Using Peplau’s Theory of Interpersonal Relations to Guide The Education of Patients Undergoing Urinary Diversion

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Bladder cancer is the second most common urologic cancer in the United States resulting in over 61,000 new cases in 2006 (American Cancer Society, 2006). Approximately 30% of all new cases present with muscle-invasive disease that requires a radical cystectomy and a urinary diversion for the best cure rate. Surgical options for a urinary diversion include an ileal conduit diversion or the formation of a continent urinary reservoir (CUR) (Kane, 2000a; Perimenis & Koliopanou, 2004). The teaching needs of persons with a surgically altered urinary tract system are significant. Patients undergoing this major abdominal surgery are at risk for multiple postoperative complications including pneumonia, ileus, infections, thrombophlebitis, and emboli. Further, the potential for altered body image, incontinence, and changes in sexual functioning exist (Perimenis & Koliopanou, 2004). As the length of hospitalization decreases, the patient and/or family are required to assume more responsibility for postoperative care at an earlier date. A well-planned, concise nursing intervention/teaching program is necessary to facilitate the transition from hospital to home. The purpose of this article is to show how Hildegard Peplau’s Theory of Interpersonal Relations can guide the nurse’s effort to provide critical teaching for these patients.

Patients diagnosed with bladder cancer may require a urinary diversion to maximize their health care outcomes. These patients, faced with sudden changes in their health status, develop complex unmet needs that can be addressed by a planned program of education. Peplau’s theory of interpersonal relations offers a framework for patient teaching that emphasizes the importance of the nurse-patient relationship. This therapeutic relationship enables the nurse to provide the patient with the information needed to understand the diagnosis, cooperate in the treatment plan, facilitate postoperative recovery, and return to a state of independence with quality of life.

Overview of Continent Urinary Reservoir

Continent urinary reservoirs reflect the state of the art approach to urinary diversion. Two types of CURs are constructed by isolating and detaching various sections of the intestine and configuring this tissue into a sphere (Gray & Beitz, 2005; Kane, 2000a). This sphere-shaped reservoir is then anastomosed to the intact upper urinary tract system (Gray & Beitz, 2005). Elimination of urine depends on the type of diversion created. The orthotopic neobladder is reattached to the urethra so that the patient urinates through the meatus (Gray & Beitz, 2005). A second method of diversion, the continent cutaneous reservoir, involves creating an efferent limb ending with a stoma that is brought through the abdomen to the skin level (Gray & Beitz, 2005; Kane, 2000a). Elimination from the continent cutaneous reservoir requires insertion of a catheter into the reservoir to drain the urine.

Patients have significant pre and postoperative needs that unfold with the cancer diagnosis, and balloon to affect daily life both pre-operatively and post-operatively. Physical needs include learning the management of the altered urinary system, receiving adequate pain control, and understanding the role of nutrition in the recovery phase (Kane, 2000b). A daily exercise plan with increasing intensity and duration is necessary to maintain...
levels of activities of daily living, prevent constipation, and lessen the possibility of pneumonia or emboli. If necessary, in-home physical therapy can be arranged.

Lack of proper nutrition can delay the healing process and increase the risk for other surgical complications. Since nutrition is a key component in the recovery process, patients may need to re-evaluate previous eating habits. Loss of appetite is common following this surgery and these patients should be encouraged to eat six small meals daily with attention to protein at each meal. Isolated patients or those living alone are less likely to eat properly. Community resources such as “Meals on Wheels,” well-being checks, and clergy visits can be planned to improve the needed social aspect of eating.

Social needs relate to concerns about finances including the loss of income, inability to pay for hospital services and other medical costs, and the inability to care for themselves or other dependant family members. Patients may also experience a change in their role or status within the family, going from decision maker to dependent member. This may cause increased stress, anxiety, and depression. Compound this with the fact that, in the initial postoperative period, these patients usually require additional family support for assistance with physical care and temporary housing. Many are elderly, live alone, and should not return to their primary home alone for at least 1 week. Yet many of these patients may be reluctant to interrupt their children’s lives and request assistance. If necessary, short-term stays in extended care facilities can be arranged through social service agencies.

Psychological needs stem from the physical and social issues patients are challenged to confront (Fleischer & Bryant, 2005; Gray & Beitz, 2005). Knowledge deficits about the diagnosis, surgical treatment options, pre-operative testing procedures, and short and long-term postoperative care, create an environment that further increases patients’ anger, grief, fear, and anxiety (Fleischer & Bryant, 2005; Gray & Beitz, 2005). Instruction by a knowledgeable nurse is, therefore, critical to help guide them through decision making, treatment, and recovery in order to promote their return to optimal health status. Peplau (1992) identifies a need for patients to also be part of a community. These patients need involvement with friends and family on a social level beyond their assistance as caregivers. Rejoining their church community, meeting friends for lunch/dinner, and participating in other community events may prevent depression.

Peplau’s Theory of Interpersonal Relations

Peplau’s (1992) theory of interpersonal relations provides a conceptual framework by which the nurse can assess, plan, and intervene for optimal outcomes for the patient with bladder cancer. The foundation of her theory explores the primacy of the nurse-patient relationship (Forchuk, 1991; Peplau, 1997). According to Peplau (1992), the nurse is a complex individual, who is the sum of all past experiences, rigorous nursing training, and unique personality traits. The patient, also a complex individual, has a unique personality and is knowledgeable within his or her own frame of reference (Peplau, 1992). The nurse-patient relationship is initiated with a change in the health status of the patient, and the availability of a nurse with the ability to provide specific skills (Peplau, 1992). The nurse-patient relationship evolves through the phases of orientation, identification, exploitation, and resolution. The nurse must adapt to different roles so that the needs of the patient are met within each different phase (Forchuk, 1991; Peplau, 1997).

Peplau (1997) suggests that as nurses learn to apply principles of human relationships, they mature in the ability to promote therapeutic relationships as they come to understand their own behaviors and needs. Successful nurse-patient relationships require unbiased, patient-focused encounters that address and meet the patients’ needs (Peterson & Bredow, 2004). Nurses must recognize, accept, and encourage cues that indicate the patient’s readiness for growth and movement. Likewise, they must be able to identify and mobilize community resources to help patients cope with the psychosocial needs that arise with sudden change in health status (Peterson & Bredow, 2004).

Phases of the Interpersonal Process

Orientation. Peplau (1992) outlines the phases of the interpersonal process that are integral for successful teaching including orientation, identification, exploitation, and resolution (see Table 1). In the orientation phase, the nurse and patient meet. As the patient begins to accept the nurse and his/her level of expertise, the role advances from stranger to resource person and counselor (Peplau, 1992). The nurse answers questions and assesses the patient’s readiness to learn. Once the patient acknowledges and accepts his or her own knowledge deficit, there is a motivation to learn. This awareness and need permits the nurse to move into the roles of teacher and resource person (Peplau, 1992). Limited information is given based on the stressors the
### Table 1. Phases of the Interpersonal Process

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<th>Phase of Interpersonal Process</th>
<th>Definition</th>
<th>Teaching Activities for the Patient Undergoing Urinary Diversion</th>
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| Orientation                    | Patient recognition of need for help. Resources provided on limited basis as acceptable by patient. Initiation of nurse-patient relationship. | 1. Assessment of prior knowledge and experiences.  
2. Assessment of readiness to learn.  
3. Involvement of patient in developing mutual teaching goals.  
4. Presentation of educational materials.  
5. Discussion of pre-operative procedures.  
6. Different options for diversions; patient pathways. |
| Identification                  | Patient identifies problems to be worked on. The patient has some working knowledge of the health care needs. Trust level with nurse is in early stages and the patient will selectively begin to assimilate knowledge and accept interactions with nurse. Imitative behavior begins and gradually switches to a creative constructive response. | 1. Demonstration/return demonstration of neo-bladder care.  
am. Bladder irrigation.  
b. Maintaining tube patency.  
c. Care and cleaning of equipment.  
d. Knowledge of emergency situations.  
2. Discussion on nutrition.  
a. Re-assessment of prior eating habits; reduce “empty” calories.  
b. Six small meals daily with attention to five food groups.  
c. Fluid requirement 2 quarts daily.  
a. Rationale for exercise.  
b. Intensity and duration. |
| Exploitation                   | Comfort and trust level established. Patient takes advantage of services offered by nurse and benefits from relationship with nurse. Some vacillation between dependence on nurse and self-direction. Focus on incorporating learned experiences into future health status and quality of life (QOL). | 1. Reaffirm patient’s knowledge and expertise.  
2. Promote independence.  
3. Identify available community resources.  
4. Role playing.  
5. Present theoretical complex situations and have patient problem solve. |
| Resolution                     | Prior goals have been met and new goals are formed. Patient experiences a sense of security because needs have been met in a timely manner. Increase in self-reliance and decreased reliance and identification with urologic nurse. | 1. Encourage participation in support group for continent diversions.  
2. Identify QOL issues and discuss options.  
a. Nocturnal incontinence.  
b. Sexual changes.  
c. Alterations in body image.  
d. Anxiety about cancer diagnosis. |

Patient may be experiencing such as pain, fear, anxiety, or emotional instability (Peplau, 1992; Pohl, 1978). Principles for adult learning stress readiness, repetition and reinforcement, and guide the nurse in determining the amount, level, and frequency of teaching that can be provided to the patient at any one time (Pohl, 1978). Active participation, problem solving, and trial and error foster collaboration, and strengthen the bond between the nurse and patient (Peterson & Bredow, 2004; Pohl, 1978). Validation and acceptance of the fear, tension, and anxiety exhibited by the patient enables the nurse to suggest ways to redirect it in a constructive fashion, thus preventing escalation of the anxiety that blocks learning, acceptance, and growth (Peterson & Bredow, 2004).

In the orientation phase the nurse and the patient discuss
their expectations and goals for initial and future meetings. Mutually agreed upon goals guide the nurse in developing an outline of the treatment protocols for the urinary diversion with which the patient must become familiar. Verbal and written descriptions are used to explain important information. Visual teaching aides are also useful supplements that greatly enhance the instructional sessions at this stage and could include hands-on exposure to an ostomy appliance, an anatomical model, or pictures. Also included in the teaching are the preparations for surgery such as donation of autologous blood, bowel preparation, changes in medication, and a generalized pathway for hospitalized care.

Identification. The identification phase begins when the patient has a limited understanding of the disease (bladder cancer), treatment choices, and potential self-care issues. Based on prior relationships and previous medical interventions, the patient may identify the need for help (Peterson & Bredow, 2004). This phase may involve independence, over dependence, or complete isolation/rejection of the nurse. The ultimate goal of this phase is to provide opportunities for the patient to attain a level of readiness to assume responsibility for his/her care (Peplau, 1997).

Goals for this phase could be divided into pre-operative, immediate post-operative, and discharge planning. A pre-operative goal would be for the patient to understand and comply with the bowel preparation program. A second pre-operative goal would be for the patient to review the written materials about the diversion on the eve of the surgery. A review of this material helps him/her to foster independence and maintain a sense of control during the pre-operative period. Compliance of these goals indicates the willingness to learn and the beginning of accepting responsibility for self-care.

A postoperative goal would be to understand and undertake the activities that may prevent pneumonia and emboli, including early vigorous ambulation and frequent use of incentive spirometer. A second postoperative goal would be to learn self-care about the tubes draining the CUR, the incision care, and the equipment care. Often at discharge, 7 to 10 days after surgery, the patient relies on family members to assist with care. However, early independence helps to foster self-esteem and a return to positive body image.

A discharge planning goal is for the patient to identify an emergent situation and outline the procedures for managing the situation. This could include knowing the signs and symptoms of wound infections or urinary tract infections. Other critical situations could be nonfunctioning urinary drainage tubes, fevers, and sudden onset of gross hematuria or abdominal pain.

The patient who is able to recognize the need for new skills/knowledge to achieve the goals established has effectively moved through the identification phase of the nurse-patient relationship. Accomplishment of these goals facilitates movement into the exploitation phase of the relationship.

Exploitation. In the exploitation phase the patient demonstrates the ability for self-care and independence (Peplau, 1997). The comfort and trust level of the nurse-patient relationship has been established. Initial goals have been met, allowing an opportunity for further growth. Therefore, new goals are identified that prompt a temporary return to the identification phase. An example: After 2 to 3 weeks post-surgery the bladder incisions have healed and the x-rays indicate no extravasations of the dye; the indwelling catheters will be removed. At this point, the patient must learn a new set of self-care techniques. The patient must be taught to urinate using Valsalva maneuvers and pelvic floor muscle relaxation. Techniques for intermittent catheterization, timed voiding, bladder diaries, and use of incontinence products present a new array of tasks.

Resolution. The final phase, resolution, may begin months after discharge. The patient experiences a sense of security because his/her needs have been met. Immediate self-care has been learned and self-reliance is increasing. Independence and separation from the urology nurse occurs. The focus switches to quality of life issues and long-term acceptance of the health status.

Incontinence, sexual intimacy, and acceptance of body image changes may require longer nurse-patient relations (Gray & Beitz, 2005). Long-term involvement in a support group provides an important and necessary link to others in their community who are dealing with the same concerns and issues (Kane, 2000b). A sense of security and confidence is derived from the ability to reach out to others (Forschuk, 1991).

Applying Peplau’s Theory

The nurse-patient relationship is a key concept in Peplau’s theory. If switching from a theoretical to practical application is to be effective, the clinician must establish outcome measures that incorporate the unique needs of the patient (Peplau, 1992; Peterson & Bredlow, 2004). Outcome measures guide the practitioner in the assessment of the patient’s individual needs, and outline the care required. They also provide a means for evaluating the progress of the instruction and related interventions. Peplau stresses that successful interventions only occur if the patient is
valued and accepted by the nurse. Acceptance is attained by seeking active patient participation in the development of the goals for the interventions.

Suggested outcome measures for patients undergoing a urinary diversion might include:

- The patient participates in a bladder cancer/urinary diversion support group pre-operatively and postoperatively.
- The patient is able to engage in self-care activities to support maintenance of the urinary diversion.
- The patient collaborates with the nurse to identify resources to help him/her cope with post-surgical consequences of urinary diversion (urinary incontinence, sexual dysfunction, etc.).

Case Study

A 60-year-old male with muscle-invasive bladder cancer. He was seen by his local urologist after two episodes of hematuria. Patient denied dysuria, urgency, or frequency. He had no recent weight loss, shortness of breath, or symptoms of bone pain. He underwent a cystoscopy and bladder biopsy that revealed muscle-invasive bladder cancer. He was referred to the academic medical center for further evaluation and treatment.

Past history included tobacco use of three packs/day for 45 years; however, the patient stopped smoking 1 year ago after a severe upper respiratory infection. He works full time as an independent painting contractor. No other health problems were reported. He is married and has two adult sons; the sons are not employed in his business. The complete blood count and complete metabolic count, especially the BUN and creatinine, were within normal limits for age. The chest x-ray and CT scans of the abdomen and pelvis were also normal. The consulting urologist discussed options for continent diversion, and explained that his chances for long-term, disease-free recovery were excellent. He was referred to the urologic nurse for additional teaching.

In the first meeting with the urologic nurse, the patient was very agitated and anxious, announcing he did not have time for this teaching session and could not plan any surgery at this time due to the constraints of his business. His immediate concerns centered on his ability to pay his bills, support his family, and maintain his business. Compounding these concerns were fear, anxiety, grief, and knowledge deficit regarding the cancer diagnosis and the need to undergo surgery to remove his bladder. His wife was present, and equally anxious and tearful.

Once the patient’s concerns were validated and discussed, potential community resources to help him through this difficult time were identified. These included hiring associates who could work as subcontractors, identifying his wife as temporary bookkeeper, and involving the social worker to mobilize other available community resources. The initial teaching session was concluded with minimal information being given to the patient about the surgery, but the steps taken to help him plan for his surgery contributed to a significant change in his behavior and willingness to consider future options. Flexibility in addressing the patient’s primary concerns rather than implementing the planned teaching session fostered the therapeutic nurse-patient relationship. An evening appointment was made for the next teaching session, so as to not interfere with his painting business. He was given written material to review at home prior to the next session.

At the second session, readiness to learn was assessed. First, the patient was asked to explain what he understood about the proposed surgery. He was asked if he read the material given to him at the last teaching session. He was given the opportunity to ask questions, which were then used to direct the teaching session. Body language, eye contact, and focused attention span all indicated the patient was expressing his willingness to learn. Based upon the patient’s description of the surgery, information about anatomical changes, pre and postoperative care, and expected recovery time were discussed. Visual aids used to enhance the teaching session included an anatomical model of the bladder, prostate, and seminal vesicles. A pictorial drawing of the bowel and remodeled bladder helped the patient to understand the construction of the new bladder. The final visual aid was a representative picture of his body with the incision marked and the sites of the various drainage tubes. The written material given to him was a review of the verbal discussion regarding the pre and postoperative care. Adequate time was allowed for the patient and his wife to ask questions. As the session concluded, the urologic nurse provided the patient with information about the upcoming monthly support group meeting. The patient was encouraged to attend these meetings prior to his surgery. These meetings offer an opportunity for patients to share their experiences, and to support and encourage others beginning this journey. According to Peplau, developing a new sense of community and comfort in a changing environment, such as participating in support groups, is critical to maintain a positive self-image and a return to optimal health (Peplau, 1992).

The patient selected the orthotopic neobladder diversion. This surgery involves removing the bladder, prostate, seminal vesicles, appendix, some of the

CONTINUING EDUCATION

UROLOGIC NURSING / October 2006 / Volume 26 Number 5
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sion area he was again seen by the urology nurse who reviewed the admission area. In the pre-admission area. The patient was admitted to the hospital 2 hours before the surgery. He stopped all asprin and asprin-containing medications as well as all over-the-counter medications 1 week prior to surgery. Bowel-cleansing procedures began on the day before surgery and included oral intake of 3 ounces of Fleet® phosphosoda at 10 a.m., followed by clear liquids only and antibiotics (1 gram of neomycin and ery-thromycin, at 1 p.m., 2 p.m., and 10 p.m.). He was instructed to not eat or drink after midnight.

The patient was admitted to the hospital 2 hours before the surgery and taken to the pre-admission area. In the pre-admission area he was again seen by the urology nurse who reviewed the education material and reaffirmed his choice of surgical intervention. Opportunity to ask questions was given. The patient was then marked for an optimal stoma site in the event the neobladder was unable to be performed.

While hospitalized, daily teaching sessions were planned, consisting of a review of the previous day’s lessons as well as presentation of new information. The patient and his wife were taught to irrigate the neobladder, using 0.9 NS in 30 cc increments to remove mucus and blood clots. They were taught how to clean the irrigation equipment and where to purchase additional supplies as necessary. Teaching strategies stressed the importance of maintaining the patency of the drainage tubes and the consequences of a blocked drainage tube. These lessons involved verbal, written, and hands-on demonstration and return demonstration. Final teaching sessions discussed the most common reasons for emergency room visits and how to prevent the need for these visits. A final question and answer period was arranged prior to discharge. The patient was also given access numbers for the nurse and the physicians.

Short-term goals included maintenance of the integrity of the urinary diversion, return to normal activity, improved nutritional status, and perhaps most importantly a focus on the psychosocial aspects of recovery. Anxiety, fear, anger, and depression can impede the learning process. Utilization of clergy, social service, or psychologists may be beneficial and should be considered.

The patient was discharged on postoperative day 8. He demonstrated care of the urinary drainage tubes and incision. He was given supplies for home use. He verbalized the importance of adequate protein in his diet and the need for six small meals daily. He also was to start taking a multivitamin daily. Protein bars and shakes had been purchased by his wife for home use. The patient stated that drinking two quarts of fluid a day seemed difficult but he understood that it was necessary. Family members were recruited to assist him in his daily walks, and provided needed social contacts.

The physician provided the patient with the final pathology report that staged the bladder tumor as T1, N0, M0, indicating that the cancer had not penetrated through the bladder wall and did not involve any nodes or spread to any distant sites (see Figure 1). As part of the discharge teaching session, the urology nurse provided an opportunity for the patient to ask questions about the pathology report and verified his understanding of the results. The return clinic visit and followup x-rays were scheduled for 2 weeks later.

At the clinic visit, the x-rays documented that the neobladder incisions had healed, allowing for the urinary drainage tubes to be removed. The patient was instructed on daily self-catheterization, voiding techniques, timed voiding, and use of the diary. He was also instructed that the bladder would continue to expand in size over the next year. Early incontinence was expected and would improve as bladder capacity increased and pelvic floor muscles strengthened over the next few months.

Porter, Wei, and Penson (2005) identify three common quality-of-life issues that these patients experience: decreased sexual functioning, incontinence, and altered body image. Long-range goals for the first postoperative year were developed focusing on these issues. Sexual function changes could include an inability to obtain or maintain an erection, an inability to have an ejaculation, diminished orgasms, and/or decreased libido. Incontinence issues are present because of the anatomical changes during the diversion surgery but usually improve within a year. Body image changes are related to an alteration in elimination patterns, a change in sexual functioning, and the impact of the cancer diagnosis (Jenks, Morin, & Tomaselli, 1997). These changes
may result in loss of self-esteem, depression, and sense of isolation, anger, or fear (Jenks et al., 1997).

This patient noted an inability to obtain an erection, decreased libido, and no orgasms or ejaculations. Despite penile rehabilitation, the early onset of treatment for erectile problems, the sexual dysfunction continued. Oral agents for erectile dysfunction were started at 2 months and used periodically during the first year post-surgery with minimal response. Although the vacuum device and the penile prosthesis implant are viable treatments, the patient did not wish to consider these options. Intracorporal injections with papaverine, prostaglandin, and phentolamine were initially successful, but decreased in efficacy over the subsequent 5 years.

Although nocturnal enuresis is a common complication of orthotopic neobladder diversion, the incidences of nighttime incontinent episodes 6 months post-surgery were rare and adequately managed by placing a minipad in his underwear. Nocturnal continence was attained, in part, by teaching the patient to perform Kegel exercises on a regular basis, empty the bladder before bedtime, and adhere to a diet and fluid regimen to prevent constipation. He attained daytime continence within 4 months of the surgery.

The body image changes that these patients experience are significant but can resolve as self-confidence and independence increase. The process of adapting to these changes or the re-imaging of one’s self is aided by a successful nurse-patient relationship and a patient-community relationship. Monthly attendance at a support group helped the patient develop a strong sense of community. Individual problems and concerns were discussed freely resulting in shared knowledge by all members of the group. The urologic nurse facilitated these meetings and invited guest speakers to present topics relevant to their post-diversion care. In time, the patient became a resource for new patients undergoing urinary diversion. An interesting outcome of these meetings was the interaction between fellow members as they helped each other establish new goals such as traveling, managing unsanitary bathroom conditions, and packing equipment for overseas trips. The patient also contributed to efforts to develop tips for traveling booklets, guidelines for emergency room visits, and even suggestions on airport facility use.

Quality-of-life issues improved for the patient over the course of 5 years. He returned to work full time, money issues resolved, and many of the life changes were accepted. Concerns regarding return of the cancer, diminished sexual functioning, and altered body image remain and may persist throughout his lifetime. The patient expressed gratitude for the nurse(s) whose teaching and support aided him in his return to optimal health status.

Summary

In conclusion, a highly skilled urologic nurse with good observation and communication

skills plays a critical role in promoting the health of patients undergoing urinary diversion. The scope of patients’ needs require a nurse competent to assume the changing roles in the four phases of the interpersonal process described by Peplau (1992; 1997). Peplau’s theory emphasizes that effective communication is integral to the nurse-patient relationship and necessary for educational efforts to be successful. To that end, it is important to involve the patient in establishing the teaching goals, conduct frequent review of these goals, and evaluate the efficacy of teaching methods used. Applying this theory to practice helps the urologic nurse evaluate and develop skills and teaching methods to meet the needs of each patient.

References
Additional Reading