

Identifying Standards and Criteria

Once values are identified the model directs the practitioner to the development of standards and criteria (structure, process and outcome). "Basically, standards are an agreed upon level of excellence, whereas criteria are statements which are measurable and which reflect the intent of the standard. Thus, it is possible to generate any number of criteria per standard."[1(p16)] The standards for this program were adapted from the ANA Standards of Nursing Practice and from the standards of Clinical Practice for the Nephrology Patient.[7,8] The standards for the nephrology patient were developed by the American Association of Nephrology Nurses and include a special section on the patient receiving hemodialysis. In this program the standards are designated as critical variables. See Appendix A for examples of how these were utilized.

NURSING INTERVENTION

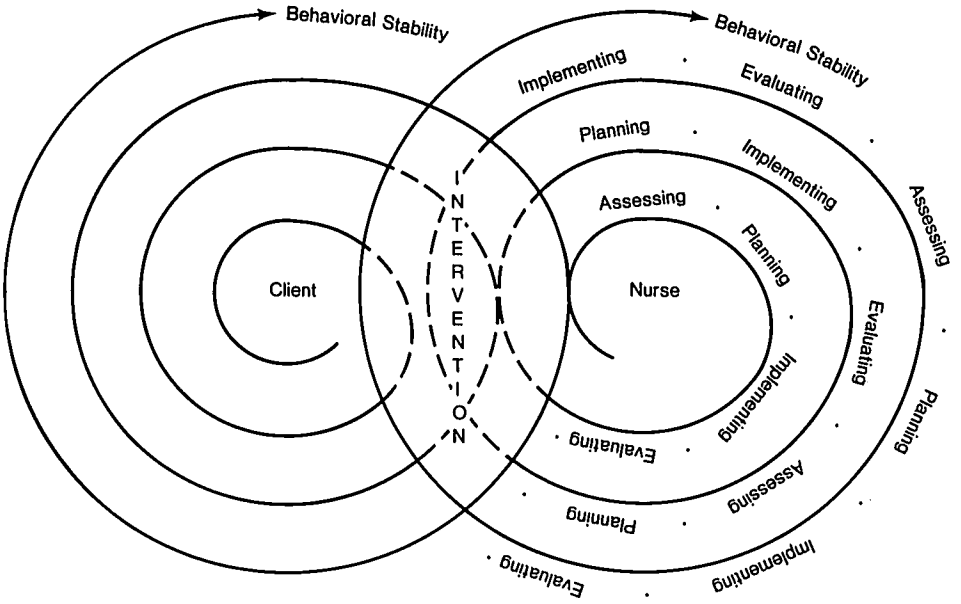
The establishment of criteria provides a concrete measure of high-quality nursing care. In this investigation structural criteria were not addressed. Process activities (nursing interventions) were examined in relation to outcome criteria. Nursing intervention was defined as any nursing acts directed toward maintaining, promoting, or improving client behavioral system balance. As such, any goal-directed aspect of the nursing process could be identified as nursing intervention. This is illustrated in Figure 2.

Given the target population of ambulatory clients with ESRD and the outpatient setting, the three major categories of nursing intervention were determined to be comprehensive client assessment, client education and psychosocial counseling. These three areas of independent nursing intervention have been identified in the literature as areas in which nurses have expertise and where further investigation is needed.[9]

All clients in the target population or their significant others completed a basic program of client education, after which they were expected to have the knowledge and skills enabling them to maximize their health potentials despite the limitations of ESRD. Translating this knowledge and these skills into the clients' everyday life patterns became the focus of a continuing program of client education and counseling. Intrinsic to the program was comprehensive client assessment, which identified any deficits in the clients' health status so that interventions could be promptly initiated.

Nursing interventions are viewed as the means that lead to achievement of nursing's goal: "to maintain or restore the person's behavioral system balance and stability or to help the person achieve a more optimum level of functioning (balance) when this is possible and desirable."[10(p2)] Outcome criteria provide a tangible means to measure the achieve-

FIGURE 2. NURSING INTERVENTION: THE INTERACTION OF NURSE AND CLIENT SYSTEMS



Nursing intervention is graphically illustrated as the interaction of the nurse and client systems. Any aspect of the nursing process directed toward facilitating the client's move toward behavioral stability may be termed nursing intervention.

ment of this goal. A tool was developed to evaluate client outcomes in relation to fluid and electrolyte balance.

TOOL DEVELOPMENT

To develop a tool to measure outcome criteria for fluid and electrolyte balance in the client with ESRD, an extensive literature review was conducted. Included in this review were normal renal physiology,[11] end-stage renal disease,[12-17] client education,[17-19] fluid and electrolyte balance[20-24] and literature specific to developing and utilizing outcome criteria.[25-30]

The critical variables pertinent to the target population were first identified and then assigned priorities. Zimmer and Lang wrote: "When the objective for evaluation is to monitor patient health/wellness outcomes, only the criterion variables that are the most significant or critical of the health/wellness status of a specific patient population are selected."[29(p161)]

By use of Johnson's conceptual framework, the critical variables unique to each subsystem were identified. The majority of the variables identified as critical to the target population were physiological in nature and related to the ingestive and eliminative subsystems. These two subsystems, with their respective goals, as identified by Auger, were combined to avoid repetition.[31] Variables grouped under the

subheadings "exhibition of knowledge and skills," "demonstration of compliant behavior" and "demonstration of problem-solving behavior" were assigned to the achievement subsystem and found to be compatible with the goal of this subsystem.

The major elements chosen for audit were fluid balance, sodium and chloride, potassium, calcium and phosphorus, magnesium, hydrogen ion, knowledge and skills, compliant behavior and problem-solving behavior. The tool was developed for a concurrent audit and designed for use by the professional nurse. To assist in establishing the content validity of the tool, it was submitted to five nurse experts. The input from these professionals was utilized in the revision of the established criteria. Two sample pages from the tool are presented. They represent both the ingestive/eliminative and achievement subsystems. (See Appendix A.) Those terms pertinent to the tool are theoretically and operationally defined. (See Appendix B.)

Securing Measurements

A concurrent audit methodology was selected so that current nursing practices could be evaluated with the ultimate goal of improving the quality of care provided to clients. Six clients with ESRD receiving maintenance hemodialysis were evaluated. They were of varied ethnic backgrounds, with ages ranging from 45 through 67. The setting was an outpatient dialysis center located in a large metropolitan area. The audit was conducted by professional nurses using the client interview, the client record, and physical assessment.

Making Interpretations

The tool comprised 94 criteria. The number of criteria attained by each client within this sample ranged from 58 through 78 with a mean of 67 (71%). An analysis of the two subsystems revealed the following. The ingestive/eliminative subsystem contained 64 criteria. The number of criteria attained by each client ranged from 48 through 57 with a mean of 52 (80%). The achievement subsystem contained 30 criteria. The number of criteria attained ranged from 5 through 27 with a mean of 16 (53%). A summary of the data of the six clients who were audited is presented in Table 1.

INGESTIVE/ELIMINATIVE SUBSYSTEM

The large proportion (80%) of criteria attained within the ingestive/eliminative subsystem reflects the clients' overall adequacy in maintaining fluid and electrolyte balance. This is perceived as being related to the strengths of the existing program of client care. Although it is recognized that an audit identifies strengths and weaknesses in nursing intervention, attention toward the weaknesses facilitates the identification of specific nursing interventions for the improvement of patient care.

The greatest percentage of criteria not attained involved the maintenance of normal serum electrolyte values. Serum sodium, chloride, potassium, calcium, phosphorus, magnesium and carbon dioxide were the laboratory measurements used to evaluate electrolyte balance. The audit indicated that 83% of the sample did not meet the established standard for normal calcium, magnesium and carbon dioxide values; 50% did not attain the

TABLE 1
Summary of Evaluation of Six Clients' Fluid and Electrolyte Balance Utilizing Outcome Criteria Tool

Client	Ingestive/Eliminative (64)* No. of Criteria Attained	Achievement (30)* No. of Criteria Attained	Total Criteria: 94 Total No. of Criteria Attained
1	48	20	68
2	48	16	64
3	57	14	71
4	53	5	58
5	51	27	58
6	50	14	64

*Total number of criteria within the subsystem.

standard for sodium and potassium. However, the majority of the clients, despite their abnormal laboratory values, exhibited few clinical symptoms related to these values. The possibility that the range of laboratory values was too restrictive was explored. However, the literature and the clinical experience of the authors substantiated the values as given. Thus the strength of this range of laboratory values was that abnormal electrolyte levels could be detected and intervention initiated before symptoms presented.

Although the variables affecting electrolyte balance are complex and often lie within the domain of medicine, certain nursing responsibilities are clearly delineated. For example, 83% of the sample did not meet the standard for the serum calcium level, which was 9 to 11 mg/100 ml. (The clients' values ranged from 8.3 through 9.2 mg/100 ml.) Questions for nurses to consider arising from these data include the following: Are clients knowledgeable regarding the purpose and proper administration of phosphate binders and calcium supplements? Are the clients compliant with their medication regimen? Are the clients receiving an adequate dialysis according to their clinical presentation, dialysis blood flow rate and BUN/creatinine laboratory determinations? How are the calcium dialysate and the mineral content of the bath water monitored?

Although the variables affecting electrolyte balance are complex and often lie within the domain of medicine, certain nursing responsibilities are clearly delineated.

The data relevant to magnesium revealed that 83% of the clients did not meet the established standard. This was attributed to the fact that serum magnesium values were not routinely evaluated in this outpatient dialysis setting; only one client had a recorded serum magnesium

value. The authors contend that a routine evaluation of magnesium levels is a necessary component of client assessment. The frequent usage of nonprescription magnesium-containing medications can lead to magnesium toxicity. Without magnesium laboratory determinations, the insidious onset of magnesium imbalances would be undetected.

A similar analysis was conducted on the data from the criteria evaluating fluid balance. The clients attained 90% of the criteria evaluating fluid balance. Therefore, it was assumed that the clients were knowledgeable regarding the importance of monitoring fluid intake. Although 50% of the clients exceeded their weight limitations, none of the clients exhibited any clinical evidence of fluid excess. This indicates that possibly the criteria were too restrictive for clients in the outpatient setting. However, it is possible that the narrow weight limitations are helpful in detecting a pattern of fluid overload. All of the clients attained the criteria established for vital signs, except the temperature, which was not measured in this outpatient setting. The authors believe that the temperature could easily and economically be included in the client assessment. Its inclusion would establish a baseline to determine the presence of an infection or a pyrogenic reaction related to the dialysis procedure.

ACHIEVEMENT SUBSYSTEM

The criteria within the achievement subsystem were grouped under three critical variables: (1) exhibition of knowledge and skills, (2) demonstration of compliant behavior and (3) demonstration problem-solving behavior. Successful attainment of the established criteria within this subsystem is essentially dependent upon the client's knowledge of the disease process and the therapeutic regimen. Since these categories are interrelated and interdependent, the data were analyzed collectively. There were 30 criteria within this subsystem. The number of criteria attained by each client ranged from 5 through 27. The mean was 16 (53%).

The low percentage of attainment within this subsystem, when compared with the ingestive/eliminative subsystem, reveals some inconsistencies. For example, within the achievement subsystem, clients demonstrated the ability to weigh themselves, to state their individual fluid restrictions and to state the kidneys' role in fluid balance. But they could not identify signs of fluid excess; describe the relationship between sodium, water and body weight; accurately measure their fluid intake; or identify high-water-content foods. These data pose many questions in view of the fact that the clients attained the majority of the criteria regarding fluid balance within the ingestive/eliminative subsystem. Does the client have adequate knowledge, but is unable to articulate it? Is the tool a valid indicator of desired client outcomes (e.g., did the tool take into consideration the client's sociocultural background)? Is being asymptomatic a valid indicator that the client has adequate knowledge to prevent fluid overload? Or does the small sample and lack of data from repeated audits preclude making a judgment on these data?

In regard to potassium, 83% of the clients could identify foods with high

potassium content, but 100% of the clients could not state possible side effects of hyperkalemia and 66% did not know its potentially lethal effect. Is the knowledge of high-potassium foods meaningless without the rationale for avoiding them? The fact that 50% of the clients did not meet the criteria for normal serum potassium levels supports the contention that there is a relationship between knowledge and the maintenance of electrolyte balance.

Although the clients reported that they were complying with their prescribed dietary and medication regimen, the fact that 83% of the clients wre unable to communicate a 24-hour diet history compatible with their restrictions and 50 to 80% could not communicate knowledge about their medications demonstrated that client self-report may not be a valid indicator of compliance. This is substantiated by the abnormal serum electrolyte values noted within the ingestive/eliminative subsystem.

The results of this audit indicated that, in general, the clients did not have sufficient knowledge of their disease and therapeutic regimen to function at an optimal level of wellness. The audit results provided the guidance for designing appropriate nursing interventions to reinforce positive outcomes and to correct the identified deficiencies.

In conducting the audit, the authors noted that the clients' records revealed little evidence of nursing assessment. Nursing diagnoses and nursing care plans were not recorded. Furthermore, the environment was not conducive to a comprehensive client assessment. One must ask these questions: Are the nurses knowledgeable in the nursing process? Do they have the knowledge and skills needed to perform a physical assessment and provide client counseling? Could the environment be modified to allow a monthly client assessment by the professional nurse? What means would facilitate the documentation and communication of nursing care plans? How could collaboration with other members of the health care team be enhanced? Since certain components of the client assessment were found to be lacking according to the criteria established (e.g., temperature, serum magnesium values, electrocardiograms), what is the process of implementing change within the agency?

In conducting the audit, the authors noted that the clients' records revealed little evidence of nursing assessment. Furthermore, the environment was not conducive to a comprehensive client assessment.

On the basis of low percentage of attainment within the achievement subsystem, one must look at the current client education practices. Is the staff knowledgeable in principles of client education? What is the ratio of professional nurses to nonprofessional (technical) personnel? What is the ratio of professional nurses to clients? Are audiovisual and written educational materials available, accessible and appropriate for this client population? Are families and their significant others included in client education? Are multiple approaches to client

education provided? Are client educational programs individualized? Is there a mechanism to evaluate the client's level of understanding of his or her disease process and therapeutic regimen? Answers to these questions would provide the impetus for establishing appropriate nursing interventions.

Identifying Courses of Action

After interpreting the strengths and weaknesses of nursing practice as revealed by the audit, the authors proceeded to identify possible courses of nursing action so that positive outcomes could be reinforced and deficiencies corrected.

Results of the data identified nursing interventions for both the dialysis center and the individual client. Nursing interventions recommended for the dialysis center include the following:

- nursing in-service education programs with particular emphasis on the nursing process, client assessment, principles of client education and psychosocial counseling;
- environmental changes to allow for a comprehensive client assessment;
- administrative changes for the addition of selected assessment criteria (e.g., temperature, serum magnesium values and electrocardiograms);
- administrative support for continuing client education;
- initiation of multidisciplinary team conferences.

Although the nursing interventions appropriate for this population were identified as client assessment, client education and psychosocial counseling, it is the responsibility of the professional nurse to individualize these nursing interventions for each client. Utilization of a nursing care plan as a permanent part of the client's record is advocated as the most efficient means to accomplish this. For purposes of illustration, a sample of a client's care plan is presented to demonstrate how the implementation of the total quality assurance program leads to specific nursing interventions. These interventions then need to be evaluated and the program of quality assurance begun anew.

Figure 3 illustrates a sample nursing care plan developed upon completion of an outcome audit. The plan is divided into five basic areas:

- assessment data: data which were found on audit;
- nursing diagnoses: the nursing diagnoses derived from the assessment data;
- outcome criteria: the anticipated outcome;
- intervention plan: specific nursing interventions to ensure outcome;
- evaluation: documentation of attainment of goal.

The client presented in the care plan is a 63-year-old black male with end-stage renal disease secondary to hypertension who began maintenance hemodialysis in December 1977. Presently he is being dialyzed for $4\frac{1}{2}$ hours three times a week in an outpatient dialysis center. He is on a 2-gm sodium diet with a 1-liter fluid restriction daily. He is unemployed and lives at home with his wife. The client attained 72% of the total criteria—75% within the ingestive/eliminative subsystem and 66% within the achievement subsystem.

FIGURE 3. SAMPLE NURSING CARE PLAN: FLUID AND ELECTROLYTE BALANCE IN CLIENT WITH END-STAGE RENAL DISEASE

Assessment Data	Nursing Diagnoses	Outcome Criteria	Intervention Plan	Evaluation
Weight gain 3.2 kg Intense thirst Unable to identify food with high water content Unable to communicate relationship of sodium and salt Unable to communicate accurate method of measuring intake and output	Inability to maintain body weight within prescribed limits related to inadequate knowledge and inability to integrate knowledge into lifestyle	Maintains body weight ± 1-2 kg between dialysis Absence of intense thirst Identifies three foods with high water content Communicates relationship between salt and sodium Communicates accurate method of monitoring intake and output	I. Assess A. Knowledge base B. Skill level C. Client perceived needs D. Psychosociocultural factors II. Utilize data from assessment to plan and implement an individualized teaching program to include: A. Dietary management 1. Rationale for sodium restriction 2. Explanation of relationship between sodium intake and thirst 3. Explanation of relationship between sodium and salt B. Fluid management 1. Rationale for 1,000 ml fluid restriction 2. Identification of foods high in water content 3. Method of measuring intake and output 4. How to plan fluid consumption for 24-hour period a. 200 ml/meal = 600 ml b. 400 ml to be spaced throughout day as determined by client c. Cold fluids quench thirst better than hot fluids III. Continuous assessment and reinforcement until a pattern of compliance is established	
Serum calcium 8.3 mg/100 ml Phosphorus 7.1 mg/100 ml Complaints of bone pain Client states he/she does not take Titralac because he/she does not understand the importance of taking it	Noncompliance with drug therapy related to lack of knowledge of the importance of taking calcium supplements	Maintains calcium & phosphorus intake compatible with Ca 9-11 mg/100 ml PO_4 3.5-5.5 mg/100 ml Absence of bone pain Communicates knowledge of Titralac to include action, dosage, time and side effects Communicates compliance with prescribed medications	I. Assessment of: A. Knowledge base B. Client perceived needs C. Psychosociocultural factors II. Utilize data from assessment to plan and implement an individualized teaching program to include: A. Rationale for maintenance of normal serum calcium and phosphorus levels and how these are altered in renal disease B. Relationship between calcium and phosphorus levels and musculoskeletal complications: 1. bone pain 2. muscle irritability 3. tetany C. Explanation of action of Titralac D. Identification of foods high in calcium E. Encouragement to include foods high in calcium in daily diet III. Continuous assessment and reinforcement until pattern of compliance is established	

THE TASK AHEAD

If nursing is to be accountable to society for the services it provides, means of establishing accountability must be designed and implemented. Quality assurance programs based on the evaluation of client outcomes were one step in this direction—but only an initial step. The need to relate these outcomes to specific nursing interventions became evident. The ANA proposed a model for quality assurance that integrates standards and criteria (structure, process and outcome). This model provided the framework for a quality assurance program based on the relationship between client outcomes and nursing interventions. This is just one approach. For nursing to continue to advance this aspect of nursing science, more research is needed.

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Appendix A

Selected Outcome Criteria from a Tool Evaluating Fluid and Electrolyte Balance in Clients with End-Stage Renal Disease

Target population: Adult clients (18 years and older) with end-stage renal disease requiring maintenance hemodialysis. Clients with nephrotic syndrome excluded. Criteria reflect predialysis and postdialysis expected outcomes, although audit may be conducted during the dialysis procedure.

Critical variable (standard): All critical variables are to be met by all clients 100% of the time.

Critical Time: Any time after discharge from acute-care setting.

Documentation: Data obtained from selected client.

Appendix A (continued)

Critical Variable	Outcome Criteria	Met	Not Met	Exceptions (PE = preexisting)	Documentation
INGESTIVE/ ELIMINATIVE					
1.0 Maintenance of extracellular fluid balance	1.1 Maintains fluid intake:				
	1.11 According to prescribed restrictions			No fluid restriction	
	1.12 Compatible with maintenance of body weight ± 1-2 kg (2.2-4.4 lbs) between dialysis			None	
	1.2 Demonstrates no edema:			Hyperaldosteronism	
	1.21 Periorbital			Steroid therapy	
	1.22 Extremities (pitting)				
	1.23 Sacral				
	1.24 Pulmonary				
	1.241 Lungs clear to auscultation and percussion			PE respiratory deficits	
4.0 Maintenance of extracellular calcium/ phosphorus balance	4.1 Maintains calcium/phosphorus intake compatible with (reported within last month):			Parathyroid disorder	
	4.11 Calcium 9-11 mg/100 ml			Acid-base disequilibrium	
				Skeletal disorders	
				Acute pancreatitis	
	4.12 Phosphorus 3.5-5.5 mg/100 ml			Pregnancy and lactation	
	4.2 Maintains stability of neuromuscular system evidenced by:			PE neuromuscular deficits	
	4.21 Pulse 60-100/min., regular and full quality			PE cardiovascular deficits	
	4.22 Absence of (within last week):				
	4.221 Muscle irritability				
	4.222 Tetany				
	4.3 Maintains integrity of skeletal system evidenced by absence of (within last 6 months):			PE skeletal disorders	
				Parathyroid disorder	
	4.31 Bone pain			Aging process	
	4.32 Pathological fractures				

Appendix A (continued)

Critical Variable		Outcome Criteria	Met	Not Met	Exceptions (PE = preexisting)	Documentation
ACHIEVEMENT						
7.0 Exhibition of knowledge and skills	7.33	Communication of relationship between salt and sodium				
	7.34	Communication of 24-hour diet history compatible with dietary restrictions, nutritional requirements and individual/cultural preferences				
	7.35	Identification of five high-sodium foods and/or condiments				
	7.36	Identification of five high-potassium foods and/or condiments				
	7.37	Identification of three foods with high water content				
	7.38	Communication of relationship between fluid and sodium intake and weight maintenance				
	7.39	Demonstration of ability to accurately weigh self				
	7.40	Communication of accurate method of monitoring intake and output			No fluid restriction	

Appendix B

Definition of Terms

There are terms specific to quality assurance that have been theoretically and operationally defined for use in this program. They are as follows:

Critical variable (standard)

Theoretical: the value-free name of a variable believed or known to be a relevant indicator of the quality of nursing care.[27]

Operational: identified essential elements of a balanced fluid and electrolyte state for clients with end-stage renal disease requiring maintenance hemodialysis (target population) that are to be met by all clients 100% of the time.

Outcome criteria

Theoretical: "the end result of nursing care; a measurable change in the state of the client's health."[2(p29)]

Operational: the identified end results of nursing care to the target population; measurable changes in the health/wellness indicators of a balanced fluid/electrolyte state of those clients.

Exception

Theoretical: "extenuating problem that would legitimately necessitate nonconformance to predictable care or outcomes."[32(p27)]

Operational: those valid, documented events listed in the tool that prevent compliance with the stated outcomes.

Documentation

Theoretical: written or printed paper furnishing information or proof.

Operational: comments written during the audit process that identify the sources of information, specifying whether criteria were "met" or "not met."

Critical time

Theoretical: specified time frame to indicate at what point the outcome criteria are to be applied.[27]

Operational: any time after discharge from an acute-care setting; clients should meet the standard at any time they or their records are audited.