A CHECK LIST FOR PREVENTING PRESSURE ULCERS IN COMMUNITY DWELLING ELDERS

Scholarly Project for the Degree of M. S. N.

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1997

Michigan State University

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Acknowledgments

I wish to thank the members of my Scholarly Project Committee, Dr. Sharon King, Catherine Lein, and Brigid Warren for their support and guidance through the development of this project. A special thanks to Dr. Sharon King for her patience when I was changing themes and working at less than a snail's pace. It has been a long term goal of mine to pursue a Master of Science in Nursing and to receive it from Michigan State University has been a dream come true.

A special thank you goes out to Mary McCartney for assisting in my dream come true. She shared my vision that an outreach Master of Science in Nursing could become a reality in Muskegon. Thank you to the entire faculty at Michigan State for their commitment to outreach education. I would also like to thank my employer, Hackley Hospital for their generous financial support for higher education.

My family must not be forgotten. Thank you to my husband for his support and encouragement to reach my goal. Thank you to my two children for their patience while mom pursued her goal.

Introduction

The Agency for Health Care Policy and Research (AHCPR) defines a pressure ulcer as "any lesion caused by unrelieved pressure resulting in damage of underlying tissue" (AHCPR, 1994). The absolute prevalence (a cross-sectional count of the number of cases at specific point in time) and incidence (the number of new cases occurring during a specified time) in the United States is unknown. The terms tend to be misunderstood and used interchangeably, making it difficult to determine the prevalence and incidence of pressure ulcers.

Despite the confusion in terms, many researchers have attempted to study the prevalence and/or incidence of pressure ulcers in the United States. The prevalence of pressure ulcers among hospitalized patients and nursing home type patients has been the most widely studied.

The prevalence of pressure ulcers among hospitalized patients was studied nationally by Support Systems International (SSI) in response to the National Pressure Ulcer Advisory Panel's (NPUAP) challenge in 1989. The first National Pressure Ulcer Prevalence Study was conducted at 148 acute care facilities. Patients were jointly examined by

nurses from the facility and SSI on the same day. The prevalence rate for pressure ulcers within these acute care facilities was 9.2%. The majority of the patients (58%) were in the 70-89 age group. The three most common sites for pressure ulcers were the sacrum, heel and ischium (Meehan, 1990).

SSI repeated this National Pressure Ulcer Prevalence Study in 1993. Patients at 177 acute care facilities were examined by nurses from the facility and SSI on a given day. This time the national prevalence was found to be 11.1%. Again the majority of patients (54%) were in the 70-89 age group. The three most common sites were sacrum, heel and malleolus (SSI, 1993).

The prevalence of pressure ulcers among 159 residents in a long-term care facility was found to be 23% (Langemo, Olson, Hunter, Burd, Hansen & Cathcart-Silberg, 1989). The most common sites were the sacrum followed by the elbow, heels, and ankles. Bergstrom, Braden, Kemp, Champagne, and Ruby (1996), found the incidence of pressure ulcers among 225 skilled care nursing residents in two facilities to be 23.9%.

The prevalence of pressure ulcers among home care patients is not as easy to identify. The studies done to date have only reported on patients being cared for by nurses in the home. No data are available on patients being cared for by their physician, family or lay home care giver. Langemo, et al. (1989), found the prevalence of pressure ulcers in home health to be 19% and 13% in Hospice patients. The sample populations were small, 26 patients and 8 patients, respectively. Langemo, et al., (1991), found zero incidents of pressure ulcers in home care and Hospice patients over a 3-week period of time. Again, the population was small, 30 patients and 20 patients respectively. The NPUAP (1980), has estimated the prevalence in the home setting to be 7% to 12%.

Pressure ulcers increase the cost of health care. The NPUAP (1989), estimates the cost of treatment in the acute care setting to be $2,000-$30,000 per patient. The costs in home care are not very well understood.

The non-financial costs of pressure ulcers must be also be considered as stated by V. Alterescu (1989):

> The nurse who is emotionally drained because the pressure ulcer patient requires frequent, difficult dressing changes contributes to the non-financial cost of pressure ulcers. Other patients in the facility pay the penalty of receiving less nursing care, or waiting longer for certain services, when a person with a pressure ulcer requires treatment. Most importantly, irrespective of the financial costs to treat pressure ulcers, they are a source of anxiety and pain for the patient, the family, and the staff.

The word "care giver" can be substituted for "nurse", and "home" can be substituted for "facility" in the above statement. Caring for a family member in the home with pressure ulcers is likely to cause the same feelings of frustration to the care giver whether it be a nurse or a family care giver. The family care giver may find more of their time taken away from other family members and self as the care of pressure ulcers demands more time.

Contrary to what most nurses have been told, not all pressure ulcers are preventable, but a large number of them are. Teaching patients and families prevention may help them avoid the burdens associated with caring for pressure ulcers.

Problem

The lay public is unaware of the causes of or ways to prevent pressure ulcers in caring for an at risk family member.

Purpose / goals of the project

The purpose of this project is to design a check list that can be used by the primary care provider to identify the preventive measures needed to assist the patient and care giver in the prevention of pressure ulcers. Two goals have been identified for this project: (1) pressure ulcer free elder and (2) satisfied care giver.

Berlowitz & Wilking (1989), found that patients who developed pressure sores were likely to be elderly, diabetic, and have a history of cerebrovascular accident. Other conditions such as a contracted or flaccid extremity, alteration in mental status, incontinence and poor nutrition have been identified as risk factors in the development of pressure ulcers.

The Advance Practice Nurse as a primary care provider has the analytical skills to assess the patient's risk for pressure ulcer and to formulate a plan of action with the patient/care giver to prevent pressure ulcers. The check list will be used to assist the patient, care

giver, and nurse to identify support services needed in the home. Such services may include: home nursing services, durable medical equipment, and community service agencies. The Braden Scale for prevention of Pressure Ulcers will be the tool used to identify the patient's risk factors.

Literature Review

Anatomy of the Skin

The skin is the largest organ in the body. It weighs six to eight pounds and varies in thickness. Intact skin is essential for both functional and cosmetic reasons. The skin is responsible for the tactile sensations of pain, temperature, touch, pressure, and pleasure. The skin helps to maintain body temperature, fluid and electrolyte balance, and aids in the prevention of infection. In our fashion-conscious society, intact skin is important to our psycho social well being as well as our physical well being.

The skin has three layers (Baron, 1983). The epidermis and the dermis make up the true skin. The subcutaneous tissue lies just beneath the dermis and is often considered part of the skin.

The epidermis is made up of squamous epithelium, the same type of cells that line the gastrointestinal, genitourinary and tracheobronchial system. Epithelial cells have the ability to regenerate. When the skin needs repair, these epithelial cells become mobile and spread across a wound to make a new covering. Also in the epidermal layer are the melonocytes that determine the color of our skin and protect us from sunlight.

The dermis is made up of stronger collagen fibers that provide elasticity. It contains blood vessels and nerves that nourish the epidermis. Hair follicles, sweat glands and sebaceous glands are found in the dermal layer. The dermal epidermal junction allows exchange of fluids and cells between the layers. The surface is irregular, with finger-like projections from both surfaces that help to anchor the two surfaces together, preventing them from sliding back and forth on one another. Subcutaneous tissue is adipose tissue and provides insulation and cushioning for the skin. Just below the subcutaneous tissue is connective tissue that covers muscles, tendons, bones and large blood vessels.

Skin changes with aging. The dermal epidermal junction begins to flatten and decreases in thickness by one third, increasing the risk of skin tears from separation of the skin layers (Baron, 1983). The numbers of sebaceous and sweat glands decrease and the skin is drier. The amount of adipose tissue on arms and legs decrease. These changes result in thinner, drier, less elastic skin with less padding (Fitzsimons, 1983).

Etiology of pressure ulcers

Blood supply to tissues is made up of the arterial system, the capillary bed and the venous system. Blood flow at the arterial end of the capillary system is about 32 mm hg and about 12 mm hg at the venous end, making the average flow in the capillary bed about 20 mm hg pressure (Landis, 1930). Pressure to soft tissue for long periods of time can cause capillary vessels to thrombose and die, cutting off blood supply and nourishment to soft tissue resulting in tissue death.

Two schools of thought exist on the cause of pressure ulcers; the top to bottom theory and the bottom to top theory (Maklebust & Sieggreen, 1996). The top to bottom theory is the more traditional theory. This theory is based on the premise that pressure applied to the

outer epidermal layer of the skin results in pressure on lower tissues, disrupting capillary flow and resulting in tissue death. This is clinically apparent as non-blanchable erythema of the epidermis. Supporters of the bottom to top theory believe that pressure from bones may cause injury to subcutaneous tissue, resulting in disruption of capillary flow and tissue injury. Therefore, the non-blanchable erythema of the epidermis may be just the tip of the iceberg in assessing pressure ulcers.

Pressure ulcers can develop over any bony prominence or over any soft tissue area that is subjected to prolonged pressure. This can happen from pressure against the surface of the bed or chair, one body part against another or from orthopedic support devices, foley catheters and feeding tubes caught between the body and the bed or chair. The most common sites for development of pressure ulcers are the scapula, iliac crest, trochanter, sacrum, ischium, lateral malleolus, heel and the edge of the foot (Maklebust & Sieggreen, 1996).

Staging of pressure ulcers

A staging system was developed to assist health care professionals in assessment of pressure ulcers. Adopting a standardized system also aids in communication about pressure ulcers among health care

professionals. AHCPR (1994), adopted the staging system from the NPUAP consensus Development Conference (NPUAP, 1989). The stages are as follows:

Stage I: Nonblanchable erythema of intact skin, the heralding lesion of skin ulceration. In individuals with darker skin, discoloration of the skin, warmth, edema, induration, or hardness may also be indicators.

Stage II: Partial thickness skin loss involving epidermis, dermis, or both. The ulcer is superficial and presents clinically as an abrasion, blister, or shallow crater.

Stage III: Full thickness skin involving damage to or necrosis of subcutaneous tissue that may extend down to, but not through, underlying fascia. The ulcer presents clinically as a deep crater with or without undermining of adjacent tissue.

Stage IV: Full thickness skin loss with extensive destruction, tissue necrosis, or damage to muscle, bone, or supporting structures (e.g., tendon, joint capsule). Undermining and sinus tracts also may be associated with Stage IV pressure ulcers.

There are a few limitations in the acceptance of this staging system:

1. It is difficult to assess darker pigmented skin that is intact.
2. Wounds with eschar cannot be staged until they are debrided.
3. Skin that is not seen cannot be assessed, i.e., skin under casts or other orthopedic devices.
4. This staging system is based on the top to bottom theory of pressure ulcer development. If the bottom to top theory is also accurate, there may be more extensive tissue damage under what appears to be a Stage I ulcer.

Risk factors associated with pressure ulcers

There are several risk factors associated with the incidence of pressure ulcers. Immobility, friction and shear are mechanical causes of pressure ulcers.

Immobility is probably the highest risk factor in the development of pressure ulcers. Patients that are bed or chair bound cannot move in response to the sensation of pressure. Shear is defined as "mechanical force that is parallel rather than perpendicular to an area" (Maklebust & Sieggreen, 1996, p. 24). Tissues attached to bones are pulled in one

direction while the skin tissues stick to the surface of the bed or chair. Friction is caused by two surfaces moving across each other. This occurs when patients are pulled across bed and chair surfaces. Persons with spastic movements can have pressure ulcers resulting from friction.

Moisture, alteration in level of consciousness, nutrition, and aging skin are contributing factors to the development of pressure ulcers. Moisture softens connective tissue and makes tissues adhere to bed linens. The most common moisture source is incontinence, but diaphoresis and wound drainage must also be considered. Nutrition is important in healthy skin. Healthy skin is less likely to breakdown. Aging skin is drier, thinner, less elastic and has less adipose tissue for padding.

Prevention of pressure ulcers

The underlying motivation for behaviors differs for health promotion and health protection/prevention. "Health promotion is motivated by the desire to increase well-being and actualize human health potential" (Pender, p. 7). Health protection or illness prevention as described by Pender is motivated by the "desire to actively avoid

illness, detect it early, or maintain functioning within the constraints of illness" (Pender, p. 7).

Much has been written about the prevention of pressure ulcers. Prevalence and incidence have been well studied in the inpatient setting, but few studies have been done in the outpatient setting. The Agency for Health Care Policy and Research (1992), reviewed the literature extensively and published guidelines for preventing pressure ulcers. Their recommendations targeted assessment of risk factors and education as key factors in the prevention of pressure ulcers. The check list is designed to assist in meeting these goals.

Assessment

Several risk assessment scales have been developed. The three scales most often cited in the literature are the Gosnell Scale, the Norton Scale and the Braden Scale (Gosnell, 1989). Activity, mobility, and sensory perception are factors in determining intense or prolonged pressure. Nutrition, friction, moisture and shear are factors in determining tissue tolerance for pressure (Bergstrom, et al., (1987). A comparison of these scales reveals that all three score activity, mobility, continence, and the ability to relate to the environment (sensory

perception). The Braden and Gosnell scales have indicators for nutrition, the Norton Scale does not. The Braden Scale has indicators for friction, shear and moisture unrelated to continence (Braden & Bergstrom, 1989). The Braden Scale for predicting pressure sore risk will be incorporated for use in the check list.

The Braden Scale for Predicting Pressure Sore Risk (Appendix A) is comprised of six subscales; sensory perception, moisture, activity, mobility, nutrition, and friction and shear. Each subscale is scored numerically from 1 to 4 with the exception of friction and shear being rated 1 to 3. The higher the score, the higher the level of functioning. The maximum possible score is 23 (Bergstrom et al., 1987).

Reliability and Validity of the Braden Scale for Predicting Pressure Sore Risk

Bergstrom et al., (1987), conducted three studies of interrater reliability in different settings and geographic areas on the Braden Scale. Groups studied were institutionalized elderly, rehabilitation, and skilled nursing facility patients. Pearson product moment correlation between observers ranged from $r = .83$ to $r = .94$ for nurses' aides and licensed practical nurses to $r = .99$ when used by registered nurses.

Bergstrom et al., (1987), conducted two studies of validity on two groups of 28 hospitalized medical surgical patients. At a cut-off score of 16, the Braden scale was 100% sensitive in both studies. Specificity was 64% and 90%. Ramundo (1995), found the mean score of 48 patients confined to bed or wheelchair who developed a pressure sore to be 17 and the mean score of those who did not develop an ulcer to be 18. Ramundo (1995), found the Braden Scale to be 100% sensitive and 34% specific at a score of 18. Langemo et al., (1991), studied patients in acute care, rehabilitation, skilled nursing facilities, home care and Hospice. The mean Braden Scale score among 30 homes care patients was 20, and 19.3 among 20 Hospice patients. Despite the fact that no patients in either setting developed pressure ulcers, the recommended cut-off scores were 20 and 18 respectively. Oot-Giromini (1993), found the Braden Scale to be 53% sensitive and 90% specific at a cut-off score of 16 among 103 home care patients. At a score of 18, the Braden Scale was 70% sensitive. Specificity was not reported at a score of 18.

The relatively high sensitivity scores make the Braden Scale a useful screening tool in identifying patients at risk for the development of pressure ulcers. The individual care giver's skills and availability may

be a factor in the home care patient developing a pressure ulcer. The check list can be used to assist in identifying the care giver's individual and community resources available to assist in the prevention of pressure sores in the community dwelling individual that is at risk.

Conceptual Framework

The purpose of this project is development of a check list for prevention of pressure ulcers in patients residing in the community. Prevention is described in mental health and community nursing literature as occurring at three levels: primary, secondary and tertiary. Community health educators Shamansky & Clausen (1982), described primary prevention as those actions directed at a generally healthy population, before any pathology is involved. They describe secondary prevention as occurring when pathology is involved and state that "secondary prevention emphasizes early diagnosis and prompt intervention to halt the pathological process, thereby shortening its duration and severity and enabling the individual to regain normal function at the earliest possible point" (p. 106). Screening procedures of any type are part of secondary prevention. Tertiary prevention occurs

when a defect or disability is fixed, stabilized, or irreversible and rehabilitation is the goal (Shamansky & Clausen, 1982).

The check list proposed in this project is a screening tool that fits into secondary prevention, but could cross over into tertiary prevention. Most patients for whom the tool will be used will have chronic illness. Pathology puts the patient at risk for pressure ulcer. The tool will be used to identify the risk(s) and assist the patient and family to modify these risks. The prevention of pressure ulcers in persons with chronic health problems fit appropriately into a health promotion/disease prevention model.

The Health Promotion Model (HPM) developed by Pender first appeared in 1987 as a competence or approach-oriented model. Fear or threats are not used to motivate the individual toward healthy behaviors. The HPM is based on action rather than reaction to the environment. Variables of the HPM were researched by several researchers including Pender, resulting in the Revised Health Promotion Model (RHPM).

The theoretical basis of the RHPM is Feather's Expectancy-Value theory and Bandura's Social Cognitive theory (Pender, 1986). Expectancy - Value theory is based on the premise that behavior is

rational and economical. Individuals persist in behaviors that they have the resources for, and that are likely to produce outcomes that are beneficial to the individual (Feather, 1982). Social Cognitive theory places emphasis on self direction, self regulation and perceptions of self-efficacy (Bandura, 1986).

Self-efficacy is a central construct in the RHPM. "Perceived self-efficacy is a judgment of one's ability to carry out a particular course of action" (Pender, 1996, p. 54). The RHPM has been selected as the conceptual model for this project because the check list proposed in this project requires that the individual patient and family assess their ability to carry out specific tasks necessary for the prevention of pressure ulcers.

The RHPM is shown schematically in Figure 1. The RHPM has three major concepts: (1) individual characteristics and experiences (2) behavior-specific cognitions and effect (3) behavioral outcome. Each concept has variables that either directly or indirectly affect the concept or the outcome. The variables and their effects on the outcome are described below.

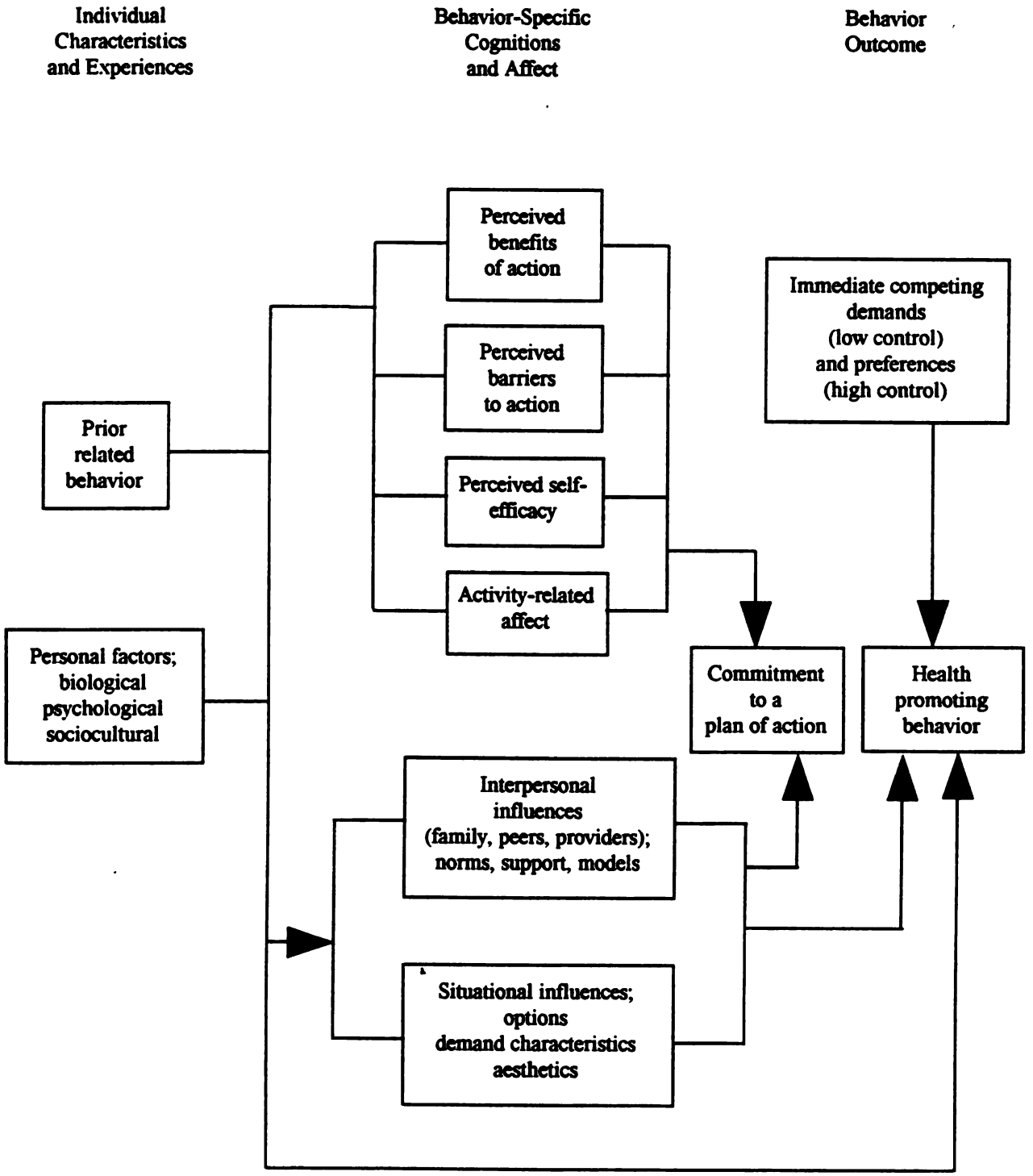


Figure 1. Revised Health Promotion Model

Individual characteristics and experiences

Prior related behavior has both direct and indirect effects on the likelihood of practicing health promoting/disease preventing behaviors. Prior behavior affects behavior-specific cognitions and affect. The direct effect is in habit-forming past behavior that occurs automatically. Past behavior has indirect effects through the perception of self-efficacy (Pender, 1996). *Personal factors* are categorized as biologic, psychologic and sociocultural. These factors have been proposed to directly influence behavior-specific cognitions and affect health-promoting behavior (Pender, 1996).

Behavior-Specific Cognitions and Affect

Perceived benefits of action are the individuals's beliefs that practicing health promoting behaviors will result in a positive outcome (Pender, 1996). *Perceived barriers to action* are either imagined or real perceptions that affect the individual's ability to carry out the behavior (Pender, 1996). *Perceived self-efficacy* motivates health promoting behavior directly through personal expectations and indirectly by affecting perceived barriers to action (Pender, 1996). Perceived self-efficacy emphasizes the individual's belief that he/she can accomplish the

task (Pender, 1996). *Activity related affect* is the emotional response associated with the behavior; positive, negative, or a mixture of both (Pender, 1996).

Interpersonal influences come from family, peers, and health care providers. These interpersonal influences are described as norms or expectations of others (Pender, 1996). Situational influences include the individual's perceptions of options available, demands of the behavior, and the surrounding environment in which the change is to take place (Pender, 1996).

Behavioral Outcome

Commitment to a plan of action implies that the individual has made a commitment to carry out a specific action, and has identified strategies for carrying out the behavior and for reinforcing the behavior (Pender, 1996). *Immediate competing demands and preferences* are alternative courses of action that come to mind before the behavior change is to take place and alter the plan of action (Pender, 1996). *Health-promoting behavior* is the outcome. It is directed at achieving positive outcomes (Pender, 1996).

Adaptation of the Revised Health Promotion Model

The adaptation of the RHPM is shown in Figure 2. The major concepts of individual characteristics and experiences, behavior-specific cognitions and affect, and behavioral outcome have been maintained. The variables within each concept have been adapted to the patient/care giver with pressure ulcer risk. Risk of pressure ulcer is determined by assessment using the Braden Scale for pressure ulcer risk.

Individual characteristics and experiences

Prior related behavior has been changed to prior history of pressure ulcers. Previous experience with the process of healing a pressure ulcer may affect the patient/care giver's compliance with a prescription for prevention. Personal factors have been modified to include the patient's: (1) biologic factors of height, weight, age, mobility, and underlying medical problems, (2) psychological factors include the patient/care giver's perception of competence, and (3) sociocultural variables of race, education, and socioeconomic status. Biologic factors are predictors of pressure ulcer risk. Although many personal factors cannot be changed, they can directly influence behavior-specific cognitions and affect health-promoting behaviors.

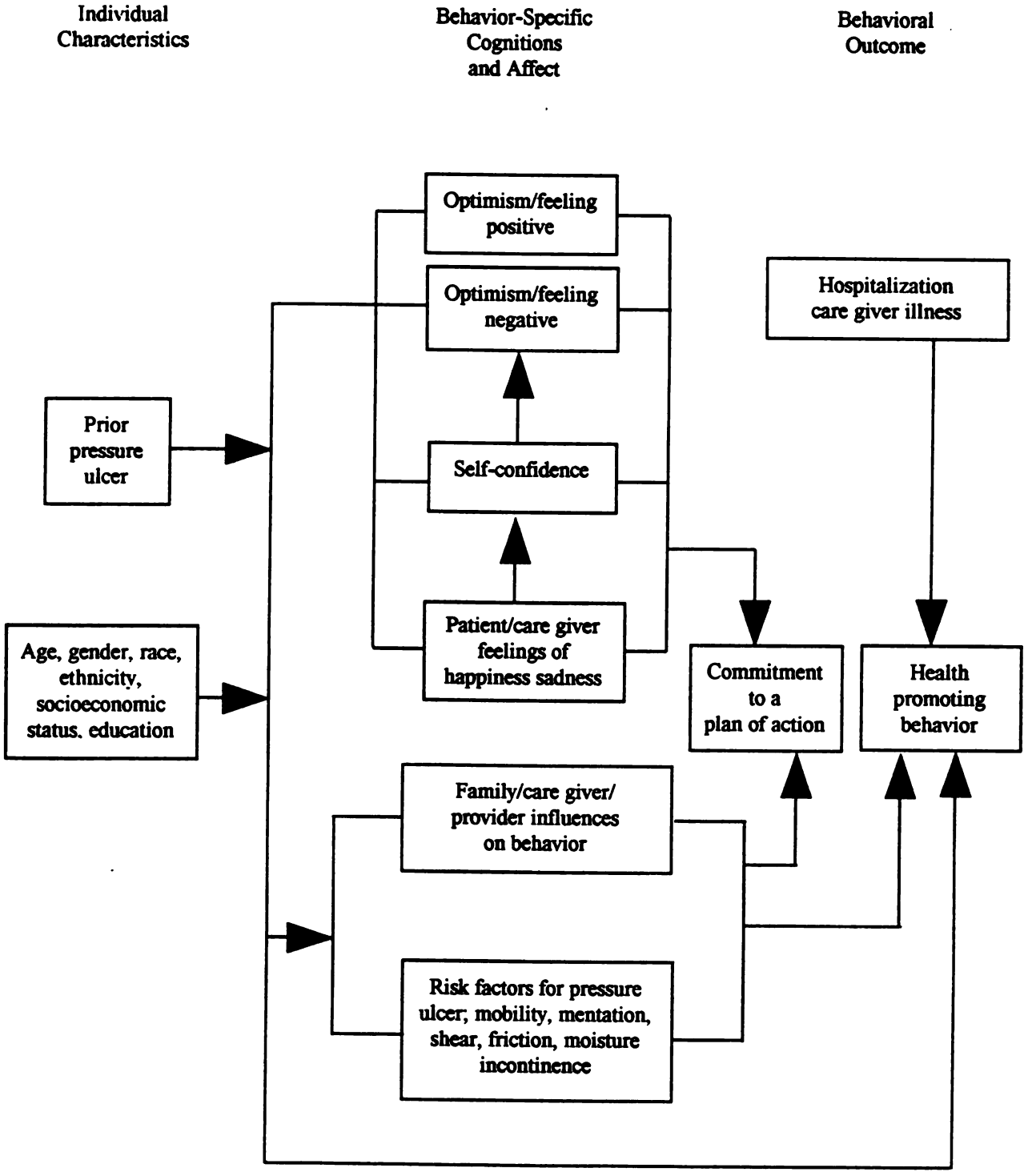


Figure 2. Adapted Revised Health Promotion Model

Behavior-specific cognitions and affect

Perceived benefits of action has been adapted to the patient/care giver beliefs that optimism will result in positive outcomes. Pessimism is a barrier to positive outcomes. Perceived self-efficacy is the patient/care giver belief that health-promoting behaviors can be instituted and maintained. Activity related affect is the satisfaction that comes with practicing health promoting behaviors. Interpersonal influences are those that come from family members, peers and health care professionals involved in the plan of care. Situational influences are those factors that predispose the patient to pressure ulcers such as: immobility, mentation, friction, shear, continence, nutrition, and moisture. The variables in this category are the most amenable to change with assistance from the nurse. The nurse can assess and intervene to set mutual goals with the patient/care giver to affect a positive behavioral outcome.

Behavior outcome

This concept has not been adapted. Commitment to a plan of action is the patient/care giver strategies for carrying the plan of action and for reinforcing the behavior. The desired health-promoting

behaviors are those actions resulting in the prevention of pressure ulcers.

Discussion

Use of the RHPM is appropriate to guide development of a check list (shown schematically in Figure 3) for assessing skin integrity and preventing pressure ulcers. The check list will require that the patient/care giver assess their ability to modify risk factors to affect a positive behavioral outcome. Assessment of risk factors will be done by the nurse using the Braden Scale for assessing pressure ulcer risk to identify those patients at risk for pressure ulcers.

Methodology

The check list (pages 30-33) for preventing pressure ulcers in community-dwelling elders is designed to be used by the primary care provider along with the patient and care giver. Other health care professionals may be involved as needed as pressure sore prevention is often a team approach. Patients scoring 18 or less on the Braden Scale for Predicting Pressure Sore Risk should have the check list completed in order to design a plan of care for the patient and care giver. A score of 18 is based on the research of Oot-Giromini and Ramundo.

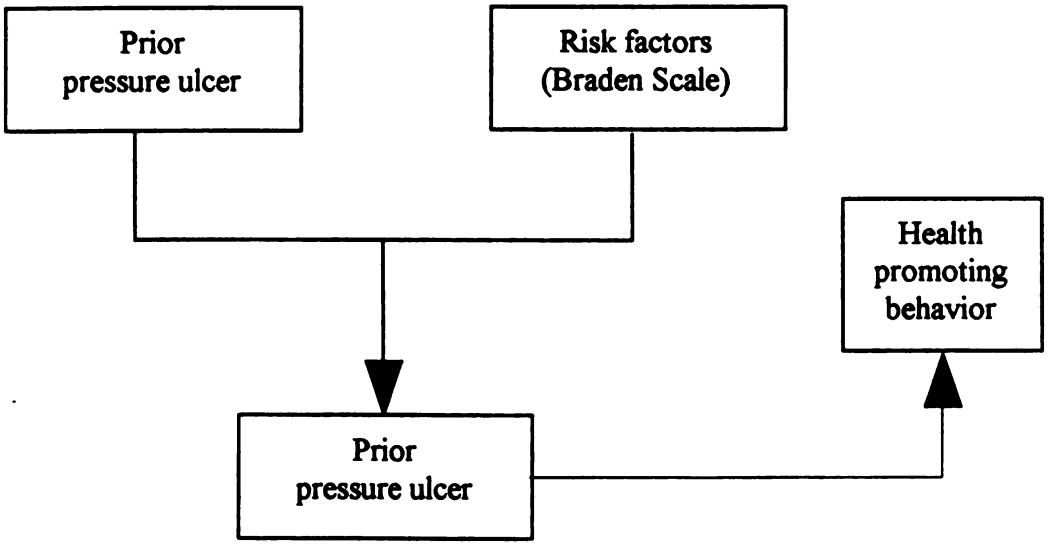


Figure 3. Conceptual model for the check list for prevention of pressure ulcers in community dwelling elders

Check List for Preventing Pressure Ulcers in Community Dwelling Elders

1. Name _____
2. _____ Male _____ Female
3. Age _____
4. Diagnosis _____
5. Primary care giver _____
6. Braden Scale Score _____ If score is 18 or less proceed with check list
7. Prior pressure ulcer Yes _____ No _____ Location(s) _____
   Place a Check (✔) on the figure in Question 11 near the anatomic location(s).
8. Can patient be left alone in the home during errands? Yes _____ No _____
9. Is respite care available? Yes _____ by whom? _____
   No _____ Plan for respite care
10. Services in the home at the time of assessment. Check (✔) all that apply
    _____ None
    _____ Nursing agency _____ times per week
    _____ Occupational therapy _____ times per week
    _____ Physical therapy _____ times per week
    _____ Speech therapy _____ times per week
    _____ Meals on wheels _____ times per week
    Other _____
11. Durable medical equipment in use at the time of assessment. Check (✔) all that apply. "Need" column will be assessed at the completion of the check list.

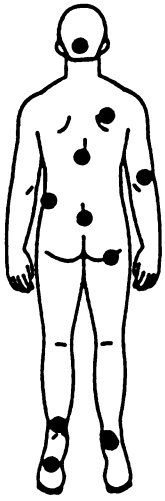
Current	Need		Current	Need	
☐	☐	wheelchair	☐	☐	removable arms
			☐	☐	removable legs
			☐	☐	leg lifts
☐	☐	cane			
☐	☐	bedside commode			
☐	☐	walker			
☐	☐	Hoyer lift			
☐	☐	mattress overlay / specialty bed			
☐	☐	chair pad			
☐	☐	tube feeding pump			
☐	☐	other _____			

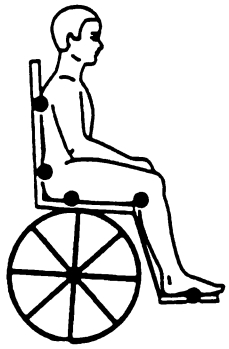
12. Daily skin assessment by: Check (✔) appropriate

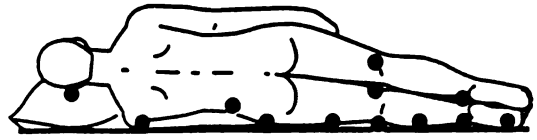
☐ care giver - report any redness that persists after repositioning or injury to skin to your health care professional within 24 hours

☐ health care professional

13. Identify area(s) that patient is at risk for developing pressure ulcer(s) by placing a Check (✔) next to the anatomical location. Consider area(s) of prior pressure ulcer(s) alteration in mobility, sensory impairment and activity. Review areas of risk with the patient / care giver.







U.S. Department of Health and Human Services (1992). Pressure ulcers in adults: Preventing pressure ulcers (AHCPR Publication No. 92-0048). Rockville, Md: Author.

14. Activity / mobility Check (✔) appropriate

☐ partial immobility - write prescription for prevention and place on plan

☐ immobile - write prescription for prevention and place on plan

☐ chair bound - write prescription for prevention and place on plan

Yes	No	
☐	☐	independent transfer
☐	☐	care giver assist transfer
☐	☐	other transfer

☐ independent with repositioning

☐ repositions self when instructed to - write prescription on plan

15. Nutrition Check (✔) appropriate
    - ☐ requires assistance with meals
    - ☐ tube feeding
    - ☐ independent with feeding

16. Moisture Check (✔) appropriate
    - ☐ wound - write prescription on plan
    - ☐ incontinence - write prescription on plan
    - ☐ diaphoresis - write prescription on plan
    - ☐ no problem

17. Friction and shear Check (✔) appropriate
    - ☐ bed / chair bound - write prescription on plan
    - ☐ no problem

18. Return to number 11 and reassess need for durable medical equipment

PLAN

Need	Care giver Ability / Responsibility	Health Care Professional Responsibility	Family / Social Support System Responsibility
Turning prescription _____			
Activity prescription _____			
Feeding prescription _____			
Skin assessment prescription _____			
Bathing prescription _____			
Moisture/toileting/ incontinence prescription _____			
Friction/shear prescription _____			
Respite prescription _____			

I understand the above plan

_____ _____

Care Giver Provider

Oot-Giromini (1993), found the Braden Scale for Predicting Pressure Sore Risk to be 70% sensitive at a score of 18. Ramundo (1995), found the Braden Scale to be 100% sensitive when the cut-off score was 18.

The variables of prior pressure ulcer and risk factors from the Braden Scale for Predicting Pressure Sore Risk have been incorporated into the check list. The first three questions relate to demographic information. The variables of prior ulcer, designated primary care giver and diagnosis are identified in questions 4-7. Questions 8 & 9 pertain to care giver satisfaction. Current support services and durable medical equipment are identified in questions 10 & 11. Questions 12-18 are related to variables from the Braden Scale for Predicting Pressure Sore Risk. Sensory perception has been incorporated into the activity/ mobility question.

Upon completion of the check list the primary care provider is asked to re-examine the durable medical equipment for changes or additional needs. The provider is also asked to discuss prevention with the patient/care giver and write a mutually acceptable prescription for prevention related to each variable. The prescriptions are written on a plan that designates responsibility for each prescription. Completion of

the check list and plan of action is designed to meet the goals of a pressure-free elder and a satisfied care giver.

A copy of AHCPR Publication No. 92-0048 Preventing Pressure Ulcers: Patient Guide can be given to the patient/care giver as an educational tool to assist the care giver in carrying out the prescriptions.

Evaluation

The check list for preventing pressure ulcers in community-dwelling elders can be evaluated on the basis of the proposed behavioral outcomes (1) pressure sore free elder and (2) satisfied care giver. Evaluation methods may include a comparison of pressure sore incidence between groups of elders using the check list and elders not using the check list. A survey of care givers could be done to determine care giver feelings of competence in carrying out the prescriptions related to prevention of pressure ulcers.

Implications for Advanced Nursing Practice

Further research is indicated in the prevalence and incidence of pressure sores in patients cared for in the home. More research needs to be done on the Braden Scale cut-off score for homebound patients. Costly preventive prescriptions for durable medical equipment may not

be required, but at this time empirical evidence does not exist to refute or substantiate the point at which equipment is required to prevent pressure ulcers. Such research is within the role of the Advanced Practice Nurse (APN).

The APN as an educator can have an impact on prevention of pressure ulcers. Educational programs taught at different levels for different groups of patients and care givers need to be designed. It is within the role responsibility of the APN to provide education to care givers of the elderly and provide tools such as the prevention check list to ensure that appropriate preventive behavior occurs. It is vital that basic nursing education contain content relevant to skin assessment and current principles of wound healing. Continuing education is needed for the APN working with elders and their care givers related to current principles of wound healing.

The APN acts as the collaborator among the patient, care giver, health care providers and social support systems when completing the check list and outlining the plan of care. Coordination of the services these participants provide is the responsibility of the APN.

The APN as a health care provider must make skin assessment and prediction of potential patients at risk for pressure ulcers part of daily practice. Assessment of care giver ability and their understanding of physical needs of the elder is the role of the APN.

This check list can also be used to advocate for the client. Prevention of pressure ulcers and a satisfied care giver are the outcomes for this project. Completion of the check list can provide the information needed to advocate for home care or extended care.

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Braden Scale for Predicting Pressure Sore Risk

Patient's Name		Evaluator's Name		Date of Assessment				
Sensory perception Ability to respond meaningfully to pressure-related discomfort	**1. Completely limited:** Unresponsive (does not moan, flinch, or grasp) to painful stimuli, due to diminished level of consciousness or sedation. OR limited ability to feel pain over most of body surface.	**2. Very limited:** Responds only to painful stimuli. Cannot communicate discomfort except by moaning or restlessness. OR has a sensory impairment which limits the ability to feel pain or discomfort over 1/2 of body.	**3. Slightly limited:** Responds to verbal commands but cannot always communicate discomfort or need to be turned. OR has some sensory impairment which limits ability to feel pain or discomfort in 1 or 2 extremities.	**4. No impairment:** Responds to verbal commands. Has no sensory deficit which would limit ability to feel or voice pain or discomfort.				
Moisture Degree to which skin is exposed to moisture	**1. Constantly moist:** Skin is kept moist almost constantly by perspiration, urine, etc. Dampness is detected every time patient is moved or turned.	**2. Moist:** Skin is often but not always moist. Linen must be changed at least once a shift.	**3. Occasionally moist:** Skin is occasionally moist, requiring an extra linen change approximately once a day.	**4. Rarely moist:** Skin is usually dry; linen requires changing only at routine intervals.				
Activity Degree of physical activity	**1. Bedfast:** Confined to bed.	**2. Chairfast:** Ability to walk severely limited or nonexistent. Cannot bear own weight and/or must be assisted into chair or wheel chair.	**3. Walks occasionally:** Walks occasionally during day but for very short distances, with or without assistance. Spends majority of each shift in bed or chair.	**4. Walks frequently:** Walks outside the room at least twice a day and inside room at least once every 2 hours during waking hours.				
Mobility Ability to change and control body position	**1. Completely immobile:** Does not make even slight changes in body or extremity position without assistance.	**2. Very limited:** Makes occasional slight changes in body or extremity position but unable to make frequent or significant changes independently.	**3. Slightly limited:** Makes frequent though slight changes in body or extremity position independently.	**4. No limitations:** Makes major and frequent changes in position without assistance.				
Nutrition Usual food intake pattern	**1. Very poor:** Never eats a complete meal. Rarely eats more than 1/3 of any food offered. Eats 2 servings or less of protein (meat or dairy products) per day. Takes fluids poorly. Does not take a liquid dietary supplement, OR is NPO[1] and/or maintained on clear liquids or IV[2] for more than 5 days.	**2. Probably inadequate:** Rarely eats a complete meal and generally eats only about 1/2 of any food offered. Protein intake includes only 3 servings of meat or dairy products per day. Occasionally will take a dietary supplement, OR receives less than optimum amount of liquid diet or tube feeding.	**3. Adequate:** Eats over half of most meals. Eats a total of 4 servings of protein (meat, dairy products) each day. Occasionally will refuse a meal, but will usually take a supplement if offered, OR is on a tube feeding or TPN[3] regimen, which probably meets most of nutritional needs.	**4. Excellent:** Eats most of every meal. Never refuses a meal. Usually eats a total of 4 or more servings of meat and dairy products. Occasionally eats between meals. Does not require supplementation.				
Friction and shear	**1. Problem:** Requires moderate to maximum assistance in moving. Complete lifting without sliding against sheets is impossible. Frequently slides down in bed or chair, requiring frequent repositioning with maximum assistance. Spasticity, contractures, or agitation leads to almost constant friction.	**2. Potential problem:** Moves feebly or requires minimum assistance. During a move skin probably slides to some extent against sheets, chair, restraints, or other devices. Maintains relatively good position in chair or bed most of the time but occasionally slides down.	**3. No apparent problem:** Moves in bed and in chair independently and has sufficient muscle strength to lift up completely during move. Maintains good position in bed or chair at all times.					
				Total score				

[1]NPO: Nothing by mouth.
[2]IV: Intravenously.
[3]TPN: Total parenteral nutrition.

APPENDIX B

pressure 42

CREIGHTON UNIVERSITY
Graduate School

Office of the Dean

Date: March 27, 1997

To: Susan J. Zemke, RN.

From: Barbara Braden, Ph.D., R.N. & Nancy Bergstrom, Ph.D., R.N.

Re: Permission to use the Braden Scale

As holders of the official copyright for the Braden Scale for Predicting Pressure Sore Risk, we hereby grant permission for the use of the Braden Scale in *

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