THE U.B.C. MODEL FOR NURSING: DIRECTION FOR NURSING PRACTICE

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A model for nursing, a conceptual framework, is a mental image which provides a means for viewing the phenomena about which nursing is concerned: man and the ways in which nursing cares for man. The purpose of this paper is to identify and explain the direction the model gives for nursing practice, specifically, the provision of direct nursing care to patients.

The beliefs about nursing and its practice, assumptions about man, and assumptions about man as a behavioural system form the framework. This framework identifies for whom, when, why, where and how nursing functions in a unique way. The definition of nursing explicitly answers the following questions. Who receives nursing care? Man. When does nursing provide care? During critical periods of man's life cycle. Why is nursing care required? So that man may develop and utilize a range of coping behaviours which permit him to satisfy his basic human needs and thereby move toward optimal health. Implicit in the framework is the indication of where and how nursing functions in a unique way. Nursing provides care in a variety of settings. This implication is derived from the belief that man encounters critical periods and the inference is that critical periods may be encountered in any setting.

The implication of how nursing provides care is derived from subsystem structure and function. Forces and cognitive and executive abilities, the essential determinants of coping behaviours, are manipulated to effect suitable coping behaviours. This manipulation of forces and abilities constitutes the way in which nursing functions in a unique manner.

Thus far, the directions for nursing practice offered by the model have been specified. A conceptual framework is of limited use in practice, however, without a mechanism by which it can be made operational. Such a mechanism is the nursing process. The nursing process, a problem-solving approach, is a systematic, cyclical, ongoing method of providing nursing care. The nursing process usually is viewed as having four phases: assessment, planning, implementation and evaluation (Yura and Walsh, 1973). In addition to the direction for nursing practice previously stated, the model offers direction for each of the four phases of the nursing process.

The assessment phase includes data collection and analysis. The structure and function of each subsystem dictate what data are to be

collected. This mandate for data collection prompted the U.B.C. School of Nursing to develop a data collection tool. In this tool the major categories of subsystem data to be collected are identified. For example, in relation to the ingestive subsystem, the categories of nutritional status, patterns of food and fluid intake and perception of satisfaction of food and fluid intake are included. Further, the category of nutritional status necessitates data such as height, weight, ability to chew and knowledge about nutrition be collected.

The requirement to determine subsystem goal achievement and degree of need satisfaction demands that the data collected be analyzed. Analysis reveals concerns for nursing in relation to the presence and/or suitability of coping behaviours, the presence of negative forces and the presence and/or absence of positive forces.

The planning phase includes setting priorities among the concerns identified, establishing objectives in behavioural terms and formulating nursing interventions to be employed. Objectives are stated as coping behaviours to be developed and/or utilized. For example, analysis might reveal a concern identified as "anorexic for two weeks". An objective might be: "within three days, the patient will be eating one balanced meal per day at a time of his choice." Specific nursing interventions are derived from the three major means of intervention: reduction of negative forces, maintenance and strengthening of positive forces and fostering the development of cognitive and executive abilities. For example, in reducing a negative force, "tension headache", specific nursing interventions might include providing quiet surroundings and utilizing relaxation techniques. The framework does not offer direction for setting priorities; clinical judgement is used to determine the priority of concerns.

The implementation phase is the carrying out of nursing interventions as planned. The direction that the model gives for this phase has been discussed on page 13. The evaluation phase includes determining the effectiveness of nursing interventions, whether objectives are met and whether concerns have been resolved. These activities culminate in appraisal of behaviour change. This appraisal determines presence and/or suitability of coping behaviours and is related to goal achievement, need satisfaction and, therefore, behavioural system balance. In the example of the anorexic patient, eating one balanced meal per day would be a behaviour change. Appraisal in this instance indicates presence of a suitable coping behaviour which should facilitate goal achievement, need satisfaction and, therefore, behavioural system balance.

Validation, an activity employed throughout the nursing process, includes clarifying and confirming data collected. Data collected re-

present, in part, patient perception of subsystem structure and function. For example, statements regarding feelings of being loved and cared about indicate patient perception of goal achievement and need satisfaction in the affective subsystem. Because each phase of the nursing process depends upon patient perception of subsystem structure and function, validation is required throughout.

Explicit and implicit direction for nursing practice provided by the U.B.C. Model for Nursing has been explicated. The mechanism required to make the framework operational was identified as the nursing process. In addition, direction offered by the model for the four phases of the nursing process was delineated and discussed.

To show how direction can be utilized in giving nursing care to one patient, one example follows.

THE CASE OF MRS. A. T.

Mrs. A.T., a 61 year old lady, living in Vancouver for the past 40 years is originally from Sweden. Her second language is English. She has been separated from her husband since she was 21 years old. She has a married son, an only child also living in Vancouver. A. T. supports herself by cleaning other people's homes. She lives in a rooming house with five people whom she calls "friends".

During her life A.T. has been hospitalized three times: for childbirth, for pneumonia in 1955, and for a psychiatric episode in 1969. A.T. visits her general practitioner yearly for a physical examination which to date reveals that she is essentially well. She attends a psychiatric clinic every other week. Her main contacts at the clinic are nurses. Her only medication is a major tranquilizer she takes daily. A.T. perceives herself as being "O.K." and that she needs to come to the clinic every two weeks. When she does not feel "good", i.e. when she has a cold, a stomach upset or an injury, she sees her general practitioner.

REPARATIVE SUBSYSTEM **Need:** for balance between production and utilization of energy

Goal: capacity for activity

Physical Assessment

- facial appearance: alert and relaxed
- general posture: upright, relaxed
- movement from one position to another: smooth and easy
- has full range of body movement and joint mobility
- occasional pain and swelling of left knee
- no indication of skin breaks or slow healing of minor cuts

Interview

- makes sure that she gets 7 hours of sleep per night, in bed by 11 p.m., no aids required to help fall asleep
- states she feels rested and ready for the day's activities at 6 a.m.
- takes brief rest periods at work as required
- relaxes by watching TV, by visiting with fellow roomers
- goes to work six days per week
- work day averages 4 to 6 hours

Reparative Subsystem (continued)

Physical Assessment

— good coordination of fine and gross movements
— good muscle strength except for weak ankles

Interview

— walks to and from work but takes the bus when distance more than 16 blocks
— work includes light and heavy house cleaning duties
— babysits occasionally
— On Sundays, does personal chores, e.g. washing
— sees self as being agile, energetic and productive
— supports weak ankles by using tensor bandages
— states no problems with tissue healing

Results of Analysis:

Data indicate that reparative subsystem goal is being achieved and that the need is being satisfied. Sleeping seven hours per night, resting when tired and carrying out work activities are examples of coping behaviours in this subsystem.

RESPIRATORY SUBSYSTEM **Need:** for intake of oxgygen
Goal: oxygenation; easy respiration

Physical Assessment

— easy rhythmic, regular respirations, breath sounds clear
— colour of skin, lips, nailbeds: pink
— sits up straight with good chest expansion
— no dyspnea in any position
— apical rate 80 per minute
— radial pulse, 80 per minute full and regular
— standing and sitting, BP140/80

Interview

— states she easily catches colds and flu
— in all seasons, wraps chest with woollen material
— wears clothes to keep self warm
— knows importance of chest expansion
— knows being overweight makes breathing harder
— does not smoke
— states she has no allergies
— likes a well ventilated room
— avoids drafts
— in maintaining daily activities does not experience shortness of breath

Results of Analysis:

Data indicate that subsystems goal is being achieved and the need is being satisfied. Data suggest that the respiratory subsystem is susceptible to problems. Coping behaviours such as assuming a posture which ensures good chest expansion and keeping the chest wrapped are used to prevent the occurrence of problems. Mrs. T. recognizes that her weight interferes with respirations and says she diets in an effort to reduce weight, therefore enhance the ease of respirations.

INGESTIVE SUBSYSTEM **Need:** for intake of food, fluids; nourishment
Goal: nourishment; satisfaction of hunger and thirst

Physical Assessment

— general condition of skin: clear, intact

Interview

— shops for and prepares own food

Ingestive Subsystem (continued)

Physical Assessment

— colour: pink
— nails not brittle
— has full set of natural teeth in good condition
— able to chew and swallow with ease
— height — 5 feet, 2 inches (155 cm)
— weight — 180 pounds (82 kg)

Interview

— cooks for self on one burner hot plate
— no access to a refrigerator
— depends on own income
— eats 3 meals per day, no snacks
— knows the Canada Health Rules for foods
— eats meat once a week, fish twice a week, cheese once a week
— eats fresh fruits daily
— eats large amount of starches
— uses fats for frying
— doesn't like eggs, vegetables cooked or raw
— likes but tries not to eat breads, sweets or milk
— takes 1 multivitamin tablet daily
— says she is always trying to lose weight
— realizes she doesn't need all the food she eats
— drinks water, coffee, tea
— once or twice a month invited by son to dinner
— once or twice a month cooks fish supplied by a fellow roomer then dines with him
— usually eats alone
— states she periodically experiences indigestion, unable to identify cause

Results of Analysis:

In spite of the cognitive abilities to know food values and nutritional requirements and the executive abilities to procure and prepare nutritious meals, economic resources plus environmental forces such as inadequate food storage and cooking facilities influence the coping behaviours used. An inference might be made that the goal is being achieved and the need is being met but the quality of the coping behaviours used should be monitored for their continued effectiveness.

ACHIEVING SUBSYSTEM **Need:** for mastery
Goal: feelings of accomplishment, satisfaction with accomplishments

Physical Assessment

Interview

— likes work involved in house cleaning, likes people for whom she works
— experiences feelings of accomplishment for keeping clients for a number of years, and when the clients' children are happy to see her each week

Achieving Subsystem (continued)

— taking care of self, earning own income, using own resources to live her life in her own way are very important
— takes pride in being reliable in fulfilling commitments

Results of Analysis:
Data indicate subsystem goal achievement and need satisfaction. Coping behaviours reflect feelings of accomplishment and the ability to be autonomous.

EXCRETORY SUBSYSTEM **Need:** for collection and removal of accumulated wastes

Goal: absence of accumulated waste

Physical Assessment

— perspires moderately on exertion
— no evidence of edema
— urine: clear, straw coloured, specific gravity within normal range
— exhales evenly with ease

Interview

— bowel pattern: every two days
— consistency: well formed although experiences diarrhea-type stool approximately once a month
— states she doesn't know the cause but believes limiting food and fluid intake helps
Does not use aids
— states no difficulty with urination
— places importance on cleanliness of bathroom facilities; takes responsibility for keeping shared bathroom clean

Results of Analysis:
Data indicate that the goal is being achieved and the need is being satisfied. The occurrence of diarrhea should be explored in relation to food preparation and storage.

SATIATIVE SUBSYSTEM **Need:** for stimulation of the system's senses (i.e. hearing, vision, smell, touch, taste)

Goal: sensory satisfaction

Physical Assessment

— able to receive stimuli through her five senses

Interview

— states hallucinations interfere with sensory input and cause her to be uncomfortable
— seeks sensory stimulation by watching TV, reading, conversing with fellow roomers
— enjoys relating to children e.g. grandchildren, children she meets at work, but opportunities for contact are minimal
— likes to travel, but cannot afford to travel
— enjoys having and caring for her plants
— limited number of friends
— does not go out at night
— no telephone
— gets "tired" of TV and reading

Results of Analysis:

Coping behaviours in relation to number and variety are limited. Data indicate lack of subsystem goal achievement and need satisfaction. Extrapolating from the data, the feelings of boredom and loneliness might be identified.

PROTECTIVE SUBSYSTEM **Need:** for safety and security
Goal: integrity of the system

Physical Assessment

- ability to see, hear, smell, taste and touch, within normal limits
- no mechanical aids required
- skin intact but area covered by tensor bandages is dry, marked and flaking
- hair clean, combed
- nails clean, trimmed
- coordinated gross and fine movement apparent

Interview

- experiences hallucinations
- knows hazards in the environment to avoid, e.g. proper foot wear, no scatter rugs on floor
- knows parts of her body that are vulnerable i.e. left knee joint, chest and lungs, ankles: employs protective measures: occasionally, applies tensor bandage too tight and leaves on too long i.e. day and night. Wears support hose for comfort
- keeps her living environment clean and safe
- chooses to live in rooming house where presence of others ensures her feelings of security
- ensures she is home before sundown; feels safe in own room after dark
- visits doctor routinely for yearly physical examination
- seeks professional help when she feels uncomfortable e.g. when knee becomes swollen and painful, when hallucinations make her feel "bad"
- bathes every second day, brushes teeth twice a day; shampoos hair once a week
- has made applications for supplemental income and for low cost housing facilities
- states this is preparation for when she can no longer work and to prevent being a burden to son
- when unable to follow conversation due to limited English comprehension, physically and/or psychologically retreats until drawn back by another person

Results of Analysis:

Data indicate that most aspects of the environment are safe and secure. Application of tensor bandage too tightly and for too long may lead to a problem of skin breakdown. Data from the other subsystems, such as the affective and satiative, indicate that there are few significant people and that boredom and loneliness exist. Experiencing hallucinations may be a coping behaviour to protect against loneliness and boredom and to deal with having few significant people in her world.

AFFECTIVE SUBSYSTEM **Need:** for love, belongingness and dependence

Goal: feelings of love, belongingness and dependence

Physical Assessment

— well groomed, neatly, appropriately and attractively dressed

— slow to initiate contact with others but responds to others reaching out to her

Interview

— states she has few outfits due to financial resources and an inability to sew

— states is slow in making friends but maintains friendships

— husband in Sweden, separated for forty years, no contact

— one brother and three sisters living in Sweden, corresponds regularly with them

— son, only child, lives with wife and two children in Vancouver: sees them irregularly i.e. Christmas, Easter, Mother's Day: states irregular visits is "OK" with her because doesn't want to interfere with son's life, nor be a burden to him

— friends in the rooming house

— financial resources prevent extensive travelling and visiting

— walks or relies on bus transportation

— afraid to go out at night to visit

— no telephone

— states she feels loved and cared about by her son and grandchildren

— states she loves them and cares about them

— states she does not expect more of her son than what he already does for her

— hallucinates

Results of Analysis:

Data indicate that Mrs. T. perceives subsystem goal achievement and need satisfaction. However, in view of the data collected in other subsystems such as the protective, satiative and ego-valuative, there appears to be incongruency with Mrs. T's perception. Again loneliness and boredom can be identified.

EGO-VALUATIVE SUBSYSTEM: **Need:** for respect of self by self and others.

Goal: self-esteem

Physical Assessment

— included previously: grooming, dress, posture; hygiene and communication patterns

Interview

— states she requires times for being alone and enjoys times when she is alone

— also believes others have this same requirement

Ego-Valuative Subsystem (continued)

— feels good about self when able to do for or give to others
— when recognition given for her work well done, she feels good about herself
— is less able to receive "gifts" from others than to give "gifts"
— feels not as able as 10 years ago
— lives one day at a time but plans for the future
— states she enjoys life
— hallucinates

Results of Analysis:
Data suggest that this subsystem goal is achieved and need satisfied. However, hallucinating is a negative force which may lead to alienating employers and significant people and therefore reduce self-esteem.

Analysis of data within each subsystem and among the nine subsystems indicate behavioural system imbalance. Based on analysis the following concerns can be delineated:

1. Hallucinating due to boredom and loneliness
2. Threat to skin intactness due to use of tensor bandage
3. Enhancing easy respirations
4. Improving nutritional status

Nursing Concern	Objectives	Interventions
Hallucinating due to boredom and loneliness	1. Within one month Mrs. T will recognize that hallucinating is inappropriate behaviour. Indication of this recognition is verbal statements of adverse consequences of hallucinating. 2. Within 6 months Mrs. T will substitute appropriate behaviour for hallucinating behaviour as soon as hallucinations begin. Indication of this substitution is verbal statements of taking specific action when hallucinations occur.	1. Point out in a non-threatening manner hallucinating symptoms when they occur. 2. Help to develop socialization skills which can be used as substitute behaviours. 3. Enlarge world of social contacts by means of a group milieu. 4. Monitor use of a prescribed tranquilizer.

[Interventions are directed toward manipulating positive forces, e.g. the group milieu, and fostering the development of congitive and executive abilities by helping her acquire socialization skills.]

Progress Notes

1st week — Completely involved in describing hallucinations and explaining frequency and duration of occurrence; uses verbal and non-verbal behaviours to describe and explain her situation.

2nd week — Less involved with describing hallucinations. Less overtly expressive with hands and arms. When asked about her ability to carry out job activities, stated she was afraid people might think she is crazy.

3rd week — Pointing out hallucinating symptoms resulted in patient recognition and verbal expression of experiencing hallucinations. Also expressed undesirability of hallucinating. Appears more relaxed.

4th week — Patient not describing the frequency or duration of hallucinations. Starting to use substitute behaviors when symptoms of hallucinations are pointed out.

The interventions decided upon seem to be effective in allowing Mrs. T to meet objective #1. Continue with same interventions to meet objective #2.

Over the 6 months period Mrs. T demonstrated substitute behaviours such as describing events in her past and present life, or carrying out exercises instead of hallucinating. Mrs. T stated that when experiencing hallucinations at home, she did exercises or sought out companionship as substitute behaviours. She also stated that the hallucinations disappear when she uses substitute behaviours. In relation to this objective the group members continue to support and reinforce her new coping behaviours. Occurrence of hallucinating behaviours in the group has become minimal. Monitoring the use of the tranquilizer resulted in establishing a desirable maintenance dose.

These interventions continue to ensure that Mrs. T will remain out of the hospital and functional on a day-to-day basis.

Nursing Concern	Objective	Interventions
Threat to skin intactness due to use of tensor bandages	When Mrs. T's skin under the tensor bandage is examined, the skin will feel moist and look unmarked.	1. Check for tightness of bandage and condition of skin. a) If too tight show the patient marked and dry skin. Indicate clearly that this is undersirable. b) Apply lotion and have Mrs. T. feel skin c) Reapply bandage and show patient correct tension. 2. Ask if bandage is kept on day and night. If so, explain importance of taking bandage off at night and then applying lotion to skin.

[Interventions are directed toward fostering the development of cognitive abilities, e.g. knowledge about undesirability of tight bandage, and executive abilities, e.g. ability to apply bandage correctly.]

Progress Notes

Initially the skin was checked every two weeks. Within two months, Mrs. T. was reporting that she removed the bandage at night and applied lotion to her leg. The skin has remained intact, feels moist and marks have occurred less frequently. The objective is being achieved but Mrs. T. has difficulty comprehending the English language. Regular monthly checking has been maintained and suitable coping behaviours have been reinforced.

Nursing Concern	Objectives	Interventions
Enhancing easy respirations	1. Within 6 months Mrs. T will present a plan for reducing weight as an expression of her desire to lose weight and therefore make breathing easier. 2. Within 3 months after initiating her diet plan, Mrs. T will show a loss of 3 kg.	When Mrs. T makes statements about her weight, remind her about her desire to lose weight. Then ask: "What can you do about your weight?" If response is in relation to dieting, problem-solve with Mrs. T to help her develop a plan for dieting. Reward her for her problem-solving ability and reinforce that her plan will be of value to her. Weigh every 2 weeks. If weight loss noted, praise her. If no weight loss noted, reinforce value of diet plan to her.

[Interventions are directed toward fostering the development of cognitive abilities, e.g. knowing the relationship between being overweight and easy respirations. Although she perceives and recognizes the benefits of dieting, Mrs. T is unable to plan and therefore act with a suitable coping behaviour, i.e. dieting.

Interventions are also directed toward maintaining and strengthening positive forces, e.g. her desire to lose weight and breathe with greater case.]

Progress Notes

Up to now the other concerns, particularly "hallucinating due to boredom and loneliness" have precluded instigation of the intervention related to easy respirations. Within the next few weeks the intervention decided upon will be implemented as Mrs. T would appear to be ready to work toward the established objective.

Nursing Concern	Objective	Intervention
Improving nutritional status	—	—

Dealing with this concern depends upon Mrs. T achieving the objective established for "enhancing easy respirations". Interventions will be in relation to reinforcing the suitable coping behaviour acquired, i.e. dieting by eating the proper foods and to supporting her accomplishment for being able to plan and to carry out that plan. Until the objective for the preceding concern is achieved, this concern is only acknowledged. However, the coping behaviours of eating the amounts of protein foods that she desires and eating fresh fruits daily will be monitored to ensure that these coping behaviours are continued.

An example of giving patient care using the U.B.C. Model for Nursing has been presented. Data collected are shown in relation to

the nine subsystems. Results of analysis, within and among subsystems, are stated and culminate in identification of four nursing concerns. Objectives, interventions, and progress notes relative to each concern are delineated.

In conclusion, the benefits of using a conceptual framework in nursing practice can be viewed from two perspectives. From the patient's point of view all his needs are considered in an integrated manner. His perceptions and concerns are acknowledged and solutions sought are in relation to goal achievement and need satisfaction.

From nursing's point of view, using a conceptual framework allows nursing to become precise and effective in the provision of direct care to patients. Utilizing the model in practice provides the opportunity to test the model for its usefulness and effectiveness. The information obtained about its usefulness and effectiveness indicates further development and refinement required. Ultimately, as a result of testing, refining and retesting the framework in practice, a body of nursing knowledge can be established.

Reference

Helen Yura and Mary B. Walsh, *The Nursing Process,* 2nd ed. (New York: Appleton-Century-Crofts, 1973), p. 69.