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# The Theory of Compromised Eating Behavior

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THE THEORY OF COMPROMISED EATING BEHAVIOR

A Dissertation Presented

by

Ellen F. Furman

Submitted to the Graduate School of the  
University of Massachusetts Amherst in partial fulfillment  
of the requirements for the degree of  
Doctor of Philosophy

February 2012

School of Nursing

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The Theory of Compromised Eating Behavior

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Ellen F. Furman

Approved as to style and content by:

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## DEDICATION

To my grandmother, Dorothy B. Gustafson.

## ACKNOWLEDGMENTS

I would like to thank the nursing faculty of the University of Massachusetts School of Nursing especially Micheline Asselin and Donna Zucker for teaching me that every nurse has the ability to be a pioneer and the responsibility to be a crusader. I would like to thank Jeanne Kayser-Jones for inspiring me to do the work that I have done. I would like to thank Carol Picard for making it possible for me to continue my education. I would like to thank my Committee, Donna Zucker, Nancy Cohen, and especially Cynthia Jacelon, my advisor, for supporting me and encouraging me along the way. I truly appreciate all the time you listened to me as I theorized. I would like to thank my friend and colleague, Christine Gryglik, for helping me persevere. Lastly and most importantly, I would like to thank my family, Allison, Lindsay, Benjamin, Jillian, and especially my husband John for their patience and support. I know it's been difficult at times. Thank you all.

## ABSTRACT

### THE THEORY OF COMPROMISED EATING BEHAVIOR

FEBRUARY 2012

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The purpose of this inquiry was to develop substantive theory that describes the social process that influences the eating behavior of hospitalized older adults. Undernutrition or the inadequate intake of dietary nutrients necessary to maintain health, contributes to negative health outcomes such as increased morbidity and mortality in hospitalized older adults. Inadequate dietary intake is a risk factor for undernutrition. Despite the availability of vast resources within the hospital environment, hospitalized older adults have inadequate dietary intake. Undernutrition has been studied from a dietary intake perspective; however, why dietary intake remains inadequate is unknown. Inquiry of eating behavior and the social process that influences eating behavior will provide insight into why dietary intake remains inadequate. The Quality Health Outcomes Model was the conceptual framework that guided this inquiry. A qualitative, grounded theory methodology was used to investigate this phenomenon. Participants included acutely ill, hospitalized older adults and their healthcare providers. Field work included observation, interview, and document review to better understand the actions, interactions and perceptions of participants as to the process that influenced hospitalized older adult eating

behavior. Datum was compared, coded, and analyzed using the constant comparative method. The Theory of Compromised Eating Behavior was developed and describes the process of compromise older adults experience related to eating behavior while hospitalized. The Theory has four stages: self-indication, joint-action, negotiation, and action. Hospitalized older adults choose to compromise their health should they eat inadequately or alternatively compromise their acculturated foodways should they eat adequately. Additionally, healthcare providers compromise their beliefs when older adult patients do not eat adequately. Older adults are at risk for negative health outcomes due to inadequate dietary intake while hospitalized. The meaning of hospital food and mealtimes differs from traditional food and mealtimes for the older adult, resulting in compromise. Intervention which enhances the meaning of food and mealtimes for the older adult during hospitalization may improve dietary intake and nutritional outcomes.



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# CHAPTER 1

## INQUIRY OBJECTIVES

### A. Introduction

Eating or lack thereof can be a determinant between wellness and poor health. Lack of eating or diminished eating behavior may contribute to inadequate dietary intake which is a risk factor for undernutrition. Undernutrition contributes to negative health outcomes such as increased morbidity (Sullivan, Bopp, & Roberson, 2002) and mortality (Gariballa & Forster, 2006; Kagansky et al., 2005; Liu, Bopp, Roberson, & Sullivan, 2002; Persson, Brisma, Katarski, Nordenstrom, & Cederholm, 2002; Van Nes, Herrmann, Gold, Michel, & Rizzoli, 2001) in older adults. An environment in which undernutrition is especially problematic is acute care hospitals, where the prevalence of undernutrition in older adults is reported to be between 30% (Adams, Bowie, Simmance, Murray, & Crow, 2008) and 58% (Thorsdottir et al., 2005).

Despite the availability of vast resources within the hospital environment, hospitalized older adults are at risk for inadequate dietary intake (Incalzi et al., 1998). Eating behavior determines dietary intake. It is a complex phenomenon with physiological, psychological, social, as well as sociocultural features (Elsner, 2002) and is especially important for older adults within the hospital environment since acute illness necessitates the need for adequate if not extraordinary nutrition.

Current literature has described patient outcomes related to undernutrition and the relationship between inadequate dietary intake and undernutrition within the hospital setting. However social processes within the hospital setting that influence eating behavior have not been described. Description of this process provides theoretical insight

to inform new research and practice toward improving older adult outcomes related to undernutrition.

### **B. Purpose**

Within community and residential settings, older adult nutritional status has been reported to be influenced by physiological conditions such as disease (DiFrancesco et al., 2006; Donini et al., 2008; Plata-Salaman, 1996), functional status (Bartali, et al., 2003; Ismail et al., 2008; Donini et al., 2008; Shatenstein, Kergoat, & Reid, 2007; Westergren, Unosson, Ohlsson, Lorefalt, & Hallberg, 2002), and oral health status (Donini et al., 2008; Sheiham & Steele, 2001). A reported psychological influence is mood (Paquet, St-Arnaud-McKenzie, Kergoat, Ferland, & Dube, 2003; St-Arnaud-McKenzie, Paquet, Kergoat, Ferland, & Dube, 2004; Wikby & Fagerskiold, 2004). Other social and sociocultural influences include social facilitation (deCastro, 2002; Dube, Paquet, St-Arnaud McKenzie, Kergoat, & Ferland, 2007; Larrieu et al., 2004; Locher, Robinson, Roth, Ritchie, Burgio, 2005; Nijs et al., 2006; Shahar, Schultz, Shahar, & Wing, 2001; Wikby & Fagerskiold, 2004) ambience, (Gibbons & Henry, 2005; Nijs, et al., 2006; Wikby & Fagerskiold, 2004), food choice (Falk, Bisogni, & Sobal, 1996), and life course (Brombach, 2001a; Brombach, 2001b; Falk et al., 1996).

The hospital environment represents a setting where older adults are at risk for undernutrition secondary to inadequate dietary intake despite access to food and therapeutic nutritional intervention. While some older adults may be admitted to the hospital with undernutrition, some become more undernourished while inpatients (Charles, Mulligan, & O'Neill, 1999), yet others remain well nourished. Whether known influences of older adults' nutritional status can be extrapolated to the hospital

environment or whether unique social processes exist due to acute illness or secondary to the hospital environment was undetermined and was studied within the context of the hospital, based upon the eating behavior of those involved. The aim of this inquiry was to develop substantive theory that describes the processes that influence the eating behavior of hospitalized older adults.

### **C. Inquiry Questions**

Specific inquiry questions included:

1. What are the perceived processes that influence the eating behavior of hospitalized older adults from the patient and the healthcare provider perspective?
2. What actions influence the eating behaviors of hospitalized older adults?
3. What interactions influence the eating behaviors of hospitalized older adults?
4. What are the documented processes that influence the eating behaviors of hospitalized older adults?

### **D. Definitions**

- Undernutrition is defined as the inadequate intake of dietary nutrients necessary to maintain health (Furman, 2006).
- Eating behavior is defined as the “thoughts, actions, and intents that an organism enacts in order to ingest solids or liquids” (Elsner, 2001, p. 18).
- Processes are defined as patterns of behavior (Glaser, 1978).
- Dietary intake is defined as the ingestion of solids or liquids.
- Hospital is defined as a tertiary care hospital where older adults are admitted for short-term medical care during acute illness or exacerbation of chronic illness.

- Hospitalized older adult is defined as an older adult, 65 years of age or older, who is admitted to the acute care hospital for a medical illness, has an oral diet order, and who is functionally able and willing to participate in the research.
- Healthcare provider is defined as a hospital employee who is in direct contact with the hospitalized older adult relative to eating behavior.
- Healthcare documents are defined as written medical documents or records relative to the eating behavior of the hospitalized older adult.
- Social facilitation is defined as “the enhancement of a certain behaviors due to the sheer presence of others” (Nijs et al., 2006, p.941).
- Ambience is defined as “the atmosphere of the social and physical environment present with a meal” (Nijs et al., 2006, p. 935).
- Life course is defined as the “personal roles and the social, cultural, and physical environments to which a person has been previously exposed” (Falk et al., 1996, p. 258).
- Foodways is defined as “traditional customs or habits of a group of people concerning food and eating” (Foodways, 2011).
- Compromise is defined as “to come to terms by mutual concession; to come to an agreement by the partial surrender of position or principles” (Compromise, 2011).

### **E. Conceptual Framework**

The Quality Health Outcomes Model (QHOM) (Mitchell, Ferketich, & Jennings, 1998) provides a framework with which to holistically view what is known about the phenomenon of undernutrition in hospitalized older adults (see Figure1). The QHOM was developed as a framework to guide outcomes research and suggests that multiple factors

affect patient outcomes. The concepts within the model include client, interventions, and system as well as relationships between these concepts; all affecting patient outcomes. Additionally, Mitchell et al. (1998) realized the complexities of healthcare at the nurse-patient level of care and included bidirectional arrows between concepts to indicate complex relationships between concepts and to suggest concepts are interrelated.

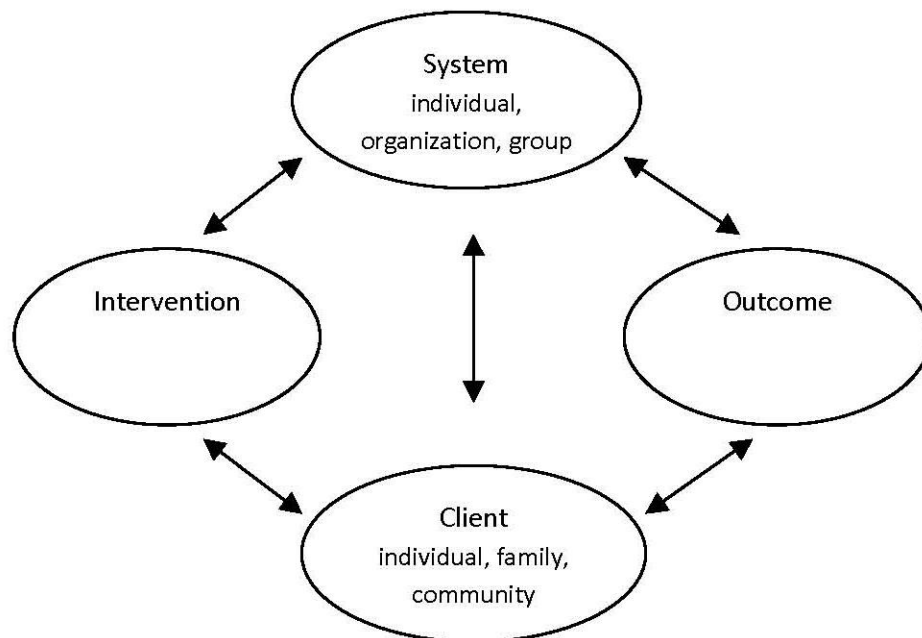


Figure 1: Quality Health Outcomes Model

Frameworks like the QHOM do not define concepts nor do they fully explain, describe, or predict relationships between concepts but rather suggest that concepts are related in some way. Further inquiry is needed to determine the nature of these relationships (Burns & Grove, 2005; Fawcett, 1980). Within the present phenomena of undernutrition, many of the concepts themselves such as patient characteristics that affect nutritional status, nutritional interventions, hospital characteristics that affect nutritional status and their overall effect on health outcomes have been described and will be

reviewed in Chapter 2. However the relationship between identified concepts, eating behavior, and the associated social process engaged in by the participants within the hospital setting and within the older adult population has not been described and represents the phenomenon of interest.

Historically, the QHOM has been used by nurse researchers to identify concepts, to identify relationships between concepts, to measure concepts, to construct theoretical frameworks, and to guide research traditions (Furman, 2009). Throughout this inquiry, the QHOM guided development of a theory that describes the social process that influences eating behavior of hospitalized older adults. Concepts were identified and relationships between concepts were described, which contributed to the Theory of Compromised Eating Behavior, and will ultimately contribute to a research tradition. A research tradition is defined as an organized program of research about a particular phenomenon, which is explained by a conceptual model (Burns & Grove, 2005, p. 129).

### **F. Methodology Overview**

The QHOM suggests that all actions occur within a context. That is no act occurs completely independent from another but is in some way interrelated with other acts. Qualitative research methodology provides an ideal perspective for analysis of complex phenomenon as rather than controlling for extraneous variables such as system or client characteristics or maintaining intervention fidelity within a controlled environment, qualitative research methodology considers all these variables as well as the interrelationship of variables within the natural setting and within the contexts of those experiencing the phenomenon. Therefore, since little is known about eating behaviors of hospitalized older adults, qualitative methodology provides a holistic perspective with

which to view the eating behavior of the hospitalized older adult so as to develop an understanding of the social process involved.

More specifically, a grounded theory methodology will be used to describe this phenomenon. Symbolic interactionism and pragmatism provide the philosophical basis of grounded theory methodology (Glaser, 1992). Symbolic interactionism suggests that all behavior whether individual or systemic is based on the individual or group of individuals' interpretation of objects and the meaning they assign to those objects (Blumer, 1969). Blumer (1969) defines an object as "anything that can be indicated or referred to" and that objects can be physical, social, or abstract (p.10-11). Thus, identified concepts within the QHOM represent socially constructed objects and social processes, as denoted by the arrows between concepts within the QHOM, are behaviors based upon interpretation and assigned meaning derived from the concepts. Understanding the meaning of older adult eating behavior from participant perspective as well as based upon participant actions and interactions provides insight into the social processes or patterns of behavior that influence eating behavior in hospitalized older adults.

Also, consistent with pragmatic philosophy, Glaser and Strauss (1967), the developers of grounded theory methodology, affirmed that generated theory be practical and applicable. Thus theory derived from the data, should be useful in explaining and interpreting the problem or process, within the substantive area being studied (Glaser, 1978). Analysis of perceptions, actions, and interactions of study participants provided data, which was then used to develop substantive theory that will be used to inform nursing research, education, and practice.

Social processes or patterns of behavior are often the phenomenon of interest in research using grounded theory methodology (Glaser, 1978, p.93). Social processes are patterns of behavior that occur over time, involve change over time, and have distinct stages (Glaser, 1978). Since little was known about the social process which influenced eating behavior within the hospital setting, theory that describes this process provides further insight into the problem of undernutrition.

Field work consistent with qualitative methods was used during this inquiry. Observation, interview, and document review was used to elicit those actions, interactions, and perceptions of older adult patients and their healthcare providers as to the processes that influence eating behaviors within the hospital environment. Observation was used to explore what actions and interactions influence the older adults' eating behavior. During observation, I entered the social world of the participants to experience their realities. Observation of participant behavior, which is reflective of the meaning of eating behavior to the participant, informed inquiry. Interview was used to gain insight into the perceptions of older adult patients ( eight older adults) and their healthcare providers (one dietitian, one patient care technician [nursing assistant], and two registered nurses) as to the processes that influence eating behavior within the hospital environment. Participants are the experts in the phenomenon of interest and the researcher, through the process of interview, can come to understand their perspectives (Lincoln & Guba, 1985). Healthcare document review was used to further substantiate the process that influenced eating behavior. Documents can be useful in establishing context (Lincoln & Guba, 1985).



## **G. Significance of Inquiry**

Working in post acute care, I often admitted older adult patients from acute care facilities who were severely undernourished and rehabilitation of these older patients took many months and sometimes years. Patient outcomes were variable. Why and how undernutrition occurs in older adults, especially in settings where nutritional resources were available became an enigma. Researchers, investigating undernutrition in older adults, have traditionally studied undernutrition from a dietary intake perspective. While a plethora of research findings suggest that indeed many hospitalized older adults have inadequate dietary intake (Charles et al., 1999; German et al, 2008; Incalzi et al., 1998; Mowe & Bohmer, 2002; Sullivan, Sun, & Walls, 1999; Wright, Hickson, & Frost, 2006; Xia & McCutcheon, 2006) why this occurs was less studied. Dietary intake is an outcome of eating behavior; therefore, study of eating behavior and of the social process that influenced eating behavior in hospitalized older adult provided insight into the problem of undernutrition. Inquiry from the eating behavior perspective had been lacking. Additionally, nursing research about this phenomenon was deficient. While beyond the scope of present inquiry, eating behavior is a nurse-sensitive outcome and subject to nursing intervention, which will be discussed in Chapter 6.

## CHAPTER 2

### REVIEW OF THE LITERATURE

#### **A. Introduction**

Eating behavior, or “the thoughts, actions, and intents that an organism enacts in order to ingest solids or liquids”, (Elsner, 2002, p. 18), determines dietary intake and the quantity and quality of foods eaten are the primary determinants of nutritional status. Hunger or appetite motivates humans to eat food as a source of energy, which is essential for human existence. Appetite enhances eating behavior and positively affects dietary intake. Conversely, anorexia or lack of appetite diminishes eating behavior and negatively affects dietary intake. Human appetite is controlled in part by physiological processes; however, the literature indicates that there are other processes associated with eating, which influence eating behavior and consequent dietary intake and nutritional status.

Throughout the literature a variety of terms such as food intake, dietary intake, nutrient intake, nutrition, nutritional status, and eating behavior are used to indicate outcomes of nutrition research. It is beyond the scope of this literature review to develop a consensus as to terminology but rather to indicate that eating or eating behavior is influenced by many conditions. Therefore the more general term nutrition will be used to indicate all nutrition-related outcomes including intake, eating behavior, and nutritional status.

#### **B. Community and Residential Dwelling Older Adults**

Various conditions, which influence the nutrition of older adults residing in the community and other residential settings, have been reported in the literature (Bartali et

al., 2003; Brombach, 2001a; Brombach, 2001b; deCastro, 2002; DiFrancesco et al., 2006; Donini et al., 2008; Dube, Paquet, St-Arnand McKenzie, Kergoat, & Ferland, 2007; Falk, Bisogni, & Sobal, 1996; Gibbons & Henry, 2005; Ismail et al., 2008; Larrieu et al., 2004; Locher, Robinson, Roth, Ritchie, Burgio, 2005; Nijs et al., 2006; Paquet et al., 2003; Plata-Salaman, 1996; Shahar, Schultz, Shahar, & Wing, 2001; Shatenstein et al., 2007; Sheiham & Steele, 2001; St-Arnaud-McKenzie, Paquet, Kergoat, Ferland, & Dube, 2004; Westergen et al., 2002; Wikby & Fagerskiold, 2004). Anorexia of aging, common in older adults, is thought to occur as a result of changes in hunger and satiety mechanisms combined with reduced energy requirements consistent with advancing age (DiFrancesco et al., 2006; Donini et al., 2008). Chronic disease states, which have increased incidence in older adults, such as heart, lung, renal disease, and cancers, have been shown to negatively affect appetite (Plata-Salaman, 1996).

Mood has been found to influence nutrition in older adults. Negative mood such as depressed feelings (Paquet et al., 2003), loneliness (Wikby & Fagerskiold, 2004), anger (Paquet et al., 2003), grief, and anxiety (Wikby & Fagerskiold, 2004) have been found to diminish nutrition whereas positive mood such as feelings of well-being have been associated with enhanced nutrition (Dube et al., 2007; Paquet et al., 2003; St-Arnaud-McKenzie et al., 2004; Wikby & Fagerskiold, 2004).

Social facilitation has been shown to affect nutrition. Social facilitation of food intake or eating in the presence of others has been shown to enhance the nutrition of older adults (deCastro, 2002; Dube et al., 2007; Locher et al., 2005; Nijs et al., 2006; Wikby & Fagerskiold, 2004). Conversely, eating alone has been associated with diminished

nutrition in older adults (Larrieu et al., 2004; Locher et al., 2005; Shahar et al., 2001; Wikby & Fagerskiold, 2004).

Ambience has been shown to affect the nutrition of older adults. Surroundings which were aesthetically pleasing to the older adult including clean environment, colorful décor, nice furniture, quiet surroundings, cloth table linens, and soothing lighting were found to enhance their nutrition (Gibbons & Henry, 2005; Nijs et al., 2006; Wikby & Fagerskiold, 2004). Settings in which there was poor ambience such as unclean environment, increased ambient noise, bright lights, paper table linens or lack of table linens, and drab décor were associated with diminished nutrition in older adults (Gibbons & Henry, 2005; Wikby & Fagerskiold, 2004).

Prior research also indicates that eating is a sociocultural phenomenon. Food choice, meal patterning, and type of eater have been shown to be influenced by the life course of older adults (Brombach, 2001a; Brombach, 2001b; Falk, Bisogni, & Sobal, 1996). Wikby and Fagerskiold (2004) found that older adults preferred traditional meals and familiar foods while unfamiliar foods were associated with unwillingness to eat or diminished nutrition.

The ability of the older adult to access food contributes to nutrition as does the ability to ingest food once accessed. Functional limitations such as inability to shop, cook, and self-feed may limit access to food, resulting in diminished nutrition (Bartali et al., 2003; Donini et al., 2008; Westergren et al., 2002). Oral health such as whether the older adult is edentate or dentate, number of natural teeth and the ability to effectively chew or swallow foods has been found to influence nutrition in older adults (Donini et al., 2008; Sheiham & Steele, 2001).

Impaired cognitive function has been shown to diminish nutrition (Shatenstein et al., 2007). While it is unclear whether changes in eating behavior are appetite-related or related to functional limitation or both, Ismail et al. (2008), has identified pathological changes in areas of the brain associated with eating motivation centers, suggesting that older adults with Alzheimer's disease have diminished nutrition directly related to the pathogenesis of the disease.

In summary, nutrition or its precursor eating behavior is a complex phenomenon with physiological, psychological, social as well as sociocultural features. Influences within community and residential settings have been identified; however, it is unknown whether these influences can be extrapolated to the hospital environment and to the acutely ill older adult.

### **C. Hospitalized Older Adults**

While undernutrition may be caused by conditions unrelated to dietary intake, such as malabsorption syndromes, the primary mode of nourishment is dietary intake, which is determined by eating behavior. Consistent with the aim of the proposed research, the literature reviewed focused on eating, dietary intake, and undernutrition. The literature often refers to malnutrition in reference to undernutrition; however, throughout this review, the term undernutrition will be used so as to eliminate confusion with overnutrition or obesity.

The data bases CINAHL and Cab Abstracts were searched using the keywords nutrition, elderly, eating, hospitalization and related terms. Inclusion criteria were primary research articles related to eating and undernutrition, published in English between 1998 and 2011. Exclusion criteria included literature in which participants were

less than 65 years of age, primary research setting was not an acute care hospital i.e. rehabilitation unit, and research which focused on undernutrition associated with specific nutrient deficiencies, illnesses, disease processes, or related to specific geographical areas. Sample size was 31. Articles were stratified into QHOM conceptual categories and put into a matrix format for synthesis.

The literature reviewed was organized based upon the conceptual framework of the QHOM (Mitchell et al., 1998) within the concepts of client, intervention, system, and outcome dependent on the aim of the research. The client concept included literature that described client variables, which contributed to undernutrition in the hospitalized older adult. The intervention concept included variables related to nutritional intervention within the hospital setting. Variables related to dietary intake at the system level of care were included in the system concept and patient outcomes relative to undernutrition in the hospitalized older adult were included in the outcome concept.

### **1. Research on Client Concepts**

Client related variables within the client concept included admission nutritional status (Belbraouet, Tebi, Chau, Toto, & Debry, 1998; Charles et al., 1999), dietary intake versus energy requirements (Mudge, Ross, Young, Isenring, & Banks, 2011), gender (Castel, Shahar, Harman-Boehm, 2006; Chen, Bai, Huang, & Tang, 2007), age (Belbraouet et al., 1998; Forster & Gariballa, 2005), morbidity (Belbraouet et al., 1998; Gariballa & Forster, 2007; Mudge et al., 2011), mood (Chen et al., 2007; German et al., 2008), functional status (Chen et al., 2007), appetite (Mudge et al., 2011; Mowe & Bohmer, 2002), and medication use (Chen et al., 2007).

Belbraouet et al. (1998) assessed the serum protein status of 668 elderly patients upon admission to the hospital compared to 104 healthy community dwelling elderly of the same age (70 years of age or older) and geographical region in France. Serum protein status was considered to be an indicator of nutritional status. These researchers found that the diseased elderly had lower serum protein values than the healthy community dwelling elderly. They also found that serum protein status was significantly lower in those patients over 80 years of age compared to those patients 70-74 years of age. These results indicate that ill or diseased elderly are more likely to be undernourished than healthy elderly and that ill or diseased elderly 80 years of age or older were twice as likely as younger ill or diseased elderly to be undernourished. Results must be interpreted cautiously as other conditions other than undernutrition can affect serum protein status.

Castel et al. (2006) found that being female increased the risk of being undernourished in older adults upon admission to the hospital in their study on gender differences and nutritional status. Being female increased the risk of being undernourished three-fold. Additional findings suggest that depression, length of hospital stay, and poor appetite are predictive of nutritional risk in males whereas impaired functional status and increased comorbidities are predictive of nutritional risk in females. This study took place in southern Israel and represents a culturally homogenous sample. It is unknown how gender-related cultural roles may have influenced these findings therefore generalizability is limited.

In a small sample (n=49) in Ireland, Charles et al. (1999), assessed the prevalence of undernutrition upon admission to an acute medical hospital and also assessed the incidence of undernutrition during hospitalization. These authors found that many older

adults were at risk for undernutrition or undernourished upon admission (84%) and that 29% developed undernutrition while hospitalized. Many (69%) had inadequate dietary intake while hospitalized. This research suggests that many older adults are undernourished upon admission to the hospital and some older adults become undernourished while inpatients, secondary to poor dietary intake.

Yet results regarding nutritional status are limited by the use of a non-validated nutritional risk assessment tool. Common nutritional indices were used to quantify nutritional risk based upon a risk grade. Without proper validation as a nutritional assessment tool, internal validity is compromised. The authors also identified inadequate dietary intake in the majority of participants however validity is again in question as participant intake was categorized as “likely adequate” or “unlikely adequate” based upon diet history (p. 181).

Chen et al. (2007) compared the effect of age, sensory impairment, oral health, functional status, social support, and mood on the nutritional status of 114 older adults within a tertiary medical center in Taiwan. Stepwise regression was used to identify those independent variables, which explained the most variance in nutritional status. Results indicated that being female, depressed mood, lower functional status, and increased medication use were most predictive of poor nutritional status (per Mini Nutritional Assessment [MNA] score).

Forster and Gariballa (2005) compared the nutritional status of acutely ill older adults less than 75 years of age to those adults older than 75 upon admission to the hospital within the UK to measure the effects of aging on nutritional status. Results indicated that increased age was an independent risk factor for undernutrition, having a



direct effect on several nutritional status indices including both anthropometrical and biochemical indicators. These results remained significant after controlling for other variables such as disability, number of comorbidities, medications, smoking status, and acute inflammatory response.

Using the same data from the previous study, Gariballa and Forster (2007) measured the association between patient diagnosis on admission and nutritional status in hospitalized older adults. Findings indicate that certain diseases such as chronic obstructive pulmonary disease (COPD), heart failure, and falls were associated with lower anthropometric nutritional indices than other diseases such as ischemic heart disease, chest infection, or elective hip or knee surgery. Differences in biochemical nutritional indices between diagnostic groups were not significant.

A limitation to this study is the researchers' lack of clarification of how subjects were stratified into diagnostic groups. Although 445 subjects were recruited into the original study, seemingly only those patients experiencing one of the 6 most common admission diagnoses groups (n=237) were included for analysis in this study. Sub-group size ranged from 19-61. Small group size may have limited the statistical power needed to detect between group differences. Additionally, older adults may experience multiple comorbidities. While number of chronic diseases per patient was considered in the analysis, it is unclear how subjects who experienced more than one of the most common admission diagnoses were stratified. Yet, these findings indicated that patients experiencing certain diseases may be at increased risk for undernutrition.

German et al. (2008) examined the association between nutritional risk factors and depression in 195 older adults in Israel and found that there was a significant inverse

relationship between depression and nutritional status. These authors found that 28% of their sample was depressed (per Geriatric Depression Scale [GDS]) and that 17% of their sample was both depressed and undernourished, with undernourished patients being twice as likely to be depressed. Results remained significant after controlling for other variables such as age, cognitive status, functional status, and number of comorbidities. They also found that depressed patients were less likely to eat than non-depressed patients.

Mowe and Bohmer (2002) considered the prevalence of reduced appetite and reduced appetite as a predictor of undernutrition in two groups of older adults, one group living in the community and one group admitted to the hospital for an acute condition or an exacerbation of a chronic condition in Norway. Results indicated that 43% of the hospitalized group versus 15% of the community group reported reduced appetite. Additionally, 71% of subjects who reported reduced appetite were undernourished as determined by anthropometrical indices. Appetite was assessed using subject self-report retrospectively for four weeks; therefore, data was subject to recall bias. However, these results suggest that decreased appetite may contribute to undernutrition in hospitalized older adults.

Mudge et al. (2011) sought to identify the prevalence of poor dietary intake in their prospective study of 134 hospitalized older adults by measuring dietary intake and then comparing energy and protein intake to estimated resting energy expenditure (REE), total energy expenditure, and protein requirements. Additionally, they sought to identify patient variables associated with poor dietary intake.

Results indicated that 66% of energy requirements were provided via meals and that energy intake was insufficient for REE in 59% of participants while 8% of participants met total energy expenditure needs, and 14% of participants met protein requirements. Additional statistical analysis showed that inadequate dietary intake was associated with poor appetite, higher BMI, delirium, and diagnosis of infection or cancer.

Strengths of this research include adequate sample size, use of validated methods to assess dietary intake, and testing of relevant variables. Limitations included assessment of dietary intake on one day only. While the authors measured the dietary intake of a subgroup (n=38) on three days, it is unknown whether dietary intake was consistent over hospital meals or days for the entire sample.

Additionally, appetite was assessed using the Simplified Nutritional Appetite Questionnaire (SNAQ), which asks participants four appetite related questions (Wilson, et al., 2005, p. 1081). This tool has been validated for use in community dwelling adults and long-term care residents but not in the hospital setting. Also of interest is that the SNAQ asks patients about their appetite history (preadmission) yet a good appetite and adequate dietary intake at home is not necessarily predictive of a good appetite and good dietary intake while hospitalized and vice versa.

Limitations to this review include lack of a “gold standard” for diagnosis of undernutrition, thus identifying those older adults who are undernourished upon admission to the hospital. Various methods were used to assess nutritional status including biochemical, anthropometrical, and dietary indicators. Dietary intake is often assessed using diet history, which is subject to bias thus limiting the reliability of these findings. A strength of this review is the use of statistical models, which allowed for

control of potentially confounding variables such as age and disease including number of comorbidities as well as disease severity, which are all closely associated with nutritional status.

The role of gender on nutritional status and dietary intake requires further investigation. The influence of disease on the older adult female and on her foodways may help explain the role of gender on nutritional status as in many cultures the female is the preparer of food. Should the older adult female be incapacitated due to disease she may be unable to prepare food to eat and consequently may become undernourished whereas if the older adult male is incapacitated due to disease the female maintains the foodways. Differences in the effect of disease on metabolic processes associated with gender must also be considered as a cause of undernutrition in older adults. The role of reduced appetite or anorexia on the dietary intake of hospitalized older adults has been established (Mowe & Bohmer, 2002; Mudge et al., 2011) however the etiology is speculative and requires further investigation since it remains unclear whether the anorexia is related to only pathophysiological processes or whether other processes are involved.

## **2. Research on Intervention Concepts**

Interventions identified within the intervention concept included: the effect of oral nutritional supplementation on nutritional status (Bos et al., 2001; Gariballa, Forster, Walters, & Powers, 2006; Gazzotti et al., 2003; Joosten & Vander Elst, 2001), assessment of feeding assistance on the nutritional status of hospitalized older adults (Hickson et al., 2004; Tsang, 2008), and an investigation on the use of a dining room setting on the dietary intake of hospitalized older adults (Wright, Hickson, & Frost, 2006).

Nutritional intervention included the use of nutritional supplements. Bos et al. (2001) examined and compared changes in nutritional indices in three groups of participants to determine if short-term (ten days) nutritional supplementation, using an oral liquid supplement, changed nutritional indices including dietary intake, biochemical, and anthropometrical indices. The supplement provided 400 kcal, 30g protein, 50g carbohydrates, 9g lipids, as well as vitamins and minerals (Bos et al., 2001, p.226). Groups included undernourished elderly control group (no supplementation), undernourished elderly intervention group (supplementation), and younger intervention group (supplementation). Results indicated increase in dietary intake in intervention groups, both groups of undernourished elderly had lower baseline biochemical nutritional indices than younger intervention group, and elderly intervention group had an increase in free fat mass (FFM) and body mass index (BMI) compared to elderly control group.

A limitation to this research includes small sample size. Total sample was 35 with six participants in the elderly control group, 17 participants in the elderly intervention group, and 12 participants in the younger intervention group, which may have limited statistically significant findings secondary to low statistical power. An additional limitation was the use of an undernourished, older adult, no supplement group as this represents an ethical dilemma. This group was identified as undernourished yet received cueing to finish meals only without nutritional supplementation, putting this group at increased risk for negative outcomes. A strength of this research is the identification of the problem evaluating the short-term effectiveness of nutritional intervention.

Joosten and Vander Elst (2001) assessed the effect of an oral nutritional supplement, administered twice every other day, on the caloric intake of 50 hospitalized

older adults. The oral liquid nutritional supplement consisted of 300 kcal, 39% fat, 48% sugar, 13% proteins as well as vitamins and minerals (Joosten & Vander Elst, 2001, p. 392). Results indicated that total caloric intake increased on days when oral nutritional supplements were administered. However, well nourished patients were more likely to consume the supplements than undernourished or nutritionally at risk patients and only half of the supplements were consumed. Additional findings suggest that nutritional supplements do not reduce voluntary food intake yet increased total daily caloric intake.

Limitations of this research are related to intervention fidelity. The dependent variable for this intervention study was dietary intake yet the authors state that only 50% of supplements were consumed. Additionally, food eaten between meals was recorded by nursing staff “as completely as possible” (p. 392) and that information was also obtained from significant others, which is subject to recall and measurement bias and may have affected accurate analysis of dietary intake.

Gazzotti et al. (2003) randomized 80 nutritionally at risk older adults into an intervention group, who received usual diet plus nutritional supplements for 60 days, or a control group, who received usual diet. Nutritional supplementation consisted of two oral supplements daily, consisting of Clinutren 1.5 and Clinutren soup, which both provide 500kcal and 21g protein (Gazzotti, et al. 2003, p.322). Mini Nutritional Assessment (MNA) scores, indicative of nutritional status, improved in the intervention group although weight did not. These results indicate that nutritional supplements may be beneficial to nutritional status per MNA score yet may not be reflected in weight gain over 60 days. The authors describe compliance with intervention post hospital discharge

as “adequate” (p. 323) however these results may be subject to bias as intervention fidelity was based upon participant self –report post discharge.

Gariballa et al. (2006) randomized 445 older adults into intervention and control groups to determine whether nutritional supplements during acute illness and through convalescence improved participant outcomes such as disability, readmission, length of stay (LOS), discharge destination, morbidity, and mortality. Intervention group received usual diet plus nutritional supplement whereas the control group received usual diet plus placebo twice daily for six weeks. Nutritional supplementation consisted of two oral liquid supplements daily, which provided 995 kcal as well as the recommended daily intake of vitamins for older adults (Gariballa et al., 2006, p. 894). Results indicate improvement in serum albumin, folate, and B12 levels as well as readmission rates in the intervention group. Other outcome measures between groups were not significant. Some of the variables measured suggest an improvement in nutritional status, which may have contributed to a decrease in hospital readmission however a limitation to this study was related to intervention fidelity. Neither group adhered to the full supplement regime, which may have contributed to non-significant findings.

Other nutritional interventions included the use of feeding assistance (Hickson et al., 2004; Tsang, 2008) for those older adults who are functionally unable to eat thus affecting their dietary intake. Hickson et al. (2004) did not find that feeding assistance improved the nutritional status of older adults in a randomized control trial involving 509 older adults. Intervention included the use of health care assistants who were specially trained to identify and care plan for functional limitations in older adults that might hinder their dietary intake, assist patients in feeding, and offer snacks throughout the day

versus usual care in the control group. Results indicated differences in antibiotic use between groups however no differences in nutritional indices including dietary intake between groups was noted.

Several methodological limitations may have affected results in this research. Primarily, while number of patients/ward was not specified, there was only one assistant for each of the three units involved. It is questionable how one assistant could assist many patients effectively at a mealtime. Assistants assisted patients five days/week and for two meals/day. This suggests that patients were not assisted by assistants for 52.4% of meals versus assisted for 42.6% of meals. Also, since participants were randomized to control versus intervention within the same unit, diffusion of treatment cannot be ruled out. Lastly, older adults who were undernourished or at risk of becoming undernourished were not targeted for this intervention. Feeding assistance that targets older adults with undernutrition or who are at risk for undernutrition is warranted.

Tsang (2008) observed 46 older adult patients admitted to a geriatric ward within an acute care hospital in Australia, to determine amount of eating assistance needed, time needed to provide the assistance, if enough assistance was provided, and to analyze the amount of food wasted (not consumed). Findings indicated that 30% of patients were independent (needed no assistance), 50% were partially dependent (needed some assistance), and 20% were totally dependent (needed full assistance). Based upon further observation, 87% of those needing partial assistance received it and 67% of those who were totally dependent received assistance. Three totally dependent patients received no assistance. Average amount of time spent with those needing partial assistance was four



minutes/patient and average time spent with those needing total assistance was 25 minutes/patient. Food wastage was highest in the totally dependent patients.

Additional results showed that assistance varied dependent on time of day. Evening meals were the busiest time with least amount of staff consequently staff spent an average of 10.8 minutes/totally dependent patient at this time. Nursing staff spent more time assisting partially dependent patients whereas paraprofessionals spent more time assisting totally dependent patients. These results indicate that lack of eating assistance may contribute to decreased dietary intake in patients that are at most risk for undernutrition. Additionally, this research suggests that observation maybe a valuable method for conducting nutrition research.

Wright et al. (2006) conducted a quasi-experimental study, in the United Kingdom, in which 48 older adults were either encouraged to eat in a supervised dining room for their lunch meal (intervention group) or at their bedside (control group). Groups did not differ significantly by age, gender, diagnosis, or weight. Results indicated that those who ate in the dining room had a 36% greater dietary intake than those who ate at the bedside. This result supports the premise of social facilitation however results are limited by small sample size. Also while diagnoses did not differ significantly between groups, severity of the disease was not considered and may have affected a participant's ability to participate in the intervention.

The majority of interventional literature reviewed explored the use of oral nutritional supplementation, which speaks to the problem of inadequate voluntary dietary intake in this population. Why voluntary dietary intake is diminished remains unknown. Various types of supplementation were used across studies, yet the rationale for use was

similar. Results indicate that nutritional supplements seemingly have some nutritional benefit however compliance with regime is variable and rationale for noncompliance is not determined. Perhaps the same processes that inhibit voluntary dietary intake also inhibit oral nutritional supplement intake.

Logic suggests that older adults who are unable to eat independently may have improved dietary intake if assistance is provided. However, the literature is contradictory as to whether eating assistance is beneficial or not. Social facilitation of eating and dining room ambience within the hospital environment may improve dietary intake; however, additional research is warranted, due to the scarcity of available literature that has been conducted within the hospital setting.

### **3. Research on System Concepts**

The system variables within the system concept focused on nutritional assessment (Adams et al., 2008; Volkert, Saeglit, Gueldenzoph, & Stehl, 2010), nutritional surveillance (Incalzi et al, 1998; Sullivan, Sun, & Walls, 1999; Xia & McCutcheon, 2006), healthcare provider nutritional knowledge (Ross, Mudge, Young, & Banks, 2011; Volkert et al., 2010), attitudes, and behavior of healthcare providers related to nutritional care of hospitalized older adults (Ross et al, 2011).

Adams et al. (2008) used mixed methods to determine the prevalence of undernutrition or undernutrition risk in 100 older adults admitted to a tertiary care center in Australia and to determine healthcare staff awareness of risk factors for undernutrition. Results indicated that 91% of older adults were either at risk for undernutrition or undernourished per MNA and anthropometric indices. Also, based upon survey results from 20 physicians and 37 nurses involved with admission of the undernourished or at

risk participants, the authors found that they failed to identify major risk factors for undernutrition such as recent unintentional weight loss or loss of appetite. Additional results suggest that physicians and nurses believed the best indicator of nutritional status was biochemical indices and skin characteristics respectively.

Incalzi et al. (1998) compared the dietary intakes of 370 older adults admitted to a surgical unit, a medical unit, and a geriatric unit. The authors determined correlations related to low dietary intake across units, and determined predictors of mortality based upon low dietary intake. Results indicated that prevalence of undernutrition was similar across groups and nutritional status deteriorated in all groups from admission to discharge. Dietary intake was related to age, functional status, body mass index (BMI), number of comorbidities, and hypoalbuminemia. Low dietary intake (less than 30% of required dietary intake in the first 3 days of stay) was predictive of mortality and dependency in ADL's and BMI less than 22kg/cm<sup>2</sup> were predictive of low dietary intake. These results indicate that within hospital nutritional support may be inadequate and that undernourished as well as dysfunctional older adults are at increased risk for low dietary intake and mortality as inpatients.

Ross et al. (2011) utilized focus groups to explore knowledge, attitudes, and behaviors of healthcare providers relative to nutritional care of older adults in a tertiary care hospital in Australia. Sample size was 22. Healthcare providers including dietitians, therapists, a pharmacist, nurses, and dietary assistants attended one of three focus groups wherein topics discussed included awareness of the problem of malnutrition, knowledge of nutrition care practices, and perceptions of barriers to nutrition care. Focus group discussion was recorded and transcribed as were facilitator field notes. Data were

analyzed for themes. Results indicated five prevalent themes (a) poor knowledge of nutrition care processes (b) poor communication among disciplines, (c) lack of role clarity and shared responsibilities, (d) competing priorities at meal times, (e) a sense of powerlessness.

Strengths of this study included triangulation of both methods and sources as transcription of focus group discussion and field notes were analyzed as data. Additionally, multidisciplinary groups participated so as to present a more holistic perspective. Transferability of these results is limited based upon methodology as within different contexts results may vary.

Sullivan et al. (1999) studied 497 older adults admitted to a Veterans Hospital in the United States to determine the average dietary intake, factors that contributed to low intake, and whether dietary intake correlated with mortality. Results indicated that 21% of study participants had dietary intake less than 50% of required, NPO diet order was found to contribute most to low dietary intake, and low dietary intake was predictive of in hospital mortality. Rationale for NPO diet order was due to diagnostic testing, gastrointestinal pathology, or decreased level of consciousness. However, 17% of NPO diet orders had no rationale. These findings suggest that nutrition may not be a priority within the acute care hospital. Limitations of this research include an all male sample. Also, although the authors describe the hospital as “an acute care hospital setting” (p. 2013) it is not clear how systemically this Veterans Hospital compares to other tertiary care hospitals.

Volkert et al. (2010) used a cross-sectional study design to establish whether physicians and nurses in a German hospital documented malnutrition or nutrition-related

problems in hospitalized older adults (n=205) and assessed whether nutritional support was utilized routinely. Researchers assessed nutritional status based upon BMI, Subjective Global Assessment (SGA), and MNA. Nutrition-related problems were assessed using a standardized questionnaire which asked about recent weight loss, poor appetite, swallowing or chewing problems, assistance needed with eating et cetera. This data was compared to the data obtained by the physician using clinical judgment of nutritional status as documented in the medical record, per nurse documentation of admission and discharge patient weight, and documentation of nutrition-related problems in the medical record.

Results indicated that physicians identified malnutrition in 6.4% of patients based upon clinical judgment when compared to assessment by researchers utilizing nutritional assessment tools wherein 5-30% of patients were identified as malnourished. Results also indicated that nursing staff failed to document nutrition related problems when compared to appetite assessment tool findings and that only 54% of participants had a documented weight, 5.9% had documented height and no participants had a calculated BMI. Additionally, only 25% of participants identified by the physician as being malnourished received nutritional support.

Strengths of this research include sample size (n=205) and use of validated nutrition assessment tools. Limitations include use of a non-validated nutrition-related problem assessment tool as well as lack of clarity related to number of healthcare provider participants. In only one figure was the number of healthcare provider participants indicated (n=205) and it seems questionable that the number of older adult participants would equal the number of healthcare providers documenting nutritional

care. Since little is known about the healthcare providers involved, it remains difficult to discern whether documentation of nutrition related problems was widespread among many physicians and nurses.

Xia and McCutcheon (2006) used observation and interview to establish what nurses do in relation to older adult eating practices during mealtimes in their interventional study within a tertiary care hospital in Australia. Nurses mealtimes were adjusted so as to not occur during patient mealtimes on one medical ward whereas usual nurse-patient mealtimes remained on another medical unit. Fifty nurses and 48 patients were observed and four nurses as well as four patients from respective wards were interviewed. A data collection tool was utilized during observation to elicit eating behaviors or assistance with eating behaviors. Semi-structured interview technique was used and both nurses and patients were asked similar questions. Results indicated that kitchen staff delivered meals and that participants waited an average of 8.4 minutes to access their food once delivered. The main reasons for delay included participants who were unable to access food independently or needed help with repositioning.

The mean time nurses spent with those participants needing assistance was 1.9 minutes. Participants were often interrupted while eating for clinical issues and nurses interrupted participant eating most often. Fifty percent of patients left at least one-third of their meal uneaten and 85% left some food uneaten. Dietary intake was often not recorded. One nurse stated "...we record urine output, we record drugs given, but not always nutrition". The authors indicated that what nurses stated during interview was not always consistent with what researchers observed during observation. For example, nurses indicated that they would assist with accessing meals however this was not always

observed during observation. Results were not conclusive as to whether changing nurse mealtimes were effective, which is a methodological limitation. Seemingly the purpose of the research became secondary to the researchers, based upon the findings from observation and interview. Additionally, interview was limited to four nurses and four patients, interviews lasted 15 minutes, and observation was non-participatory, which may have limited findings as saturation of data was not indicated.

System related variables influencing nutritional status as evidenced by this review are related to prioritization of nutrition as a standard of care. Seemingly these researchers identified lack of healthcare provider nutrition knowledge (Adams et al., 2008; Ross et al., 2011; Volkert et al., 2010), lack of surveillance of dietary intake by healthcare providers (Incalzi et al., 1998; Sullivan et al., 1999; Xia & McCutcheon, 2006; Volkert et al., 2010), role confusion, poor communication between disciplines, competing priorities at mealtimes, and a sense of powerlessness (Ross et al.) as contributory to the nutritional status of hospitalized older adults despite identified prevalence of undernutrition (Adams et al., 2008).

#### **4. Research on Outcome Concepts**

Outcome variables included in the outcome concept included mortality (inpatient or long-term [three months-three years]) (Covinsky, 1999; Kagansky et al., 2005; Liu et al., 2002; Persson et al., 2002; Stratton, King, Stroud, Jackson, & Elia, 2006; Van Nes et al., 2001), physical dysfunction (Covinsky, 1999), discharge disposition to nursing home (Covinsky, 1999; Stratton et al., 2006; Van Ness et al., 2001), increased length of hospital stay (Gariballa & Forster, 2007; Martins, Correia, & Amaral, 2005; Stratton et al., 2006;

Van Ness et al., 2001), increased readmission rate (Stratton et al., 2006), and life-threatening medical problems (Sullivan et al., 2002).

Covinsky (1999) measured the relationship between nutritional status per Subjective Global Assessment (SGA) and mortality, functional status, and discharge disposition to a nursing home at three and 12 months post hospital discharge in 369 hospitalized older adults within the United States. Results indicated that those participants who were more undernourished were more likely to die, be functionally dependent, and more likely to spend time in a nursing home. A methodological strength of this research is the use of a statistical model (logistic regression), which controlled for disease and functional status since either variable could have confounded the outcome variables. Results show that undernutrition is a risk factor for mortality, physical dysfunction, and nursing home admission.

As an arm of a previously reviewed study, Gariballa and Forster (2006) measured the effect of acute phase response and nutritional status on dietary intake, functional ability, length of hospital stay (LOS), and mortality (12 month) in 445 older adults in the United Kingdom (UK). Acute phase response was measured using C-reactive protein (CRP) to distinguish undernutrition from underlying disease. Acute response was considered if serum CRP > 10mg/dl and non-acute response was considered if serum CRP < 10mg/dl. Nutritional status was measured with anthropometric, hematological, and biochemical indices. Results indicated that the acute phase response group was more undernourished, functionally disabled, had lower dietary intakes, had increased LOS, and increased mortality. Further analysis showed that after controlling for age, disability, and comorbidity, CRP continued to have a significant effect on nutritional status and



outcomes. These results emphasize the relationship between acute diseases and decreased dietary intake, which subsequently results in negative outcomes. Limitations to this research were previously reviewed (Gariballa & Forster, 2007).

Kagansky et al. (2005) sought to identify risk factors for undernutrition and assess the ability of the MNA score and an MNA sub score to predict mortality in 414 hospitalized very old adults (>75 years) in Israel. Results indicated that 82.6% of participants were undernourished or at risk for having undernutrition. The risk factors for undernutrition included low serum albumin or phosphorus, dementia, CVA diagnosis, and age. Mortality increased in those participants whose MNA was <23.5. Statistical regression showed that low serum albumin, diabetes mellitus, and diagnosis of malignancy were risk factors for mortality. MNA sub score, related to questions about diet, were associated with undernutrition and risk factors for low MNA sub score were associated with infection, malignancy, pressure ulcers, dementia, CVA, and recent orthopedic surgery. These results support the relationship between decreased dietary intake and undernutrition in the very old adult as well as the association between undernutrition and mortality.

Liu et al. (2002) studied 660 older adults discharged from a Veterans Hospital in the US to determine if undernourished discharged patients were at increased risk of mortality within one year after statistically controlling for functional status and disease severity. Results indicated that nutritional status had an inverse relationship with risk for mortality and after controlling for disease severity and functional status, body mass index (BMI) <20 and history of weight loss were predictive of mortality within one year.

Limitations of this research include use of a predominantly white (86%) male (98%) sample.

Martins et al. (2005) compared use of the SGA, MNA, the Malnutrition Screening Tool (MST), and anthropometric indices versus the Nutritional Risk Screening (NRS-2002) and then evaluated the association of NRS-2002 with LOS of 207 hospitalized older adults in Portugal. Results indicated that the MNA had the highest agreement with the NRS-2002 ( $k=0.62$ ) and that those participants classified as undernourished by the NRS-2002 were twice as likely to have a longer LOS ( $>8$  days). A limitation to this study is lack of clarification as to the validity and reliability of the NRS-2002 to be used as a point of reference. The authors refer to the tool having been validated but sensitivity or specificity was not stated.

Persson et al. (2002) compared the validity of the SGA, the MNA, and the MNA short form (MNA-SF) versus clinical nutritional indices and the ability of these assessments to predict mortality annually for three years in a small sample ( $n=83$ ) of older adults admitted to a hospital in Sweden. Results indicated that the SGA, MNA, and the MNA-SF were highly correlated with each other ( $r=0.77-0.93$ ,  $p<.001$ ). All three assessments correlated with anthropometric and body composition indices but not with biochemical indices (albumin and insulin-like growth factor-1 [IGF-I]). Further analyses indicated that undernourished participants had mortality rates of 50%/1year, 65%/2years, and 80%/3 years. An additional finding showed that greater than 80% of participants had an IGF-I: IGFBP1 (insulin-like growth factor binding protein 1) ratio  $<5$ , indicating catabolism. While beyond the scope of this research, the high percentage of participants

experiencing catabolism on day two-three of admission is noteworthy. A limitation to this research is the small sample and sub group sample size.

Stratton et al. (2006) used the Malnutrition Universal Screening Tool (MUST) to determine if undernutrition as determined by the MUST score was predictive of mortality (inpatient, three month, six month), LOS, discharge disposition to a nursing home, and readmission to the hospital rates in 150 older adults admitted to an acute care hospital in the UK. The MUST tool was thought to be more “user friendly” since nutrition risk assessment could be accomplished without having a documented patient weight. Results indicated that those identified as being at medium or high risk for undernutrition per MUST score were more likely to die (as inpatients, at three and six months) than those at low risk. Also, those participants at medium and high risk per MUST score were more likely to have an increased LOS than those identified as low risk. Findings for discharge disposition to a nursing home and readmission to the hospital rates were found non-significant. Those participants who were unable to be weighed yet scored at medium or high risk for undernutrition were more likely to die than those unable to be weighed who scored low risk.

Several issues are noteworthy from this research. The reality of weighing all patients for nutritional assessment, the use of recalled weight and height, the inclusion of an acute disease effect score within the MUST tool, and the negative outcomes associated with those who were unable to be weighed. What is unclear from this research is why patients could not have weight or height measured, as non-traditional means of measuring both of these variables exist or if ease of measurement was the deciding criteria.

Sullivan et al. (2002) examined whether 508 older adults who were undernourished upon admission to the hospital were at increased risk for life-threatening clinical problems during hospitalization and whether those events remained significant after statistically controlling for illness severity i.e. biochemical indices, Acute Physiology and Chronic Health Evaluation (APACHE II) score, Charlson Weighted Index of Comorbidity. A life-threatening problem was defined as “a dramatic deterioration in the patient’s status and the need for immediate intervention or the transfer to the intensive care unit for monitoring or treatment of a myocardial infarction” (p. 925). Examples included arrhythmia, cardiopulmonary arrest, sepsis, cardiac or respiratory failure, shock, death, wound dehiscence, hemorrhage, or acute abdomen. Results indicated that all nutritional indices measured were associated with increased risk of life-threatening clinical problems, and that when all variables were considered the APACHE II score was most predictive of a life-threatening clinical problem. After controlling for illness severity per APACHE II, anthropometrical indices such as BMI remained strongly predictive of life-threatening problems while biochemical indices did not. Additionally, nutritional indices were highly correlated with illness severity. These results give credence to the continuing discussion as to the relationship between severity of illness (disease) and nutritional status. A limitation to this research includes the use of a predominantly white male sample.

Van Ness et al. (2001) analyzed the MNA scores of 1145 older adults admitted to a tertiary care geriatric hospital in Switzerland to determine if scores were related to mortality and LOS. Discharge disposition was also considered in those participants who did not reside in a nursing home previous to admission (n=908). Results indicated that a

MNA score <17, signifying undernutrition was associated with a three-fold increase in death rate compared to those participants with a MNA score >24, which signified well nourished. Average LOS increased from 30.5 days in well nourished participants to 42 days for undernourished participants. Also, 38.6% of the undernourished or at risk for undernutrition were discharged to a nursing home compared to 7.7% of the well nourished. These results indicate that undernutrition is related to adverse outcomes such as mortality, increased LOS, and discharge to nursing home. A strength of this research is the use of the MNA to identify undernutrition or risk for undernutrition as the MNA has been validated for use in hospitalized older adults (Guigoz, Vellas, & Garry, 1994). Inclusion of this article for review was questionable as although the hospital was described as a tertiary care hospital, the LOS for well nourished patients was more consistent with LOS at alternative healthcare settings such as rehabilitation hospitals.

Negative health outcomes related to undernutrition in hospitalized older adults include short and long-term mortality, functional dependence, increased LOS, nursing home use, and life-threatening medical problems. While acute and chronic disease experienced by hospitalized older adults can also contribute to these negative outcomes, researchers have shown that undernutrition is an independent risk factor for these negative health outcomes (Covinsky et al., 1999; Liu et al., 2002; Sullivan et al., 2002).

#### **D. Summary of Chapter 2**

Variables shown to influence nutrition in hospitalized older adults have some similarity with variables influencing the nutrition of older adults in community and residential settings. Similar findings based upon literature review include the influence of age, disease, gender, mood, and physical dysfunction. In comparison, areas not identified

by this literature review include the influence of social facilitation, ambience, food choice, life course, oral health status, and cognitive status on eating behavior or dietary intake within the hospital setting. It is not known whether exclusion criteria limited review however this review indicates that multiple variables related to the client (patient), intervention, and the system contribute to undernutrition in hospitalized older adults and result in negative health outcomes.

Despite identification of multiple variables, two major underlying variables can be discerned; appetite for food and access to food. Age, disease, and mood have been shown to affect appetite. Access to food, the other major variable, identified includes the older adults' ability to access food including physical ability to gain access to food, cognitive ability to know that food is essential and functional ability to ingest food provided. Admission diagnosis of undernutrition suggests that some older adults experienced appetite and/or access to food problems prior to admission to the hospital.

Variables, such as nutritional supplements, feeding assistance, and eating in a designated dining area, within the intervention concept further support the variables of appetite and access. Intervention fidelity was compromised in some of the interventional studies reviewed secondary to prescribed oral nutritional supplements not being fully consumed (Gariballa et al., 2006; Joosten & Vander Elst, 2001). Failure to ingest the supplements may be attributed to lack of appetite for them or perhaps inability to access them. Results of a feeding assistance intervention (Hickson et al., 2004) were counterintuitive; however, methodological weaknesses in study design may have limited findings. Indeed, Tsang (2008) found that feeding assistance was lacking in totally dependent hospitalized older adults, which limited their access to food.

Similar findings in the reviewed literature within the system concept support appetite for food and access to food as moderating variables. Adams et al. (2008) identified loss of appetite in over half of their study population (53%) whereas access to food was identified by other researchers (Sullivan et al., 1999; Xia & McCutcheon, 2006). Incalzi et al. (1998) while not definitive, found that being dependent for activities of daily living (ADL's) was predictive of low dietary intake in their research on nutritional intake in hospitalized older adults, suggesting that again inability to access food may have contributed to undernutrition.

Additional system related variables such as healthcare provider nutrition knowledge, assessment, and surveillance et cetera suggests that nutritional care for hospitalized older adults is limited. How these limitations influence older adult appetite for food and access to food is unknown and why healthcare provider nutritional care is limited is speculative. Ross et al. (2011) suggest that healthcare providers experience barriers to nutritional care such as poor communication among disciplines, lack of role clarity and shared responsibilities, competing priorities at meal times, and a sense of powerlessness when patients did not eat. Additional inquiry is warranted.

Negative health outcomes for older adults relative to undernutrition such as increased mortality, functional dependence, increased length of hospital stay, increased discharge disposition to nursing home, as well as co-morbid disease were identified in this review. Furthermore, undernutrition has been identified as an independent risk factor for some of these negative health outcomes again suggesting further inquiry is needed.

Whether appetite or access to food or perhaps other variables contribute to undernutrition in hospitalized older adults' remains questionable. While one might

question how access to food would be problematic in a controlled setting such as a hospital, the literature reviewed suggests this. Additionally while dietary intake has been studied and has often been found inadequate, appetite as a precursor to dietary intake per se is less well studied within the hospital setting and most often is attributed to disease or illness; however, further inquiry is warranted. The investigation of older adults' eating behavior within the hospital and the process that influences eating behavior will help to discern the process that is problematic so that intervention can ensue.

Strengths of the reviewed literature include an improved understanding of the close relationship between age, disease severity, comorbidity, functional status, undernutrition, and negative health outcomes. It is difficult to discern, due to these close relationships, whether undernutrition causes disease or disease causes undernutrition. Statistical models that controlled for these potential confounding variables allowed undernutrition to be viewed as an independent risk factor for negative health outcomes. Identification of appetite and access to food as potential causes of undernutrition were used to guide the observation and interview schedule in this research.

Reviewed literature was limited in several ways. In addition to limitations described throughout the review, few studies occurred in the US. It is difficult to generalize findings to healthcare settings within the US due to possible systemic cultural variations between healthcare settings. Also, only two of the 31 reviewed studies were conducted by nurses (Chen et al., 2007; Xia & McCutcheon, 2006). The nurse as the healthcare provider who spends the most time with the patient and is responsible for coordinating patient care has responsibility for the nutritional oversight of the patient at a fundamental level of care. This suggests that nutritional intervention is nurse sensitive



and consequently nutritional outcomes are nurse sensitive. Literature related to social aspects of older adult eating behavior such as social facilitation and ambience within the hospital setting was lacking in this review and was warranted as eating behavior in the hospital setting is most often a lone event and occurs within inpatient rooms with poor ambience. The influence of food choice or life course on the eating behavior of hospitalized older adults was unknown.

A predominance of the literature reviewed sought to measure or quantify variables related to nutritional status, whether it be nutritional status itself, dietary intake, or an alternative measure. These results established that undernutrition is indeed a problem in hospitalized older adults, that undernutrition contributes to negative health outcomes, that dietary intake is often inadequate, and that perhaps appetite and access to food may be causal. Yet, the social process involved within the hospital setting that contributed to eating behavior including appetite and access to food remained unknown and was thought to be better understood studying the lived experience of those involved, using qualitative methods.

The use of qualitative methods allowed for consideration rather than control of multiple contextual variables, which represent the realities of study participants. Only through analysis of these participants' perspectives, actions, and interactions was it possible to gain insight into the social process that influence hospitalized older adult eating behavior. Theoretical description of this process provides fodder for intervention aimed at amelioration of undernutrition in hospitalized older adults thus improving patient outcomes.

## CHAPTER 3

### METHODOLOGY AND DESIGN

#### A. Introduction

Grounded theory methodology uses a qualitative perspective to develop substantive theory related to social processes. Glaser and Strauss, the developers of grounded theory methodology believed that theory needed to be *grounded* or rather closely linked to relevant data so as to predict or explain behavior, the goal of social theory (Glaser & Strauss, 1967). Grounded theory uses a process to develop substantive theory. This process involves the analysis of data collected using qualitative methods such as observation, interview, and use of written documents of those experiencing the phenomenon within the substantive area. Datum is then compared to identify similarities and differences, which are coded and simultaneously analyzed using a constant comparative method. Through continued data collection and analysis using constant comparison, codes become categories and eventually a basic social process is identified, and ultimately theory is generated. Thus theory develops inductively from the data.

A social process is often the phenomenon of interest in research using grounded theory. A social process is a pattern of behavior that occurs over time, involves change over time, and has distinct stages (Glaser, 1978). Within present inquiry, little was known about the social process that influenced the eating behaviors of hospitalized older adults. As indicated by the review of the literature diminished eating behaviors as evidenced by inadequate dietary intake and poor nutritional outcomes suggested this was problematic. Thus, development of a theory that describes the influential social process provided insight into eating behavior, which may be used to plan intervention that results in

amelioration of undernutrition. Symbolic interactionism and pragmatism are the philosophical basis of grounded theory. Symbolic interaction suggests that all behavior is based upon individuals' interpretation of objects and the meaning they assign to those objects, whether physical, social, or abstract objects (Blumer, 1969). Therefore, understanding the meaning of eating behavior from the participant perspective as well as through analysis of participant actions and interactions also provided insight into the social process involved. Pragmatically, application of this substantive theory into practice fulfills the requirement of theoretical usefulness.

My philosophy as a grounded theorist tends to align with the original work of Glaser and Strauss (1967) and the subsequent work of Glaser (1978). Since the original publication of the seminal work on grounded theory by Glaser and Strauss (1967), grounded theory as a methodology has evolved resulting in divergent philosophical stances and methods. One of the divergences in grounded theory philosophies that has occurred over time is the separation of grounded theory into constructivist versus objectivist stances. Glaser supports an objectivist stance (Charmaz, 2000). Objectivist grounded theory subscribes to a more positivistic epistemology than constructivist grounded theory. My allegiance with Glaser stems from my belief in the objectivist stance as Glaser (2002) states:

...the participant not only tells us what is going on, but tells the researcher how to view it correctly-his/her way. I [Glaser] do not mean that they are mutually built up interpretations. Adding his or her [researchers'] interpretations would be an unwarranted intrusion of the researcher (p.2).

Therefore throughout this inquiry references related to grounded theory methodology are to the seminal works of Glaser and Strauss (1967) and Glaser (1978) and are consistent with Glaserian philosophy and research processes.

## **B. Inquiry Process**

Within the qualitative research paradigm, the researcher is the preferred instrument (Lincoln & Guba, 1985, p. 236). The researcher enters the world or setting of participants who are experiencing the phenomenon of interest in order to better understand their world. The researcher takes a neutral stance in order to let the data emerge. The researcher uses field notes based upon observation occurring within the world of the participants as well as verbatim transcripts of interviews with participants as data. In this inquiry, I entered the hospital setting and used observation and interview of participants as well as documents to understand the social process that influences the eating behavior of hospitalized older adults. Field notes based upon observation of participants, verbatim interview transcripts, document content as well as my reflections were included in the collection and analysis of data.

### **1. Constant Comparative Method**

Glaser and Strauss (1967) describe four stages within the constant comparative method: (a) comparing incidents to each category, (b) integrating categories and their properties, (c) delimiting the theory, and (d) writing the theory (p. 105). The constant comparative method uses an iterative process of comparing incident to incident within the data to develop categories or themes, which are coded. As data are collected and analyzed more codes are developed and properties of categories as well as theoretical properties emerge and are also coded. As the researcher continues this process, similarities and

differences between codes become apparent. Glaser and Strauss (1967) describe this third stage as “...the analyst may discover uniformities in the original set of categories or their properties and can formulate the theory with a smaller set of higher level concepts...this delimits its terminology and text (p. 110). The last stage of the constant comparative method is writing the theory, which represents a culmination of coded data and memos.

Throughout this inquiry, the constant comparative method was used to analyze data. As transcripts were entered into the qualitative data analysis (QDA) program, I would code each line (s) of datum. As codes were established and new data was entered, I would reread transcripts/codes, compare for similarities and differences, and either code the new datum with an established code or identify a new code if indicated. Each successive input of data whether from field notes, memos, documents or interview transcripts, would be coded in this way. Once the basic social process (BSP) of compromise was identified, analysis involved the comparison of select codes that pertained to the process of compromise. Data collection and analysis continued until no new codes were identified, that is only established codes were used. This constant comparison of data allowed for development of a theory that was grounded in the data.

## **2. Coding**

While different grounded theorists utilize a variety of terminology and methods in the coding of data, Glaser (1978) describes two levels of coding; substantial and theoretical with substantial having two levels; open and selective. Incident-by-incident or line-by-line data is coded using open coding, or “running the data open” (Glaser, 1978, p. 56), to identify all possible codes. Selective coding begins once a core variable (process) has been identified and selective coding includes the conditions and consequences of the

core variable. Theoretical coding conceptualizes the substantial codes as well as the relationships between codes thus “they weave the fractured story back together again” (Glaser, 1978, p. 72). The coding of data, within this research, used coding methods as described by Glaser (1978).

Initially all data was open coded. Once the BSP of compromise was identified, selective coding began, that is data was reanalyzed and all codes associated with compromise were identified. As theoretical sampling continued and with extensive continued analysis, theoretical codes were identified. In this inquiry, open coding initially yielded 88 codes however as data was analyzed and then reanalyzed, some codes were found redundant and consequently merged, yielding 59 open codes. Glaser states “initially codes come very fast, and it is important to realize that these codes need correction by trimming and fitting... continually verifying that each code fits, eventually saturating the code and placing the code in its true relevance among other codes” (Glaser, 1978, p. 60-61). Once the BSP of compromise was identified, selective coding began to identify codes associated with the process of compromise. Selective coding yielded 32 codes. Analysis and comparison of selective codes and their relationships to both the BSP as well as to each other, led to a higher level of abstraction in the formation of theoretical codes.

### **3. Memos**

Memos represent the theoretical thinking of the researcher and give foundation and structure to the substantive theory. Memo writing begins with coding and continues even after the substantive theory has been developed. Glaser (1978) states the goals of memoing are to “develop *ideas*, with complete *freedom* into a memo *fund*, that is highly

*sortable*” (p. 83). Thus memos are researcher ideas which can be used in conceptualization and operationalization of data, hypothesis generation, and integration of coded data toward theory development as well as to determine the relevance of coded data. Glaser (1978, p. 85) also states that memos should run “open” so that the researcher is free to explore ideas, which can then be coded and sorted ad lib. In this inquiry, the use of memos was integrated into data analyses to allow for theory development. Throughout data collection and analyses I would ask of the data “what is happening here?” Memos were sources of my thinking throughout data collection, analysis, and over time, which ultimately informed the interview schedule, theoretical sampling, identification of the BSP, and overall theory development.

#### **4. Basic Social Process**

The theoretical description of a BSP is the aim of grounded theory. Social processes are patterns of behavior that occur over time, involve change over time, and have distinct stages (Glaser, 1978). BSPs must have at least two distinct stages and must “differentiate and account for variations in the problematic pattern of behavior” (Glaser, 1978, p. 97). Once the BSP is identified, the BSP becomes the focus of inquiry and theory development continues with constant comparison of data within the substantial area. The aim of this research was to develop substantive theory related to a BSP (or core variable) that accounts for the variation in eating behavior of hospitalized older adults. Compromise was the BSP identified in this research. Hospitalized, older adults’ must compromise either their health (nutritional) or their acculturated foodways, which influences their eating behavior.

The interview schedule based upon the review of the literature was fundamental in determining the BSP (see Appendix A). Older adult participants answered an interview question about their perception of the importance of eating while hospitalized similarly, agreeing that it was important to eat while hospitalized yet over time their actions often did not substantiate this perception. Through early data collection and analysis this dichotomy persisted and was a source of many memos as well as an enigma to the inquiry process. However it was only through continued data collection, analysis, and thinking that the BSP of compromise was identified. Thereafter, data collection and analysis were both a search for elements of compromise as well as a test that compromise was the BSP that influenced eating behavior.

### **C. Methods**

Utilization of diverse methods of data collection allows for accumulation of diverse facts about diverse situations. According to Glaser and Strauss (1967), “diversity facilitates the development of a theory with both a sufficient number of general concepts relevant to most situations and plausible relations among these categories to account for much everyday behavior in the situations” (p. 243). Therefore, to promote diversity, methods used in this inquiry included observation, interview, and document review.

#### **1. Observation**

Observation allows the researcher to enter the world of the participant to experience their reality (Lincoln & Guba, 1985). Observation spans a gambit of interactional levels from complete observer with no interaction between researcher and participant to complete participant with researcher becoming an incognito member of the participant group (Lincoln & Guba, 1985). In this inquiry, both methods of complete



observer as well as observer as participant were used. The role of complete observer was used “to permit the observer to expand his or her tacit knowledge and to develop some sense of what is seminal or salient” (Lincoln & Guba, 1985, p. 275), this enabled me to understand system dynamics pertaining to social processes and eating behaviors within the hospital setting. Complete observation occurred prior to participant observation, primarily. Complete observation occurred over 16 hours in two-four hour intervals until analysis of observation field notes yielded no new data. Complete observation occurred during and around patient mealtimes. Mealtimes included breakfast, lunch, and dinner times on weekdays as well as weekends.

Prior to the initial observation and before each observation, I met with unit healthcare providers to introduce myself and describe the method of observation. Complete observation occurred on the hospital unit in corridors and around patient rooms but not in patient rooms. Initially during complete observation, some healthcare providers, understanding the scope and objectives of the research would voluntarily approach me and offer their perceptions of older adult eating however over time these interactions dissipated. Field notes reflected the setting characteristics and system processes related to the appearance of meals, the serving of meals, and general activities during and after meals in relation to patient eating. After each complete observation field notes were transcribed and analyzed.

As insight was gained, observation became more focused and the role of observer as participant was used to observe actions and interactions of participants related to eating behavior while engaging in informal, unstructured interview. Prior to participant observation, informed consent from observed participants was obtained (see Appendix B

and C). Participant observation occurred over 40 hours in two-four hour increments over several months and until analysis of observational field notes yielded no new data.

Participant observation occurred during and around patient mealtimes. Mealtimes included breakfast, lunch, and dinner on weekends and weekdays. Observations included observation of participant actions and interactions related to eating including patient characteristics, setting characteristics, actions and interactions related to patient preparation for eating, serving of the meal, actions and interactions during meals, and the amount of meal consumed.

. Older adult participants were observed during mealtimes from one-five times. Often observation would begin outside the older adult participant's room as the meal was delivered, which was then followed by participant observation in the room. Anonymity of patients and healthcare providers was maintained by use of a coding system, which is described in the Protection of Human Subjects section of this inquiry. Field notes, which reflect all circumstances of the observation as well as memos, were labeled as to source, typed, and analyzed following the observations.

Meal consumed was evaluated based upon meal portion consumed method. Using this method individual food items i.e. soup, meat, vegetable, desert, et cetera were assessed for percentage consumed based upon half portions eaten. Totals of percent consumed of individual items were averaged for a total overall percentage of meal consumed. This method has been validated for use in estimating calorie and protein consumption in hospitalized older adults and has been found as valid as weighing food in the determination of calorie and protein consumption (Berrut et al., 2002). Since determination of actual patient calorie and protein consumption was beyond the scope of

this research, an average patient meal percentage consumed was used as a general assessment of dietary intake as indicated.

## **2. Interview**

Participants are experts in the phenomenon of interest within the substantive area and through the method of interview the researcher can come to understand the participants' reality (Lincoln & Guba, 1985). According to Blumer (1969) "to indicate anything, human beings must see it from their perspective; they must depict it as it appears to them" (p.22) thus through interview the researcher comes to understand participant reality from the participant perspective.

Interviews also span a gambit of interactional levels from structured interview with predetermined questions and responses to unstructured interview without predetermined questions (Lincoln & Guba, 1985). Grounded theory methodology assumes a middle-ground, using a semi-structured interview wherein an initial predetermined general question is asked regarding the phenomenon, followed by more probing questions that are determined by participant response (Lincoln & Guba, 1985). As data are subsequently collected, analyzed and the BSP (core variable) and theory develop, interview questions become more focused.

Initial thinking, as was indicated in the research proposal, was that formal interview would temporally follow complete observation but be intermingled with participant observation based upon theoretical sampling. However, obtaining informed consent and formal interview respectively prior to participant observation proved to be more methodologically sound. Thus, formal interview preceded participant observation for all participants.

In this inquiry, a semi-structured interview format was used, beginning with an initial general question- “Tell me about eating here in the hospital.” Additional probing questions were also included in the interview schedule, which was then adapted based upon whether the participant was an older adult or healthcare provider, participant responses, and stage of theory development (see Appendix A). All interviews were audiotaped and transcribed verbatim followed by analysis. Anonymity was maintained by use of a coding system as described in the Protection of Human Subjects section following. While it was anticipated that as many as 12 patients and 25 healthcare providers would be interviewed during this research, eight patients and four healthcare providers (one dietitian, one patient care technician [nursing assistant], and two registered nurses) were interviewed over several months, until theoretical saturation occurred. Patient interview took place at times that were convenient for the patient and the length of interview was limited according to patient status as I was cognizant of patient stamina and tolerance. Healthcare provider interview was arranged for a time and place convenient for the healthcare provider so as not to interfere with healthcare provider work schedules. Documented informed consent occurred prior to all interviews.

### **3. Document Review**

According to Lincoln and Guba (1985), documents are sources of valuable information since they are readily available, temporally stable, rich in context, legally unassailable, and emotionally nonreactive (p.277). Documents reviewed in this research included patient medical records and dietary menus. While a preponderance of the patients’ medical records was only available electronically and thus not accessible to me, written patient demographic sheet and nurses notes were available. Information gleaned

from these medical records included patient demographics i.e. age, diagnosis, diet order, LOS, preadmission living situation, discharge disposition, BMI and number of medications administered. Information gleaned from dietary menus included types of therapeutic diets and food choices available. Record review was also used to substantiate participant actions, interactions, and perceptions.

#### **4. Data Analysis and Management**

Analysis occurs simultaneously with data collection in grounded theory and allows for theoretical sampling, which is a unique and essential feature of grounded theory methodology. While the process for data analysis has been described in the preceding sections, the management of data that allows for a systematic method of analysis has not. To allow for co-collection and analysis of data, management of vast amounts of data must occur readily. In this inquiry, data from verbatim interviews, field notes, and memos was typed, transcribed and uploaded into the computer program Atlas.ti. Atlas.ti is a qualitative data analysis (QDA) computer soft-ware program used to “manage, extract, compare, explore, and reassemble meaningful segments of large amounts of data in flexible and creative yet systematic ways” (Atlas.ti, 2009). QDA software allows the researcher to manage and organize vast amounts of data as it emerges. The ability to readily manage and organize vast quantities of data is conducive to the researcher’s ability to analyze and reanalyze data based upon theoretical sampling and changes in theoretical thinking over time.

Data from field notes, memos, and verbatim transcripts of participant interviews were transcribed, put into word files as rich text format (RTF), and entered into the Atlas.ti program. All transcripts were entered, dated, and then labeled as to type i.e.

complete observation (CO), participant observation (PO), interview (I), document (D) or memo (memo). Each CO was labeled chronologically. Each PO or I was labeled as to participant either older adult (OA) or healthcare provider (HCP), participant number, and given a chronological number. While this data was stored within the QDA program, it was also stored in Microsoft word files as RTF while taped interviews were also saved as wavesound (WAV) on my password protected computer, labeled as indicated, and backed up on a flash drive.

As data was entered, it was analyzed using the constant comparative method and coding process described in the respective sections of this chapter. Atlas-ti proved useful as a receptacle for all data, in managing data so it could be analyzed from different perspectives i.e. code to code, code to participant, code to time, elements of compromise across participants and time, et cetera. The QDA program allowed data to be extracted or identified by participant, text, code, memo, or quotation. However, as theoretical codes were identified and the relationships between codes were yet to be determined, I found it imperative to diagram possible relationships. The Atlas-ti program has the capacity to diagram relationships via the networking feature; however, I found a larger more fluid format more conducive to theoretical thinking and utilized a large dry-erase board. This format seemingly allowed me to literally step back and see the developing theory.

## **5. Theoretical Saturation**

Theoretical saturation occurs once data becomes redundant and no new codes are identified (Glaser & Strauss, 1967). Again, grounded theory is unique in that theoretical saturation does not occur until data from the purposive sample, the theoretical sample,

and the extant literature has determined theoretical saturation. In this inquiry, data collection and analysis continued until theoretical saturation was reached.

Once it was thought that theoretical saturation had been reached, I returned to the setting to recruit one more participant. Data collection and analysis from this participant failed to identify any new codes. Additionally, I returned to the setting after theoretical saturation had been reached to continue complete observation to assure that theoretical thinking was indeed consistent with the data and the developing theory. Thereafter theoretical saturation with relevant literature and extant theory was determined.

#### **D. Trustworthiness**

Lincoln and Guba (1985) suggest four measures of trustworthiness within qualitative inquiry (a) truth value, (b) applicability, (c) consistency, and (d) neutrality (p. 290). Truth value speaks to the accurate representation of participant realities, applicability speaks to the ability of the audience to use or transfer findings, consistency speaks to dependability of researcher as well as the inquiry and neutrality speaks to the objectivity of the researcher (Lincoln & Guba, 1985). Rigor as evidenced by credibility, transferability, dependability, and confirmability within qualitative research methodologies is enhanced by using various techniques that allow for establishment of trustworthiness, which is described in subsequent sections.

##### **1. Credibility**

Credibility speaks to the use of various research techniques used to establish valid or credible findings. Credibility techniques used in this inquiry included prolonged and persistent engagement, triangulation of data and sources, peer debriefing, and member checks.

### **a. Prolonged and Persistent Engagement**

Lincoln and Guba (1985) suggest the use of prolonged and/or persistent observation to improve credibility. The purpose of prolonged engagement is “to render the inquirer open to the multiple influences-mutual shapers and contextual factors-that impinge upon the phenomenon being studied” (Lincoln & Guba, 1985, p. 304) and the purpose of persistent observation is “to identify those characteristics and elements in the situation that are most relevant to the problem or issue being pursued and focusing on them in detail” (p. 304). Persistent and prolonged engagement included complete observation, which occurred over 16 hours, participant observation which occurred over 40 hours, formal interview of 12 participants, and review of eight medical records.

Becoming inconspicuous, during participant observation of older adult participants, proved to be a challenge as patient rooms were crowded and mealtimes per se tended to be of short duration. This made prolonged engagement in patients’ rooms difficult. Variable length of hospital stay and patient transfer off the unit at times limited multiple observations of older adult participants’ mealtimes as imminent discharge or transfer was not always known, making persistent observation difficult. Observation of healthcare providers occurred more readily as healthcare provider seemed not to notice me. Whether this was due to prolonged engagement on the unit, healthcare provider overall busyness or the constant human traffic that occurred on the unit, is unknown.

### **b. Triangulation**

Triangulation of both methods and sources are suggested techniques to add to the credibility of inquiry. Triangulation of methods in this inquiry included the use of observation, interview, and documents to better understand and describe the social



process that influences the eating behavior of hospitalized older adults. Triangulation of sources was used to improve credibility as the perceptions, actions, and interactions of the hospitalized older adult as well as their healthcare providers were included in this analysis.

### **c. Peer Debriefing**

Lincoln and Guba (1985) suggest the use of peer debriefing or “the process of exposing oneself to a disinterested peer in a manner paralleling an analytic session and for exploring aspects of the inquiry that might otherwise remain only implicit within the inquirer’s mind” (p. 308). Peer debriefing became especially crucial as theoretical saturation and theory development progressed. I would meet with my dissertation chair to review schematics that was representative of the emerging theory. Development of a schematic was useful in moving selective codes toward theoretical codes and to better understand and describe the relationship between codes. This was especially significant during identification of a BSP, during theory development as well as during establishment of theoretical relationship with extant literature. Further communication with other members of my dissertation committee enhanced my thinking.

### **d. Member Checks**

According to Lincoln and Guba (1985) member checks provide the most credibility to inquiry. Member checks involve participants reviewing researcher interpretations for accuracy. Should the participant recognize the researcher’s interpretation as their reality, credibility is determined. Within this inquiry, member checking occurred initially by reiterating statements made by participants during initial interview and/or subsequent observations to them for accuracy. For example, I would say

to the participant “you told me about... during our last meeting...is this what you meant?” which would determine if my interpretation of what the participant said was accurate.

As data collection and analysis progressed, I would add questions related to theoretical thinking of that time to determine similarities and differences across participants. For example I would say “how about...tell me about that”. Occasionally, older adult participants would ask if their perceptions had been voiced by others, seemingly curious. While maintaining anonymity, identified similarities across participants would be discussed to gain further insight.

## **2. Transferability**

Transferability or the ability to apply or generalize findings into other settings or circumstances within qualitative inquiry is in a sense not consistent with qualitative philosophy since relativism suggests that multiple realities exist and are individualized as well as contextualized. However, Lincoln and Guba (1985) suggest that transferability remains the responsibility of the audience and can best be transferred using rich description. This enables the audience to determine whether transferability is appropriate. Additionally, grounded theory methodology allows for transcendence from substantive theory, which may have limited transferability to formal theory. Formal theory raises the level of abstraction and allows for greater transferability since the theory itself is not transferred to other populations but rather the BSP that was identified in substantive theory is (Glaser, 1978). The aim of this research was to develop substantive theory that describes the social process that influences the eating behavior of hospitalized older adults. Within the proposed research, rich description was used to describe the context of

participant actions and interactions. The use of verbatim quotes allows the audience to better understand participant perceptions. Throughout Chapter 5, quotations are used to provide rich description by using participants' words to best convey participant perceptions. Description of client and system characteristics provides further context.

### **3. Dependability and Confirmability**

According to Lincoln and Guba (1985) dependability and confirmability improve trustworthiness. Dependability and confirmability are established using an audit trail and reflexive journaling.

#### **a. Audit Trail**

An audit trail provides a *road map* of researcher logic, methods, data collection processes, analyses, and theoretical thinking. An audit trail allows the audience to examine the logic and processes used by the researcher to assure trustworthiness and that the research process “was carried out in ways that fall within the bounds of good professional practice, and that the products are consistent with the raw data” (Lincoln & Guba, 1985, p. 109). Schematics were integral in both analyses of data over time and in theory development. See Appendix D for an audit trail, representative of theoretical development and inquiry progression over time.

#### **b. Reflexive Journaling**

A researcher cannot begin a research project using grounded theory without prior preconceived knowledge of the substantive area since identification of a social process is the aim of inquiry using this methodology. Additionally, the researcher as the human instrument in qualitative inquiry is subject to bias as are other non-human instruments. Therefore, to maintain objectivity, the researcher keeps a reflexive journal or a *diary* so to

speak in which preconceived thoughts and feelings, hypotheses, reflections regarding on-going analysis, and other potential confounders to researcher neutrality within the substantive area are contained. This process assures both the researcher as well as the research audience that bias is limited and trustworthiness is maintained. Throughout this inquiry, a reflexive journal was maintained so my preconceived thoughts and feelings could be reconciled so as not obscure the true realities of the participants. As data was collected, analyzed, and my reflections became more informed, reflexive journaling evolved into memoing. These periods of reflection were inspirational as it allowed for thinking at a more abstract level.

### **E. Design**

Inquiry design provided a plan as to appropriate setting for inquiry, access to the setting and sample, protection of human subjects, and assessment of my competency to conduct this inquiry. The inquiry design therefore made inquiry feasible, allowed for utilization of a grounded theory methodology, and development of substantive theory.

#### **1. Setting**

The setting for this inquiry was a tertiary care hospital to which older adults are admitted for short-term medical-surgical care during acute illness or exacerbation of chronic illness. The hospital is a large academic, research, and teaching hospital located in the northeastern United States. In particular, a medical unit within the hospital was used to observe older adult patients and healthcare provider during times when patients eat both within patient rooms and around patient rooms where eating related activities occur. This unit admits both younger and older adults and was not a designated geriatric unit; however, many of the patients admitted to this unit are older and are experiencing a

medical condition requiring hospitalization. Interviews with patient participants occurred in patient rooms while arrangements for healthcare provider participant interviews were made at a convenient time and place for healthcare provider.

General nursing healthcare providers included a unit coordinator (a nurse), a charge nurse, six direct care nurses, and four patient care technicians (PCTs). The unit dietitian provided consultation for three units within the hospital. Nurses and PCTs worked 12 hour shifts. The nursing staff utilized paraprofessional staff designated as “sitters”, who provided 1:1 staff to patient oversight of patients needing additional care most notably relative to behavior. The unit had a bed census of 38. All rooms were noted to be semi-private with the exception of one private room, which had been converted from a visitor waiting room to a patient room. Each patient room had an attached single bathroom with a toilet and sink.

The unit design consisted of a single main hallway with patient rooms on either side of the hallway as well as a main nurses’ station, shower room, kitchenette, supply rooms, medication storage unit, and a documentation room/case managers’ office. At opposing ends of the corridor and in the middle, portable computer units and chairs were clustered. Main access to this unit was from either a south corridor or elevators located at the south entrance to the unit.

During complete observation, it was noted that the hospital utilized two types of diet ordering. During subsequent observation and interview, it was learned that room service diet ordering offered, designated patients, the option to order their meal from a menu at any time between the hours of 6 AM and 7 PM, thus allowing for varied mealtimes and a wide variety of food choices. Non-select diet ordering was the term used

to indicate diet ordering that had standardized mealtimes and a prescribed menu. Ordering of these diet ordering options was at the discretion of the nurse based upon the admission assessment of the functional abilities of the patient or rather whether the patient could independently order their diet. This process required the patient to view the menu, make food choices, and notify the kitchen via telephone of their choices. However, it was also noted that despite the room service diet ordering option, patients generally ordered meals in the morning, around mid-day and in the evening.

Meals were distributed by dietary aides to patients on trays, which were delivered from the kitchen via metal carts. Dietary aides would begin distributing meal trays at the south end of the main corridor and continue down the corridor stopping at select rooms as designated by room number and patient name, located on the meal tray ticket. The dietary aide would ask the patient their name and if correct would then place the meal tray on the over bed table. If the patient was asleep or did not respond to the query, the meal tray was placed on the over bed table. Meal trays were collected post meal by healthcare providers and placed in a metal food truck, which remained stationed in the main corridor. When this truck was full of used meal trays, it was replaced with another truck by dietary staff.

## **2. Access**

Contact with a Clinical Nurse Specialist who was a member of the advanced practice nursing council, within the inquiry setting was made for initial access and thereafter served as the documented Principal Investigator (PI). Per inquiry setting policy, an employee of the institution within the inquiry setting was required to be listed as the

documented PI however; the PI was not involved in data collection or analysis and served basically as a conduit to the inquiry setting.

Prior to inquiry commencement, I met with the unit coordinator of the medical unit on which the inquiry was to take place. The unit coordinator designated nurses from the unit involved to meet with me so that inquiry scope, objectives, and inclusion criteria could be explained. Notification of inquiry scope and objectives was posted on the unit as well (see Appendix E). Thereafter, direct care nurses identified patients who met inclusion criteria (potential participants) to me. I would then approach patients for inclusion into the study. Also, healthcare providers that had direct interaction with patients in relation to eating were approached for inclusion into the study. Those healthcare providers, who meet eligibility criteria, were identified during observation.

In month 11 of data collection, the Clinical Nurse Specialist, who served as PI terminated her employment at the inquiry setting and subsequently another Clinical Nurse Specialist, who is also a member of the advanced practice nursing council agreed to become PI. Modification to the inquiry proposal was submitted and accepted by the research setting's IRB on 7/28/10 as well as the IRB at the University of Massachusetts, Amherst on 8/30/10.

### **3. Sample**

The purposive sample included English speaking, consenting older adults, 65 years of age or older, who were hospitalized for an acute medical condition or exacerbation of a chronic condition within a tertiary care hospital and who had an oral diet order. Additional participants included English speaking, consenting healthcare providers, who had direct interaction with older adults relative to eating behavior. This

purposive sample was representative of my preconceived thinking and subsequent theoretical sampling allowed for sampling based upon emerging theory. According to Glaser (1978):

Theoretical sampling is the process of data collection for generating theory whereby the analyst jointly collects, codes, and analyzes his data and decides what data to collect next and where to find them, in order to develop his theory as it emerges. The process of data collection is controlled by the emerging theory, whether substantive or formal. (p. 36)

Thus, purposive sampling as described provided the initial sample of six older adult patients whereas theoretical sampling included four healthcare providers followed by two older adult patients, which represented the successive sample. The rationale for this method of sampling was that after several complete observations as well as interview and observation of 6 older adults, who were the population of interest, a tentative BSP (compromise) was identified. Thereafter, healthcare providers and two additional older adults were recruited as a theoretical sample to substantiate the BSP as well as to further develop the theory.

#### **4. Protection of Human Subjects**

I completed Collaborative Institutional Training Initiative (CITI) training (see Appendix F). Internal Review Board (IRB) approval was obtained before inquiry commencement from the inquiry setting IRB on 8/27/2009 (see Appendix G) and the University of Massachusetts, Amherst IRB on 9/29/2009 (see Appendix H) and was renewed annually by inquiry setting and the University. All participant information was kept confidential. Participants remained anonymous through the use of pseudonyms. Both names of participants as well as role were identified via codes i.e. participant1, patient was identified as OA 1 whereas participant1 healthcare provider was identified as HCP 1.



All pseudonyms were known only by me. All raw data was secured and accessed by me only. Within the informed consent documentation participants were informed of study objectives, methods, risk and benefits, as well as their right to participate or withdraw from the inquiry, without fear of reprisal. However no participant exercised their right to withdraw from the inquiry.

Had an emergent situation arose during observation i.e. patient choking, change in patient level of consciousness or condition, patient fall, et cetera I, as a Registered Nurse was prepared to act within the scope of my practice as well as report the situation to the responsible nurse immediately; however, no emergent situations arose during the data collection process.

## **5. Qualifications**

I am a Massachusetts Registered Nurse with many years of nursing experience throughout the continuum of care (see Appendix I). An interest in undernutrition in older adults came from a problem identified in clinical practice some years ago. Study of undernutrition has been the focus of many academic papers and includes a publication related to undernutrition (Furman, 2006). Participation as a research assistant in a research project entitled *Dignity and Nutrition of Nursing Home Residents: an Exploration across Levels of Care in a Graduated Senior Citizen Complex* has provided experience in the research process. Additionally, an interest in undernutrition has been a stimulus for continued academic preparation through the graduate level and into a doctoral program. Doctoral level course work in qualitative methods in nursing research included experiences with participant observation, use of field notes, interview with verbatim transcription, and data analysis using open and selective coding. Present

inquiry has allowed for the development of substantive theory that describes the social processes that influence the eating behaviors of hospitalized older adults as well as has developed my expertise as a nurse researcher.

## **6. Timeline**

The proposal for this inquiry was successfully defended on May 11, 2009. Institutional Review Board (IRB) approval was granted on August 27, 2009 and September 25, 2009 from the setting and the University of Massachusetts, Amherst respectively. A preliminary meeting was held between me, the unit coordinator and direct care nurses on the medical unit where the research was taking place on October 27, 2009. Data collection began October 27, 2009 and was completed March 16, 2010. IRB renewal was gained on July 12, 2010 and May 16, 2011 from the inquiry setting and August 30, 2010 and September 11, 2011 from the University of Massachusetts, Amherst. Data analyses began on October 27, 2009 and continued through December of 2010. The BSP was initially identified on December 20, 2009. Between December 2009 and December 2010 theoretical sampling, memoing, peer debriefing, and continued data analysis progressed to theory development. From December 2010 to September 2011 the writing of the report including theory development as well as review of current, relevant literature, and comparison to extant theory occurred. Inquiry from proposal to defense spanned 2.5 years (see Appendix J).

## **F. Summary of Chapter 3**

Methods consistent with grounded theory methodology including inquiry process and data collection methods used were described in Chapter 3. In present inquiry the constant comparative method was used to identify similarities and differences between

data, which resulted in the establishment of coded data. Coding consistent with Glaserian methods was utilized. Once the BSP of compromise was identified analysis continued toward a higher level of abstraction in the form of theoretical codes. Methods used to collect data included observation, interview and document review.

Criteria used to assure trustworthiness included credibility, transferability, dependability, and confirmability as described by Lincoln and Guba (1985). Engagement within the setting, use of diverse methods of data collection, tracking of theoretical thinking over time, discussion of theoretical thinking, and verbatim transcription of participant perceptions et cetera were used to establish trustworthiness.

Inquiry design included inquiry setting characteristics, initiating access to the inquiry setting, and sampling frame and method. Additionally, protection of human subjects including maintenance of participant anonymity and my participation in CITI training was presented. Lastly, my qualifications to proceed with this inquiry including both educational as well as experiential preparation were described.

## CHAPTER 4

### THEORETICAL ANTECEDENTS

#### A. Introduction

The QHOM was the conceptual framework that guided this inquiry. While the literature reviewed in Chapter 2 indicated that much was known about the concepts of client (patient), intervention, system, and outcome related to nutritional status in hospitalized older adults, the social process, which influenced their eating behavior represented by the bidirectional arrows in the framework, had not yet been identified and represented the phenomena of interest. The Theory of Compromised Eating Behavior identified in this research describes a social process that occurs between the system and the client (patient) concepts (see Figure 2). Older adults, during hospitalization, compromise their health by not eating or under eating or alternatively compromise their acculturated foodways by eating foods or in ways that are unfamiliar non-traditional for them. The theory derived from this inquiry will hereafter be referred to as the Theory of Compromised Eating Behavior.

According to the Theory of Compromised Eating Behavior the older adult is admitted to the hospital with unique attributes such as a disease or condition as well as acculturated foodways (representative of the client concept from the QHOM framework). Additional antecedents to the theory are related to system characteristics such as assessment modalities, environmental characteristics, and the healthcare provider (representative of the system concept from the QHOM framework). The context for the Theory of Compromised Eating Behavior will be discussed below using the QHOM to structure the discussion.

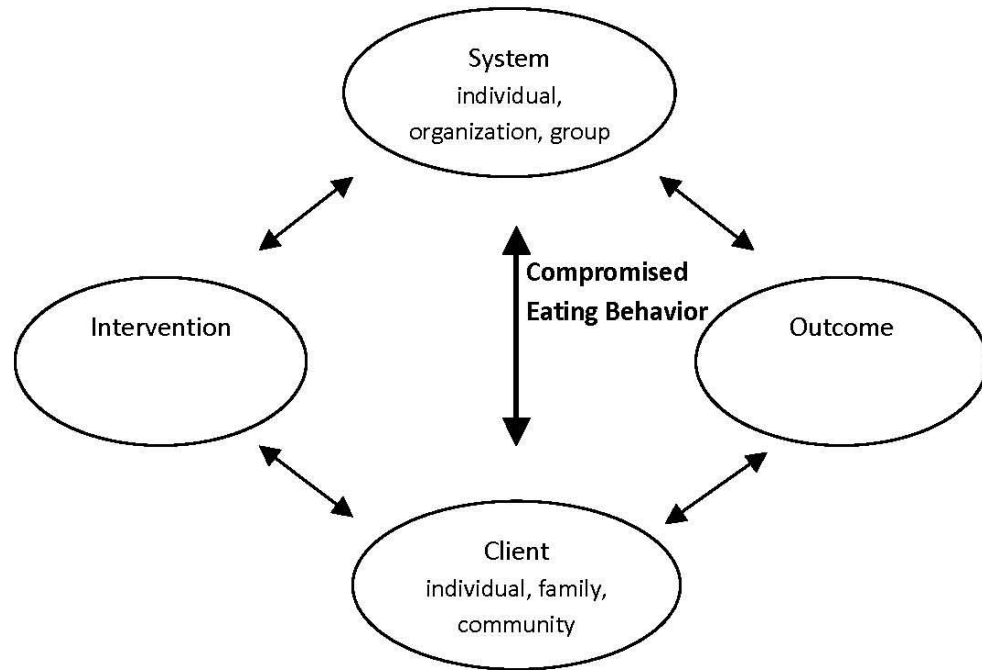


Figure 2: QHOM and the Theory of Compromised Eating Behavior

### **B. Client**

The client concept is represented by the hospitalized older adult as they are the population of interest throughout this inquiry. Characteristics of the older adult participant that were found to be integral to the Theory of Compromised Eating Behavior yet precede the actual process of compromise are the older adults' diagnoses or comorbidities as well as their acculturated foodways as older adult participants had distinct and unique food and meal preferences.

#### **1. Diagnoses**

Older adults were hospitalized for short-term medical care during acute illness or exacerbation of chronic illness. Upon admission the older adult was given an admitting diagnosis, which was representative of their reason for admission to the hospital. They

may also have other preexisting comorbidities. Based upon diagnoses, a therapeutic diet is prescribed. During present inquiry diets included: regular (no restrictions), cardiac, protein-restricted, sodium-restricted, calorie-restricted, and renal diets.

## **2. Foodways**

Foodways are defined as traditional customs or habits of a group of people concerning food and eating (Foodways, 2011) and are tied to individuals' personal and group identity (Fischler, 1988). Older adults are admitted to the hospital with acculturated personal foodways or established customs or habits concerning food and eating. During inquiry older adult participants described both traditional foods that they ate as well as traditional eating behaviors that they had.

## **3. The Hospitalized Older Adult**

As indicated in the methods section of this inquiry, older adult participants were recruited into the study using purposive sampling initially followed by theoretical sampling as the theory developed. Potential participants were approached; I introduced myself, explained the scope and objectives of the research, and if the participant was agreeable, informed consent documentation was completed. A total of seven older adult patients participated before theoretical saturation was reached. Thereafter an additional older adult patient was recruited, interviewed, and observed to ensure saturation had been reached. Therefore a total of eight older adult patients were included in present inquiry. Older adult participant demographics are located in Table 1. In the following paragraphs older adult participants will be indicated by OA followed by a number, which signifies the chronological order in which the participants were interviewed.

**a. OA 1**

OA 1 was an 83 year old female admitted to the hospital with a diagnosis of left lower leg cellulitis. OA 1 was an obese older woman. OA 1 was initially interviewed on hospital day 5. OA 1 had a medical history of diabetes and cardiac disease. Both recent and current hospitalization had been indicated due to a diabetic foot ulcer, which had repeatedly become infected.

OA1 had been hospitalized the month before. OA1 was unmarried and had lived alone since her sister died some time ago. She likes to cook and has groceries delivered to her home since she is no longer able to shop. She has meal related rituals that she practices at home. OA 1 consumed her meals. She describes that it is important to eat while hospitalized to maintain stamina and be active.

**b. OA 2**

OA 2 was a 66 year old female admitted to the hospital with a diagnosis of colitis. OA 2 was interviewed on day ten of her hospitalization. OA 2 appeared thin but nourished. She was edentulous. OA 2 complained that the food in the hospital was not appetizing but that she would sometimes eat out of “boredom”.

She could see no benefit from hospitalization and was anticipating discharge to home with her husband. OA 2 had definitive likes and dislikes when it came to food. She stated she no longer prepared meals at home but was dependent on her husband for these tasks and that they often ordered out rather than prepare meals at home.

**c. OA 3**

OA 3 was a 74 year old man admitted to the hospital with a diagnosis of altered mental status. He was a tall very thin older man. Based upon documentation in his

medical record, this was a “social” admission as OA 3 was no longer able to live alone safely due to physical and cognitive functional status changes. Extended family and hospital case management were considering discharge disposition options. OA 3 was oriented to person and place when interviewed on hospital day four. OA 3 indicated it was important to eat while in the hospital. When asked about eating in the hospital, he reflected upon eating practices and foods from the past. OA 3 indicated that he had come from a large family and mealtimes were important to him.

**d. OA 4**

OA 4 was a 74 year old man admitted to the hospital with a diagnosis of acute mental status changes. OA was formally interviewed on hospital day two. He appeared well nourished with a rotund abdomen. OA 4 was alert and oriented to person and place.

His medical record indicated that he had experienced mental status changes due to hyperammoniaemia, liver failure, and noncompliance with medication regime. His mentation had improved once he resumed lactulose administration as prescribed. During observation the dietitian was in to educate him and his family as to the importance of maintaining a low protein, fluid restricted diet as well as the importance of taking lactulose as prescribed.

Despite feeling eating was important while in the hospital; OA 4 seemed to be waiting for discharge to resume eating, since his dietary intake while hospitalized was minimal. During observation, when asked if he was going to eat his meal he stated “when I get home I’ll get something” yet discharge to home was not imminent. Conversations with OA 4’s wife indicated that OA was dependent on her for much of his care.



**e. OA 5**

OA 5 was a 76 year old woman who was admitted to the hospital with a diagnosis of weakness. The formal interview occurred on hospital day three. OA 5 was a small woman who appeared emaciated and was dressed in a hospital gown and bathrobe that seemed to hang on her. Her facial bones and clavicles were prominent, which emphasized her emaciated state.

OA 5 had stated that she had been on hospice in the past due to her end stage respiratory and cardiac status but was currently discharged from hospice. She stated she has been hospitalized monthly as of late for various conditions. She stated that eating when hospitalized is important for her “stamina”. She anticipated going home, where she resided with her boyfriend, with trepidation, since her physical stamina did not meet her boy friend’s physical expectations of her. OA 5 had poor dietary intake.

**f. OA 6**

OA 6 was a 76 year old woman admitted to the hospital with a diagnosis of weakness. OA 6 was a thin woman who appeared much younger than 76 years old. Her medical record indicated that she had a urinary tract infection, which was the cause attributed to her weakness.

OA 6 was thin but appeared nourished however during interview on hospital day two she stated that she had had a diminished appetite with a history of significant weight loss. She had a large family who were concerned with her lack of eating and who had been encouraged by hospital staff to bring in one of her favorite foods, chocolate candy. OA 6 ate little of her meals despite stating that “eating is important.

**g. OA 7**

OA 7 was a 66 year old female admitted to the hospital with a diagnosis of abdominal pain. She had been transferred to the hospital from a regional hospital after two weeks during which tests failed to identify the etiology of her abdominal pain. OA 7 was formally interviewed on hospital day four of this admission. OA 7 was an obese woman. She stated that her appetite was diminished because she would experience pain when she ate. OA 7 stated that she needed to be pre-medicated with pain medication prior to eating in order to tolerate the discomfort associated with eating. OA 7 was a long-term diabetic whose disease was managed with an insulin pump, AO 7 counted carbohydrates to better manage her diabetes. OA 7 stated that she liked most foods. She felt eating was important to regain her strength so she could be discharged from the hospital.

**h. OA 8**

OA 8 was a 72 year old man admitted to the hospital with a diagnosis of cellulitis of the right foot. He was interviewed on hospital day 13. He had been previously hospitalized for amputation of the right second toe and was readmitted for post-operative wound infection of the right foot. According to his wife during his early admission he had mental status changes secondary to delirium and/or pain medication. His wife indicated that during this time she would order meals for him from room service diet ordering and would have to “force” him to eat. She had expressed her concern for his nutrition. He was scheduled for renal dialysis three times weekly.

OA 8 appeared well-nourished. At the time of interview, OA 8 was alert and oriented. AO 8 had been the cook at home. He would share recipes with his daughters and they would often consult him when cooking. OA 8 stated the importance of eating

while hospitalized His food consumption had improved somewhat from earlier in his hospitalization.

Table 1 Older Adult Participant Demographics

OA	OA 1	OA 2	OA 3	OA 4	OA 5	OA 6	OA 7	OA 8
<b>Age</b>	83	66	74	74	76	78	66	72
<b>Gender</b>	Female	Female	Male	Male	Female	Female	Female	Male
<b>Admitting Diagnosis</b>	cellulitis	colitis	altered mental status	Acute mental status changes	weakness	weakness	abdominal pain	cellulitis
<b>Comorbidities</b>	DM, HPT		CAD EF=15%	COPD, liver failure	FTT,CAD CHF, COPD	syncope	CAD,HPT, DM	DM, ESRD
<b>BMI</b>	34.3	NA* (height only)	17.8	37.09	19.71	23.62	39.31	NA* (recorded in dialysis)
<b>Preadmission Living Situation</b>	home	home	home	home	home	home	home	home
<b>Length of Stay (days)</b>	5	10	4	3	5	4	5	12
<b>Discharge Disposition</b>	home	home	**ALF/ ***SNF	home	home	home	home	home or ***SNF
<b>Diet</b>	cardiac	cardiac	cardiac	Protein sodium restricted	cardiac	regular	1800 calorie restricted cardiac	renal cardiac calorie restricted
<b>Number of Medications</b>	11	2	6	11	13	13	21	12
<b>Dietary Intake</b>	100%	25%	35%	0%	0%	0-25%	0-33%	25-50%

\*NA- information not available \*\*ALF-Assisted Living Facility \*\*\*SNF-Skilled Nursing Facility

### C. System

Various assessment modalities and environmental characteristics influence the process of compromise within the Theory of Compromised Eating Behavior. Assessment modalities include nurse or physician ordered diet options based upon the physiological attributes of the hospitalized older adult. Environmental characteristics include attributes

particular to the hospital setting. Healthcare providers were also considered within the system concept since according to Blumer (1969), the organization (system), has to be “seen, studied, and explained in terms of the process of interpretation engaged in by the acting participants as they handle the situations at their respective positions in the organization” (p. 58).

### **1. Assessment Modalities**

Upon admission the admitting nurse determines whether the older adult’s physical and cognitive function would allow them to avail either the non-select diet ordering option or the room service diet ordering option. This determination is based upon an informal assessment during the admission process. Non-select diet ordering is indicated in those patients who are assessed as unable to independently order a diet whereas room service diet ordering is made available for patients who are assessed as able to independently order a diet.

Also upon admission a therapeutic diet is prescribed by the physician based upon admitting diagnosis and/or preexisting comorbidity. Examples of therapeutic diets include regular, renal, cardiac, carbohydrate/calorie controlled, and cardiac carbohydrate/calorie controlled. Additionally, diet texture is ordered based upon the older adult’s ability to chew and/or swallow effectively. Diet texture options included regular, dental soft, pureed, or liquid.

### **2. Environmental Characteristics**

Environmental characteristics particular to the hospital setting such as room design impacted mealtimes. The setting did not have a dining area available therefore eating occurred in patient rooms. Space did not allow for both occupants of the room to

eat while out of bed sitting in a chair. The patient was required to eat either sitting at the edge of bed if he or she could tolerate this position or semi-reclined in bed, which limited their ability to access their meal tray. Furniture malfunction also impacted the mealtime as during observations of two participants, the overbed table did not support the weight of the meal tray and subsequently compressed the legs of the participants. Rooms, despite having lights on, were dark, making visibility during mealtimes difficult, especially during the early morning and evening meals. Since each semi-private room had a bathroom attached, one bed was near the bathroom, which made the eating environment malodorous at times. Sometimes procedures and/or care were provided to the roommate while the participant ate. This care involved traffic in and out of the room, as well as unsettling smells, sounds, and conversations. Meals were delivered via non-insulated carts. Dependent on distance from the kitchen and number of trays to be delivered at that time, the temperature of the food upon delivery was affected. A microwave oven was available in the unit's kitchenette for staff to reheat food. However, this was rarely utilized during observation.

Older adult participants seemed to outwardly accept environmental characteristics of the hospital setting. This may be explained as hospitals do not traditionally have a dining area that allows patients to eat out of bed and patient rooms often have attached bathrooms. Rooms are also often semi-private and care is most often delivered at the bedside wherein patients eat. These environmental characteristics, while not identified as influential to the eating behavior of hospitalized older adults from a participant perspective, may emphasize the overall meaning of hospital mealtimes from a systems perspective.

### **3. Healthcare Providers**

Healthcare providers were recruited as participants to be included in the study. Once healthcare providers who met inclusion criteria were identified, I would approach them for inclusion into the study by explaining the scope and objectives of the research. If they were agreeable they would complete the informed consent documentation and an appointment for formal interview was made. Additionally, observation of these healthcare providers occurred over time in the process of caring for different patients during and around mealtimes. A total of four healthcare providers were included in the sample. In the following paragraphs, healthcare provider participants will be indicated by HCP followed by a number, which signifies the chronological order in which they were interviewed.

#### **a. HCP 1**

HCP 1 was a clinical dietitian. HCP 1 described her role related to patient eating as the diet expert; assuring patients had the correct diet and the correct diet texture. She described herself as a liaison between the kitchen and the patient. She also was a consultant intervening if a patient had nutritional risk factors as identified by nutritional assessment.

HCP 1 described many of the complex challenges she had as a dietitian dealing with patients including those particular to the older adult such as older adults not complaining when food was not to their liking because they did not want to be a bother. She also identified systemic issues such as menus being geared toward younger peoples' dietary likes and dislikes or not having adequate dietitian to patient ratios. HCP 1 indicated that improvements could be made that would enable older adults to eat better

when hospitalized but seemed as though she was powerless to make these improvements. She also indicated that nurses were helpful to her in both identifying older adults in need of nutritional intervention as well as implementing nutritional intervention.

### **b. HCP 2**

HCP 2 was a middle-aged female patient care technician (PCT). While I did not ask her how much experience she had as a PCT, things she said and did indicated that she was experienced. During observations, I noted that other PCT's would seek her out to ask her questions. She expressed insight into older adult eating as she described scenarios related to older adult eating that she had experienced. She described her role regarding older adult eating as assisting whether in ordering the meal, setting up the meal, or feeding someone. She described how she would season food, so as to entice the older adult to eat.

Contrary to her role as described, during an observation, it was noted that although HCP 2 was assigned to two older adults in the room across the hall, she did not get up from where she was seated to assist them with their meals. A sitter was in the room and fed one gentleman and then the other in succession without assistance from HCP 2.

### **c. HCP 3**

HCP 3 was a young staff nurse. She had seemed interested in this research from the time the scope and objectives of the research were described. She had volunteered readily to be a participant, yet it was difficult coordinating a time to gain informed consent. It would seem like every time I was on the unit to collect data, HCP 3 would be reminded of the study and comment on participating yet time to participate was always

illusive. She ultimately approached me one afternoon and indicated that she was available to be interviewed.

HCP 3 discussed the importance of patients eating while hospitalized. She identified eating behavior issues primarily with patients experiencing memory impairment indicating that they needed cueing to eat. She stated that she would often order non-select diet ordering if she thought the patient was not alert or oriented enough to order on their own so that they would receive some food. She indicated she would like to have the ability to switch from non- select to room service based upon patient need; however, she did not often have time to do this.

During observations HCP 3 seemed always to be hurried. I noted she had a friendly, reassuring rapport with her patients. I did not observe HCP 3 interacting with her patients during or around mealtimes as she seemed always to be dealing with other tasks or concerns during these times.

#### **d. HCP 4**

HCP 4 was a middle-aged staff nurse. During observations I noted, HCP 4 was a very talkative person, speaking often and loudly. She had definitive ideas about older adults and eating and wanted to participate in the study to share her ideas.

HCP 4 felt that an older adult's mood was most influential as to whether they ate or not. She indicated older adult patients are often depressed, fearful that they will be unable to resume their prior living situations. She also felt that older adults liked to have control over what they eat.



#### **D. Summary of Chapter 4**

Mitchell et al., (1998), suggest that concepts within the QHOM are related in some way and further inquiry, which results in theory construction, is necessary to determine the essence of these conceptual relationships. The QHOM was the conceptual framework that guided this inquiry. Use of the framework was integral in realizing a relationship between the framework concepts of patient (client) and system relative to older adult eating behavior during hospitalization. Early analysis also identified pertinent conditions within both system and patient concepts. Conditions within these two concepts included patient characteristics such as the older adult patient's disease or condition that precipitated hospitalization as well as the patient's acculturated foodways. System characteristics included assessment modalities related to nurse or physician diet orders, characteristics particular to the hospital environment, and healthcare providers. Having identified these structural conditions it was realized, through continued analysis, that they were actually antecedent to the theory proper. Thereafter analysis continued toward a theoretical level. It is at this level of inquiry that the Theory of Compromised Eating Behavior was developed. It will be described in detail in Chapter 5.

## CHAPTER 5

### THE THEORY OF COMPROMISED EATING BEHAVIOR

#### A. Introduction

The aim of this research was to develop substantive theory that describes the social process that influences the eating behavior of hospitalized older adults. The social process discovered during this inquiry is that of compromise. During hospitalization, older adult eating behavior is influenced by a process of compromise. Hospitalized older adults compromise their nutritional health by not eating or under eating or alternatively compromise their acculturated foodways by eating foods or in ways that are unfamiliar or non-traditional for them. Additionally healthcare providers experience compromise relative to older adult patient eating as they ultimately concede when older adult patients do not eat adequately, despite realizing the importance of eating.

#### B. Major Theoretical Concepts

Major theoretical concepts identified in this inquiry included the concepts of compromise, foodways, and health. Compromise was identified as the BSP. Older adult participants were found to have inherent foodways, a term used to describe traditional eating behavior. Health was identified by participants as the reason to eat during hospitalization. Each of these concepts will be explained in the subsequent paragraphs.

##### **1. Compromise**

Compromise is defined as “to come to terms by mutual concession; to come to an agreement by the partial surrender of position or principles” (Compromise, 2011). During inquiry, despite acknowledging that eating during hospitalization was important (OA 1-8) the older adult surrendered this position if they did not eat adequately (OA 2-7) or

alternatively surrendered their acculturated foodways if they did eat adequately (OA 1 & 8), resulting in compromise. This was also apparent with healthcare providers as during inquiry they also acknowledged that eating was important for the older adult during hospitalization (HCP 1-4) yet mutually conceded when the older adult would not eat adequately (HCP 2-3, OA3 PO1, OA4 PO3, OA5 PO2, OA6 PO2), resulting in compromise.

For example:

During an observation (OA3 PO1), a nurse asked a sitter to feed an older adult patient. The sitter refused indicating that she did not feel comfortable feeding the older adult because she was afraid the patient would choke. The nurse then came into the room to feed the patient. After raising the head of the bed, the nurse indicated to the patient it was time to eat. After two bites of the entrée, the patient stated “no more”. The nurse then opened a container of chocolate pudding and attempted to feed the patient. Again, after one bite the patient said “no more”. The nurse then put the eating utensil down and exited the room. No further attempts were made to assist the patient to eat.

## **2. Foodways**

Foodways are defined as “traditional customs or habits of a group of people concerning food and eating” (Foodways, 2011). Older adults described various food preferences and meal expectations based upon their acculturated foodways.

Hospitalization challenged these foodways. Food preferences included, the flavor of foods (OA 1-2, 4-8), the temperature of foods served (OA1-2, 4, 6, OA1 PO2, OA4 PO2, OA7 PO5), the choice of particular foods (OA 1-4, 6, & 8), and the quantity of food served (OA 1-3 & 6). Foodways also included aspects of a traditional meal for the older adult such as the ability to choose foods to eat (OA 1, 4-5, HCP 1-2, 4), the timing of the meal (OA 1, HCP 1-2), the ability to perform traditional meal rituals (OA1& OA 8) and

access to familiar foods (OA 1 & 8 , HCP 1 & 2). For example when OA 5 was asked about hospital food she stated:

There is no flavor to the food here. It's bland. They don't give you any salt and pepper...well they give you pepper but no salt which I can understand but...you've gotta have some salt...even my own doctor told me that .

Also when OA 1 was asked about quantity of food she said:

The [salads] are huge. It's a meal in itself. I made the mistake of ordering one of them last time I was in the hospital for my leg and the thing of it is, oh boy, when it came [the salad] it was this size [indicates large plate size, approximately 12 inches]. I say what a waste. Maybe some people could eat it all. I had ordered other things besides.

### **3. Health**

All older adult and healthcare provider participants related the importance of eating while hospitalized (OA 1-8, HCP 1-4), indicating a positive relationship between eating and health. Some participants indicated that eating was synonymous with more specific healthy activity such as increased stamina (OA 1), being active (OA 1), strength (OA 5), healing (HCP 2), resistance to infection (OA 8) , and prevention of starvation (OA 3) while others solely indicated its' importance (OA 2, 4, 6-7, HCP 1, 3-4). For example OA 1 indicated “[Eating while hospitalized is important] for your um, ah, your stamina and so forth...to get up and move around and so forth. It keeps you active...it's very important” whereas OA 3 stated “Well you'd better [eat while in the hospital] or you're going to starve and then you go to the cemetery” and OA 8 said “You gotta stay as healthy as you can stay. If you weren't sick you wouldn't be here”.

### C. The Theory

The Theory of Compromised Eating Behavior has four stages; (1) older adult self-indication (2) older adult-healthcare provider joint action (3) older adult negotiation with the self (4) older adult action. The theory is further described as follows:

The older adult is admitted to the hospital with a disease or condition as well as acculturated foodways. Antecedents such as physiological characteristics related to the older adults' assessed health and functional status at the time of admission to the hospital as well as environmental characteristics related to the hospital setting are present. The process of compromise occurs with each meal and involves older adult *self-indication*, *older adult-healthcare provider joint action*, *older adult negotiation with the self*, and concludes with *older adult action* (see Figure 3).

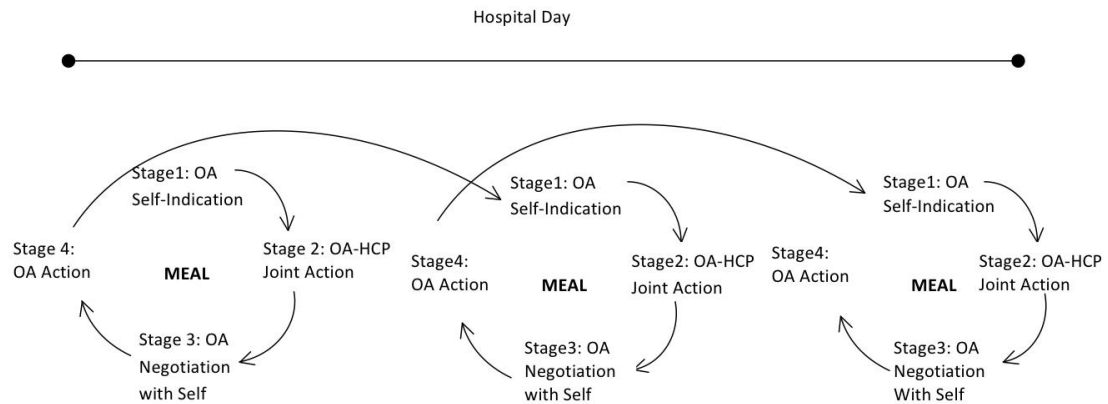


Figure 3: The Theory of Compromised Eating Behavior

Whether the older adult eats adequately or not, compromise exists; either compromise of health if the older adult does not eat adequately or compromise of acculturated foodways if they do eat adequately. Additionally, the healthcare provider

compromises their beliefs relative to the importance of older adult patient eating based upon older adult-healthcare provider co-interpretation of the hospital food and meal ( see Stage Two- Older Adult-Healthcare Provider Joint Action) as well as hospital-related characteristics (see Chapter 4). Each stage of the process of compromise engaged in by older adults will be described in subsequent paragraphs.

### **1. Stage 1-Older Adult Self-Indication**

Symbolic Interactionism suggests that all human beings have a self and are continuously interacting with the self, indicating things to themselves as they act within their world. Through continued interaction with the self, the human being, “judges, analyzes, and evaluates” (Blumer, 1969, p. 62) the things he has indicated to the self as he plans and organizes his action. This process of self-indication ultimately guides human action or behavior.

Based upon the Theory of Compromised Eating Behavior, older adult self-indication begins the process of compromise (see Figure 4). As each meal tray is delivered, the hospitalized older adult begins a process of self-indication wherein the older adult judges or assesses whether the hospital food and meal meet with their food preferences and meal expectations based upon their acculturated foodways. As OA 2 stated: “At home you know what you’re making, you know what it is, you know if you like it or not. Here you look at it [meal] first, if it doesn’t look good you stop right there”. Thus, the older adult determines whether the hospital meal is symbolic of food and a meal to them and if the food and the hospital food and meal has the same meaning to them in comparison to their acculturated meaning of food and meal.

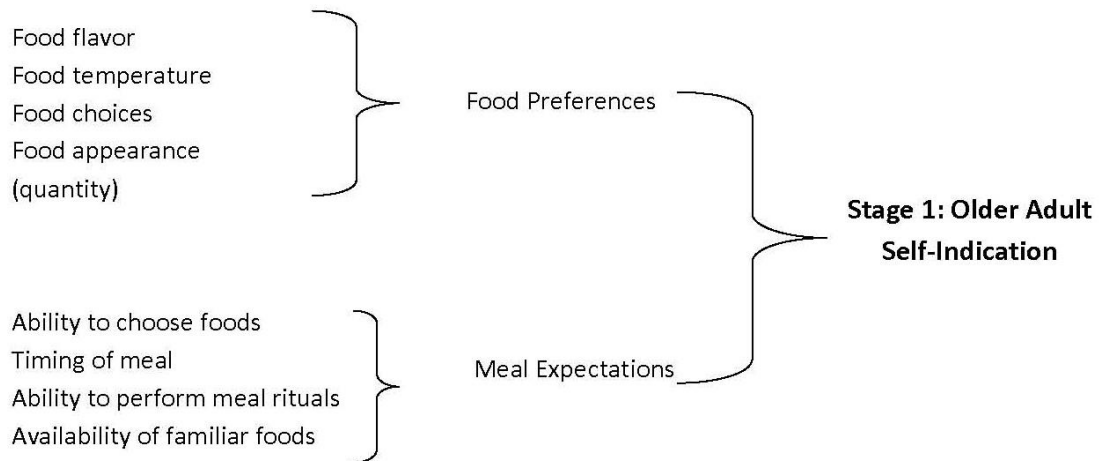


Figure 4: Stage 1- Older Adult Self-Indication

Throughout this inquiry, this process of self-indication occurred with each older adult participant meal tray delivered regardless of older adult participant age, gender, length of hospital stay, therapeutic diet prescribed, diet ordering method, or meal of the day et cetera. Repeatedly, the older adult participant would remove the meal tray cover and survey the meal tray for food preferences and their expectations of what constitutes a meal. This began a process which ultimately influenced their eating behavior.

**a. Food Preferences**

Food preferences described by older adult participants included food flavor, temperature, choices, and quantity of food served. Food flavor was especially noteworthy. The majority of older adult participants expressed the lack of flavor associated with the hospital food (OA 2, 4-6, 8). For example when asked about the food in the hospital, OA8 stated:

It's flavorless [food]. I would rather have a half of a cup of tasty pasta than to have something that tastes lousy. Flavorless-if I don't like it; I'm not going to eat it [food] so it's not doing me any good. Give me something that at least I'm going to eat.

Healthcare providers also identified the lack of flavor of hospital foods as problematic for older adult patients (HCP 1& 2). For example HCP 1 stated:

People lose their sense of taste as they grow older so food doesn't taste the same and if at home you're used to drowning your food with salt and all of sudden you're on a cardiac diet and there is not salt or sugar delivered with your meal or because you have diabetes we're not going to give you sugar [this factors into whether older adults eat or not] (HCP 1).

Some older adult participants recalled that certain hospital meals were more palatable due to flavor than others indicating that certain foods met their food preferences based upon flavor while other foods did not (OA 1, OA 5, OA8). OA 8 stated: "I ate that steak last night and it was very good...I used to like the shrimp but now the shrimp [they] get here it's dry". Other older adult participants demonstrated food preferences based upon flavor by eating select food items from their meal while leaving other items uneaten (OA 2- 8) as OA 8 said "Give me half of what I'd eat at a normal meal, have it tasty and I'll eat it".

Healthcare providers indicated they would attempt to add to the flavor of foods by seasoning foods as stated by HCP 2:

... I'll season it as if I was going to eat it and I find that they eat it really well. So I just season it like I would like it. Cause you know I'll see some people start to feed em and they don't put nothing on it and I'll say put a little sugar or something on it cause you know they like sweets, older folks.

Liberalizing the diet order thus discontinuing the dietary restrictions and allowing for additional foods and flavor enhancement was also a tactic used by one healthcare provider (HCP1). As HCP 1 indicated:



I did that 5 times today [liberalized diets]. I asked for a liberalized diet. There's one woman who's literally eating 10% of her cardiac diabetic diet and that's been for 5 days now. No one has bothered...it came to my attention only because the person came in and maybe there was no trigger so I saw her as what we call a per policy, if somebody's here for 5 days and has a therapeutic diet, I put it in as a per policy consult to myself, meaning I should see that patient.

OA 7 was the only older adult participant who had her diet liberalized during inquiry. For one meal, she was able to order her lunch from the employee and visitor cafeteria, ordering chicken parmesan, which was not an offering on the room service menu. This option was limited however as "passes" given out by the dietitian were required to utilize the employee and visitor cafeteria free of charge. OA 7 stated that the food was "good" and that she enjoyed the meal. Thereafter, she ordered from the room service menu based upon her 1800 calorie restricted, cardiac diet and continued to have poor dietary intake.

The temperature of the food delivered to the older adult was identified as a food preference since foods that are traditionally served hot were not necessarily hot when served to the older adult participants (OA 1, 4, 6, OA1 PO2, OA 4 PO2). Coffee and breakfast foods were more likely not to be hot enough. Also foods that are traditionally served cold were not always cold (OA 2, OA 7 PO 5). Milk and ice cream were more likely than other foods to be served not cold enough or melted. The process of delivering meal trays took the dietary aide, once on the unit, up to 30 minutes to deliver dependent on number of trays to be delivered at that time. Meal trays were delivered to patients and placed on over-bed tables or at the nurses' station regardless if the patient was asleep or not in the room respectively (CO 2-5). Although commonplace, during a particular observation, it was noted that two meal trays were delivered around 7:25A and placed on patients over bed table while patients were sleeping. It was an hour later (8:30A) before

these patients began consuming meals yet meals were not reheated (CO 3). A microwave oven was available in the unit's kitchenette, to reheat foods, yet it was utilized on only two occasions, during observation (CO 2, P5 PO3).

Having more of a variety of acceptable food choices available for the older adult was identified by participants. Despite the food choices available with room service diet ordering, OA 1 indicated that:

Well you get to choose [different foods] but they have the same menu. If you're here in the hospital more than once, like I was here before in September, they have the same menu. It's exactly the same menu ... They have chicken, shrimp, tilapia but when you're here for quite a few days it gets monotonous.

Monotony related to food choices was also identified by HCP 4 as she stated "...but for some [older adults] they don't still like the food. They don't think there's still that much of a selection, especially for dinners. It's the same thing every night. If you're here for 5 days you're screwed". According to HCP 1 "The non-select [diet ordering] tends to be very repetitive so that you would have a lot of the same sandwiches, tuna or turkey, so that there's a lot of repetitive meals".

Ordered foods were not always as the older adult anticipated. For example OA 8 stated that he ordered a hamburger but that "the hamburger patty tastes like a hockey puck" or OA 1 stated that the "they have chicken with the lemon sauce yet if ever I have chicken, I would probably do it a little differently". Food choice preferences identified by older adults included apple pie, salt, scrambled eggs with cheese, fresh fruit, mushrooms, seafood, ham sandwich, hamburger and onions, filet mignon, French fries, popcorn, rice, fried chicken, potato salad, and pasta with tomato sauce. While some of these foods were

available, they were often restricted secondary to the therapeutic diet the older adult had been prescribed or not available on the non-select diet ordering menu.

Quantity of food provided was also identified as a food preference since portion size was sometimes overly adequate. No participants indicated that portion size was too small but rather some participants indicated portion size was too large (OA1-3). As OA 3 stated “You’re sicker than a dog and ...comes over with a big steak and it makes you wanta throw up”. This opinion was shared by some healthcare providers as well as they indicated that older adults tended to prefer small meals rather than large meals (HCP1-2).

### **b. Meal Expectations**

Older adult participants indicated that they had certain meal expectations. The ability to choose foods to eat for the meal, the timing of meal, the ability to perform traditional meal rituals, and the availability of familiar foods were identified. The ability to choose foods was considered an important aspect of the meal for older adults (OA1, 5, OA 3 PO1, HCP1-2, 4). Having control over what was ordered was thought to contribute to improved dietary intake since choosing foods that were preferable would enhance intake. This was the opinion shared by healthcare providers and older adults however it was limited by food preferences such as food choices, which were considered monotonous by some participants as well as food flavor, which was generally considered poor. Thus, although the number of food choices increased, the quality of the food associated with those choices remained limited.

The ability to choose foods was also governed by whether the older adult had room service diet ordering or non-select diet ordering. Room service diet ordering allowed for increased food choices as compared to non -select diet ordering (See Chapter

3 for a detailed description of diet ordering options). Some older adult participants had room service diet ordering (OA 1,3, 5,7-8) whereas some participants had non-select diet ordering (OA 2, 4, & 6). OA 3 had recently been changed from non-select diet ordering to room service diet ordering to avail him more food choices since his dietary intake had been poor. Assistance was provided by a healthcare provider to accomplish successful ordering (OA 3PO 1). This was further substantiated by HCP1 as she also acknowledged the importance of having the ability to choose foods stating “Older doesn’t mean you want to give away the independence of a choice so I think it’s really important [to have a choice] and you eat better if you get what you ordered”.

However, healthcare providers indicated that healthcare provider ordering from a room service menu for the patient was a rarity as they infrequently had the time to do this (HCP 1-3). HCP 3 stated: “I’ll switch it back [from non select diet ordering to room service diet ordering] and order for them if I actually have the time to do that. Most of the time we don’t-truthfully, it sucks”. Some participants seemed unaware of the availability of room service diet ordering option (OA 2 & 6) yet seemed cognizant enough to utilize this service or could utilize the service with assistance (OA 4).

The process of room service ordering seemed somewhat controversial as while some healthcare providers thought that the ability to order a meal from a menu enhanced intake, one healthcare provider indicated that many older adult patients found the concept of room-service diet ordering foreign (CO2). She indicated that some older adults had never experienced menu-based diet ordering due to patients’ diverse social and cultural norms. She felt room service was a very middle-upper class concept, which many older adult patients had not experienced and subsequently they would not initiate this type of

ordering without assistance. The ordering of a diet was also identified by HCP 1 as she referred to a trial diet ordering option stating:

We have an in-between [diet ordering option] that we are experimenting with on some floors-where a person from the diet office goes up and assists somebody, who is almost playing the role of a waitress/waitperson. So that would be an important in-between [diet ordering option] for those that can mentally do it [order from room service diet ordering option] but maybe their vision is bad or there is a language barrier. .. We have, I think, a huge need.

Timing of the meal was an important aspect of meal expectations (OA 1-2, 7 PO 1, & HCP 1-2). Older adults with non-select diet ordering had prescribed mealtimes, generally 7:30A, 11:30A, and 4:30P. These times did not always conform to the older adult's expectation of meal times as OA 2 stated: "Lunch is much too early. Sometimes I skip lunch anyway cause I'm not hungry cause I had breakfast". Those participants with room service diet ordering wherein the timing of the meal was at the discretion of older adult or designee (family member or healthcare provider) also had meal expectations related to the timing of the meal as OA 1 stated:

At home I'm on a schedule, living alone and so forth I usually have my breakfast at a certain time, my lunch, my dinner at night and so forth and here it's a little bit different. You order it but you don't know how soon you're going to get it.

Traditional meal rituals were described by some participants (OA1, 3, 7, HCP 1-2), which influenced meal expectations. While some rituals were related to timing of meals or food preferences as discussed in previous paragraphs, there were also other rituals identified. These rituals tended to be related to role in meal preparation as OA 1, who lived alone and prepared all of her own meals, indicated:

At home you cook, set your table, get the placemat out, um dishes, knife and fork and so forth from the stove you put it on the table and so forth. If you need extra you have your extra right there.

OA 8 reminisced about cooking for his family. He and his four daughters would share recipes. He enjoyed preparing and eating good food. His stated his specialty was Italian food and during the interview he reminisced about picking tomatoes fresh from the garden for his recipes. He had especially high meal expectations, based upon his discerning palate and his involved traditional role in meal preparation. He not only missed the meals that he created but also his role, as the cook, in the preparation of family meals.

Meal expectations also included the availability of familiar foods. If the older adult was familiar with the food they would be more likely to order it or to eat it and vice versa. For example OA 1 stated: “They give things fancy names here [referring to menu entrees]. Florentine loaf is meatloaf and of course I make meatloaf...” whereas HCP 1 indicated:

We have a meatloaf but its turkey meatloaf and it’s not really distinguished to me. It doesn’t look like meatloaf to me either and these fancy dishes like the shrimp Provençal. It [the menu] describes it with these fancy descriptions. I think people are afraid to order it because they’re not sure what it is. Sometimes they just don’t know what it is.

Another food that was identified as being non-familiar to the older adult by healthcare providers was the sandwich known as a wrap (HCP 1-2) as it was described as being popular with younger people but unfamiliar to older people. The wrap was served to patients with non-select diet ordering and as HCP 2 stated: “The hospital serves a lot of cold sandwiches; most of them [older adults] won’t eat the sandwiches. They want something hot. The wraps were terrible today for the older people”. This sentiment was also shared by OA 6 as she stated: “we had those little sandwiches [for lunch] ...what do you call those sandwiches... wrappeds? I didn’t even touch those”.

### **c. Summary of Stage 1**

Older adults have acculturated foodways that have developed over the course of their life. These foodways include certain food preferences and meal expectations based upon their acculturated foodways. During hospitalization these acculturated foodways are challenged. As each meal tray is delivered to the older adult, the older adult assesses the food and the meal and determines whether the food meets with their preferences and whether the meal meets with their expectations or in other words whether the hospital food and meal are symbolic of their traditional food and meal. The more closely aligned the hospital food and meal is with the older adults' traditional preferences and expectations the more symbolic they are and consequently the more meaning they have.

Food preferences identified in this inquiry included food flavor, temperature, choices, and appearance. Meal expectations identified included the ability to choose foods, the timing of the meal, the ability to perform meal related rituals, and the availability of foods that are familiar to the older adult. Most notable based upon older adult participant interview was the influence of flavor of food as older adult participants identified flavor of food as inconsistent with their food preference. Findings suggest that overall, at this stage of the Theory; the majority of older adult participants did not believe that the hospital food and meal were symbolic of their traditional food and meal.

The Theory of Compromised Eating Behavior begins with older adult self-indication wherein the older adult assesses whether the hospital food and meal is symbolic of their traditional food and meal and whether the food and meal set before them has meaning to them. This stage “sets the stage” for the second stage of the Theory,

that of older adult-healthcare provider joint action, and invariably the process of compromise.

## 2. Stage 2- Older Adult-Healthcare Provider Joint Action

Older adult-healthcare provider joint action is the second stage of the Theory of Compromised Eating Behavior (see Figure 5). Once the meal tray is delivered and older adult self-indication has occurred, joint action or interaction between the older adult and the healthcare provider begins. This stage can be explained via symbolic interactionism as human behavior involves human interaction. Blumer (1969) calls this interaction “joint action” and considers joint action the fundamental characteristic of a society (p. 70). In joint action participants fit together their lines of action based upon mutual identification and interpretation of the act into a collective action. Fitting together lines of action between participants is the essence of human interaction.

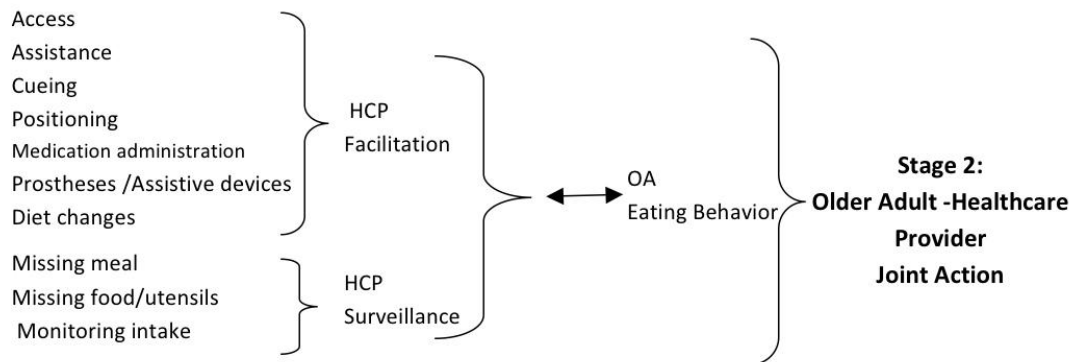


Figure 5: Stage 2- Older Adult-Healthcare Provider Joint Action

Thus in the Theory of Compromised Eating Behavior, joint action occurs between the older adult and the healthcare provider. Since the older adult has already made indications about the meaning of the hospital meal to themselves in stage one, older adult



indications about the meaning of the meal are then fit together with those of the healthcare provider in stage two. Joint action is exhibited by the older adult's eating behavior during the meal and the facilitation as well as surveillance of such by the healthcare provider throughout the meal. During inquiry healthcare provider facilitation was identified as helping the older adult access food items on the meal tray, assistance with eating, cueing or reminding the older adult to eat, physical positioning of the older adult to eat, timing of medication administration in relationship to eating, assessing the availability of prostheses or assistive devices or alternatives, and promoting diet changes whereas healthcare provider surveillance involved identifying missing meals or missing food items or utensils and monitoring dietary intake.

#### **a. Healthcare Provider Facilitation**

Whether healthcare providers facilitated older adult eating influenced the meaning of the hospital meal for the older adult. Actions by the healthcare provider relative to the food and meal were interpreted by the older adult. Lack of facilitation indicated lack of meaning whereas facilitation would indicate meaning to the older adult. Pertinent methods of facilitation were identified during inquiry.

Due to packaging of foods and utensils, older adults had difficulty accessing food items on the meal tray. Many food items or utensils were commercially packaged, which proved to be challenging for the older adult to access independently (OA 2-5, 8, HCP2). For example, during observation it was noted that OA 8 was opening the packaging on his utensils with his teeth or OA 4 spent several minutes trying to open a package of crackers. Cartons and juice containers were especially difficult to open for older adults. HCP 2 indicated:

Sometimes they're too tired [older adults] to go through pulling off covers, cutting things up... by the time they're through with all that they're just so exhausted they don't want to eat, so I'll just go in there set em up.

If older adult participants could access their food and utensils independently they would; if they could not they would not thereby affecting whether they ate that food item or not. They did not call for assistance from the healthcare provider and rarely during inquiry did the healthcare provider offer assistance.

Assessment of independency versus dependency for eating by nurses was informal. According to healthcare providers they would visually assess someone's ability to eat independently (HCP2-4) similar to the assessment method used to determine diet ordering status. It was clear during observation that some participants would have benefited from assistance to eat yet older adult participants did not ask for assistance nor did they receive assistance from healthcare providers (OA4 PO 2-3). Infrequently, during observations, healthcare providers would assist older adults to eat. This was a delegated task as PCTs or more often sitters would feed those older adults needing assistance to eat (CO 4, OA 3 PO 1, and HCP 2 PO1). HCP1 offered this:

Some [older adults] just aren't used to eating off a tray and don't quite know how to...there's not enough room to spread out and take things off the tray and manipulate...there's very much a difficulty in --"my coffee's over here but how can I get to it, it's in the way of my food". I don't think there's enough assist given. We don't have enough personnel.

Cueing or reminding the older adult to eat was a tactic used by some healthcare providers to facilitate the older adult to eat (HCP3, OA 4 PO3). This tactic was not observed to be successful as despite cueing, the older adult did not eat (OA 4PO3). It was observed however that often meal trays were removed from the bedside uneaten or with

little eaten without cueing or comment from the healthcare provider removing the tray (OA2 PO1, OA4 PO2-3, OA5 PO1-2, OA6 PO1-3, OA7 PO1, 4-5).

Older adult participants more often than not ate while in bed. As indicated previously, space within the hospital room was limited whereby there was space for only one patient occupying the room to be out of bed in a chair to eat at a given time. Some participants were able to eat in a chair (OA5 & 7), other participants were able to sit edge of bed to eat (OA3 & 6), while others ate while in bed (OA1-2, 4, & 8). One participant who ate in bed could manipulate bed controls to raise the head of the bed to eat and could manipulate the meal tray while in bed (OA1) while others were unable or had difficulty manipulating bed controls or the meal tray while in bed (OA2, 4, & 8). During observations, these participants ate while the head of the bed was at 45 degrees or less and struggled to access their meal tray (OA2, OA 2PO1, OA 4 PO 2-3, OA8 PO1-2) yet did not ask for assistance nor were they given assistance with positioning. OA 2 had this to say about managing her meal tray:

It depends where they leave it [meal tray] and how my bed goes. If my bed goes up a little maybe I can reach it or if it goes down a little, maybe I can reach it. If I can't; maybe I'll ask someone. If they [healthcare providers] come in [to the room] I'll eat; if they don't I won't. I won't even look at it, so that's another factor.

One especially disturbing observation occurred with OA 4 as he attempted to eat breakfast one morning (OA 4 PO2). He was attempting to drink his cranberry juice but due to a significant hand tremor, his reclining position in the bed, and the flexible container the juice was in, he struggled to bring the juice from tray to mouth without spilling, despite many attempts. This was evident by the trail of spilled red juice across the bed linens and up his hospital gown, which ultimately left very little juice in the cup

for his consumption. He did not consume any of his breakfast. He did not call for assistance with positioning nor did anyone assist him.

Timing of medication administration by the healthcare provider (nurse) to facilitate eating was important for those participants requiring medications to be administered with or before meals. This was important for those older adults with diabetes whose meal, insulin administration, and blood glucose testing needed to be coordinated (CO 2, OA7-8) or for older adults needing to be pre-medicated for pain prior to meals (OA7). This was especially poignant for OA 7 as her dietary intake was dependent on premedication for pain prior to meals, since eating caused her pain. Yet on one occasion (P7 PO1), OA 7 was not medicated until after her meal had arrived and on another occasion her meal was inadvertently given to another patient requiring that she reorder thereby delaying the timing of her meal (P7 PO3). In the latter example, OA7 had been pre-medicated for pain yet had to wait for another meal tray to be prepared and delivered, thus perhaps impacting the maximum effectiveness of her pain medication and ultimately her dietary intake.

Timing of medication administration was also important so as to not interfere with eating as during observation it was noted that medications were administered during the meal (OA4 PO3, OA5 PO3). The administration of several medications at one time required the older adult drink large quantities of fluid, which may have contributed to either premature satiation or in contrast anorexia thereby influencing their dietary intake. On one such occasion, OA 4 had his mid day meal tray in front of him, when the nurse came into the room to administer medications. The nurse gave OA 4 a medicine cup, half full of pills, which were washed down with milk from his meal tray. She then handed OA

4 a medicine cup full with a clear liquid, indicated it was lactulose, which was subsequently washed down with milk from his meal tray. OA 4 ate nothing more from his meal tray thereafter. Timing of medication administration around the meal time rather than during the mealtime would perhaps have facilitated his eating.

The older adults in this inquiry did not have needed prostheses or assistive devices such as dentures (OA 2, 4, OA 7 PO 2), orthotic device (OA 2), or assistive device, a walker (OA 5). Lack of prostheses such as dentures influenced whether the older adult was able to eat foods of a familiar texture whereas lack of a walker to ambulate or orthotic device used to ambulate impacted eating secondary to the older adult's ability to ambulate to the bathroom for elimination.

For example, OA 4 had no upper teeth and only two bottom teeth, which were on opposing sides of his mouth yet he was prescribed a regularly textured diet. His wife stated his dentures were at home. Healthcare providers did not downgrade his diet texture to accommodate his edentulism nor did OA 4 ask for a change in diet texture but rather he continued to have very poor dietary intake. Healthcare provider facilitation related to prostheses or lack of prostheses was further substantiated when during an interview HCP4 stated:

Like my lady today, she's choking and everything and what's up. She speaks no English and I look in her mouth and she has no teeth. Did anybody notice that she can't chew chicken? So I went in and changed her diet to diabetic soft diet. So you have to look at people, how they eat, what they eat...Nobody told me she has no teeth. No bottom or top teeth. She chokes. [This was noted by HCP4 on this patient's 7<sup>th</sup> hospital day].

The issue of texture and downgrading diets texture seemed to be a vicious cycle as older adults did not bring dentures to the hospital because they were afraid they would

be lost (OA2, 4, & HCP 3) yet lack of dentures required a downgrade in diet texture that could negatively impact dietary intake since the downgraded texture was unfamiliar. Healthcare providers indicated that they would order mashed potatoes as a meal since that was often the only food the older adult would eat on a downgraded diet (HCP 2-3). Nonetheless, during inquiry, downgrading of diet texture did not happen readily when the older adult participant was edentulous (OA 4, OA7 PO2, HCP 4).

Lack of assistive devices necessary for ambulation impacted eating as participants were concerned about elimination (OA 2 & 5). OA 2 had an orthotic device that was necessary for ambulation yet she did not have it with her in the hospital. When asked about what influenced her eating in the hospital OA2 explained:

I guess its [eating] whether you can walk or not too, can go the bathroom yourself. It makes a big difference because if I eat too much, I'll be calling them too much and if I don't eat then nothing happens. I'm more comfortable when nothing happens...cause I end up having an accident in bed, even though I call for the bed pan they don't get here on time.

#### **b. Healthcare Provider Surveillance**

Whether healthcare providers provided surveillance over older adult eating influenced the meaning of the hospital meal for the older adult. Actions by the healthcare provider relative to the food and meal were interpreted by the older adult. Lack of surveillance indicated lack of meaning whereas healthcare provider surveillance would indicate the food and meal had meaning. As older adults and healthcare providers fit their lines of action together, meaning of the meal to both became more apparent. Healthcare provider surveillance included identification of missing meals, food items or utensils and overall dietary intake.

During one observation (OA4 PO1), OA 4 did not receive an evening meal. Other meal trays came and went yet OA 4 received nothing to eat. OA 4 had non-select diet ordering so his meal tray should be delivered automatically around 4:30P yet 5:30P came and went and no meal tray. OA 4 did not question the lack of a meal tray nor did any healthcare providers note that he did not receive a meal tray. After I had a discussion with the dietitian, who was in to provide patient education, there was no rationale for the missing meal tray, it was simply missed. This prompted the question (memo), as to whether anyone would know if the older adult did not inquire about a missing meal or alternatively if someone had room service diet ordering and never called to order a meal, would anyone notice? This issue was further substantiated by healthcare providers as they indicated that they would routinely order non-select diet ordering for older adults when it was questionable as to whether they could order independently to assure that a meal would be delivered (HCP 2-3). As HCP 2 stated:

Now if...patients and their families aren't orderin, we'll say he's a regular diet but we'll say he's unable to call and not all the time are the nurses or the PCTs able to call for him, so the whole day will go by and this poor man will not get anything unless you're [healthcare provider] alert and notice, so that's why we put in non-select [diet ordering], so he could get his meals.

Missing food items and utensils seemed to be especially disconcerting to the older adult as when items were missing they seemed visibly upset (OA1, 7-8). For example, OA1, a diabetic, had fresh fruit as a dessert option, on her cardiac, calorie restricted diet. For one meal, she ordered an orange for dessert, yet when the meal came she did not receive any utensils. After calling down for utensils, which the dietary aid subsequently provided, she received plastic utensils and indicated "...the only thing is that they sent me a plastic knife. I can't peel an orange without something more". Also, OA 8 was on a

highly restricted diet (renal, cardiac, calorie restricted), which severely limited his food choices. One evening for dinner he received a box of dry cereal for his dinner minus the milk that would go in the cereal. He growled his frustration with the meal stating “how do they expect me to eat cereal without milk”. Rationale for this frustrated behavior seemed to be a combination of having to wait for the healthcare provider to supply the missing item to continue with the meal as well as overall frustration with the lack of surveillance by the healthcare provider.

Nutritional supplements were often missing from trays (OA5 PO1, OA6 PO3, & OA8 PO1). This was especially concerning since the prescription of nutritional supplements indicated that the older adult was at nutritional risk yet the supplement was not provided as prescribed. When I questioned OA 6 about the lack of nutritional supplement on her tray OA6 stated: “they must have forgotten it”. OA 6 accepted this and did not inquire further. Missing nutritional supplements seemed less concerning to the older adult compared to missing food items or utensils (OA 5, 6, & 8). Healthcare providers did not seem to notice missing nutritional supplements indicating a lack of surveillance. This was further substantiated by the medical record of OA 5 as it indicated that OA 5 “consumed 50% of her nutritional supplement” yet no nutritional supplements were delivered during observed meals (OA 5 PO1-3).

Throughout inquiry, healthcare provider surveillance of dietary intake was minimal. Many older adult patient meal trays were collected by healthcare providers uneaten or with little eaten yet the healthcare provider rarely commented on lack of dietary intake. On one occasion, a healthcare provider suggested OA 4 “try the soup” stating “the soup here is good” yet she neglected to realize that with his significant hand



tremor he would not be able to get the soup from tray to mouth without spilling the soup and did not offer assistance. Had the soup been actually hot, this could have put OA 4 at risk for burns. Meanwhile his entire meal sat uncovered and uneaten on his plate. OA 4 ultimately did not eat anything and the healthcare provider did not comment on his lack of intake. Even OA 5 who had a diagnosis of failure to thrive and was malnourished on admission (BMI=19.71) and had poor dietary intake during her hospital stay was not encouraged to eat nor did any healthcare provider comment when she did not eat (OA 5 PO 1-3).

Formal surveillance of dietary intake by healthcare providers occurred at different levels. HCP 2 indicated that if she noted someone was not eating she would tell the nurse or rather if she saw a dietitian she would notify them that a patient was eating inadequately. Nurses explained they would document dietary intake on patient care forms or communicate patient dietary issues via the nurse to nurse communication feature of the electronic medical record (HCP 3-4). The dietitian indicated she would provide surveillance of dietary intake based upon certain patient diagnoses, per consult, by documentation of consistent inadequate patient dietary intake or by random assessment of meal trays as HCP 1 indicated:

The nursing staff has a Braden score that they have to fill out daily and under my part [dietitians] they'll say excellent, adequate, inadequate, very poor. [If it says] ...okay adequate, not too worried about that. If I get too many inadequates and very poors that's a signal to me. Gotta talk to the nurse. Gotta see what the patients doing, observe a meal. I try to observe meals. I try to on some days, if it's slow enough, I go to the collection boxes. I call them that [carts used to store used meal trays] are in the hall. I try to go through them and pull the trays and see how people are doing...the nurses are writing down adequate but Mr. so and so ate all of his fruit and ate his desert. That's not adequate. He left his entrée and this is the third meal in a row he's left his entrée and he only went for the sweet stuff. So it [these assessments] can be misleading.

During inquiry, it was noted that sometimes visitors or family members would eat food items from meal trays (OA 7 PO 4) or during one observation (OA 6 PO 1) the son of OA 6 ate her entire meal, which could be misleading despite healthcare provider surveillance.

### **c. Older Adult Joint Action**

Older adult joint action was influenced by the older adults' perceptions about the hospital meal as determined in Stage 1-Older Adult Self Indication and was exhibited by the older adult's eating behavior during the meal. During inquiry, older adult participants identified negative influences related to their eating behavior yet did not proactively seek to remedy these influences during or around mealtimes. As discussed previously, older adult participants would not ask for assistance from the healthcare provider to access food either via positioning or opening food items but would rather not eat foods they could not access or would perhaps struggle to access these food items. If food flavor was not to their liking, they would not eat the food rather than ask the healthcare provider for an alternative. If food that was traditionally served hot was cold the older adult participant did not ask for it to be reheated. Additionally, OA 4, whose dietary intake was negligible, did not question his missing meal, did not ask the healthcare provider to return to administer medications after his meal rather than during his meal nor did he ask for assistance eating his meal as he stated during one observation, "They [healthcare providers] would cut it up [food] if I asked". He never asked and consequently it was never cut up. These actions by the older adult participant conveyed the meaning of the hospital food and meal from the older adult perspective to the healthcare provider.

#### **d. Summary of Stage 2**

Stage two of the Theory of Compromised Eating Behavior, older adult-healthcare provider joint action, describes the interaction that occurred between the older adult and the healthcare provider relative to hospital food and meals or rather hospital foodways. Healthcare providers having opportunities to facilitate eating or provide surveillance during older adult mealtimes would thereby convey the meaning of the hospital food and meal from the healthcare provider perspective to the older adult. Failure to facilitate eating by providing access to foods, assisting those older adults that are dependent for eating, encouraging the older adult to eat, administering medications during meals thereby affecting appetite, providing necessary prostheses or assistive devices or alternatives, or assessing the need for diet changes gave the older adult the impression that the food and meal had little meaning from the healthcare providers' perspective. Also, lack of surveillance of the food and meal for missing meals, items, or utensils and dietary intake indicated to the older adult that the hospital food and the meal had little meaning again based upon healthcare provider perspective.

As the older adult and the healthcare provider “fit their lines of action together” the lack of meaning of the hospital meal from both older adult perspective, identified in Stage 1, as well as healthcare provider perspective became apparent as healthcare provider facilitation or surveillance was limited to not existent. Additionally and also noteworthy was the lack of proactivity by older adult participants i.e. asking for assistance, requesting alternatives, complaining, et cetera; however, this rarely occurred.

Thus began a cycle of older adult-healthcare provider interactions (joint action) wherein the hospital meal had little meaning for both the older adult and consequently the

healthcare provider yet all participants , per their verbatim interview, stated the importance of eating while hospitalized. The dichotomy between the older adult's perception about the importance of eating while hospitalized versus the lack of meaning assigned to the hospital food and meal required older adult participants to negotiate between hospital foodways and their health (importance). This begins stage three of the Theory of Compromised Eating Behavior, older adult negotiation with the self.

### **3. Stage 3- Older Adult Negotiation with the Self**

Human action is at times predictable, that is, humans have a tendency to act in certain ways based upon learned and shared meanings over time. However, intervening processes can occur that redefine the act causing the human to reconstruct their action.

According to Blumer (1969):

In a new and different situation a person has the need of carving out a new line of activity. He has to size up the situation, get cues, judge this or that, and piece together some line of activity that will enable him to fit the situation as he sees it. The situation will pose new demands and present new possibilities” and “in fitting his tendency into the developing act, he may organize it, transform it, hold it in suspense, block it, or sternly cast it aside as a basis of action (p. 96).

The hospitalization presents a new situation wherein the older adult needs to “carve out a new line of activity” (Blumer, 1969, p. 96) about eating to fit the situation as they see it. Based upon stage three of the Theory of Compromised Eating Behavior (see Figure 6), the older adult thereafter negotiates with the self in a decision to eat or what to eat.

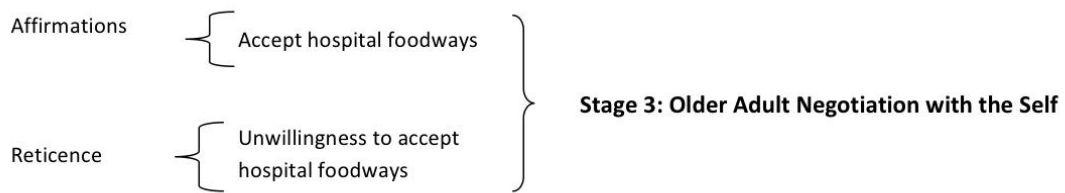


Figure 6: Stage 3- Older Adult Negotiation with Self

As indicated previously all older adult participants felt that eating while hospitalized was important to maintain health. Additionally, all but one older adult participant (OA 6) indicated they were hungry prior to meals, while some indicated that the hospital food was an appetite deterrent yet continued to have sensations of hunger (OA2, 4, & 8). Thus, the importance of maintaining acculturated foodways and eating to maintain health and satisfy hunger versus the collective meaning of the hospital meal became the substance of intrapersonal negotiation for older adult participants. As older adult participants redefined the act of eating while hospitalized, they could choose to eat, not eat, or eat select food items based upon this negotiation.

Negotiation had variable outcomes based upon the degree to which the older adult could reconcile the meaning of the hospital food and meal. One older adult participant (OA 1) could more readily accept differences, which ultimately affected her decision to eat in a positive way whereas others had more difficulty thus affecting their decision to eat in a negative way (OA 2-8). During inquiry this became apparent based upon older adult participants' affirmation and reticence to assume hospital foodways. Affirmations indicated a willingness to negotiate acculturated foodways for hospital foodways thereby accepting the meaning of the hospital food and meal and the importance of health and

hunger whereas reticence was indicative of an unwillingness to negotiate acculturated foodways for hospital foodways despite the importance of health and hunger.

**a. Affirmations**

OA 1 identified variations between her acculturated foodways and hospital foodways yet would consistently be affirmative: “It’s enjoyable [the food], very enjoyable. The food is good. Sometimes when it arrives of course it’s cold...” or she stated “the night I got here they had meatloaf. It’s dry. The outside top is hard. I make meatloaf but my niece said Aunt Mary don’t be so gosh darn critical. Your meatloaf is delicious but this is not home”. Yet OA 1 continued by saying the meals were:

Very, very good. They dress the meals up nicely...with the meals they always put a little couple of grapes so it looks appetizing, almost like you’re in a restaurant. As far as the utensils are and so forth they’re clean, everything is covered.

OA 1 was also able to negotiate her perceptions about healthcare provider facilitation as she indicated:

Sometimes its tight quarters depending how they situate the table and so forth and how they set your tray and everything and of course with me I have to have my leg elevated on a pillow but other than that they make themselves very useful [healthcare providers]-to make sure your comfortable... Space is at a premium but all in all it’s wonderful.

Despite identified differences associated with hospital foodways and different meaning associated with food and meals, AO 1 negotiated with herself in a decision to eat her meals, stating “It works out fine from between home and here, things work out fine”. Based upon all older adult participants, OA 1 best exemplified affirmation or in other words a willingness to accept the differences between hospital foodways and her acculturated foodways.

## **b. Reticence**

The majority of older adult participants displayed reticence or an unwillingness to accept the differences in meaning between hospital foodways and their acculturated foodways (OA 2-8). Older adult participants would eat select food items from the meal tray. These food items tended to be familiar foods such as coffee, juice, crackers, toast, fruit, and desert items. This was a strategy that allowed older adult participants to assuage their feelings about the importance of eating while hospitalized, satisfy their hunger somewhat yet not compromise their traditional or acculturated foodways. However, total dietary intake was limited and inadequate.

Based upon all older adult participants, OA 8 best exemplified reticence. For example, when asked about eating in the hospital OA 8 stated: "...if I don't like it, I'm not going to eat it...give me something that at least I'm going to eat... let me tell you something, when I die I'm going out happy and full". OA 8 was unwilling to negotiate acculturated foodways for hospital foodways despite the importance of health and hunger, thereby affecting his decision to eat or what to eat. OA 8 further demonstrated his reticence when asked during observation if he had consulted the dietitian about his dissatisfaction with the food, he responded negatively indicating "[the dietitian] only tells me what I can't eat, not what I can". OA 2 also demonstrated reticence as she indicated that additional food choices would not improve her dietary intake as she wouldn't eat because regardless it would not be prepared to her liking.

Other older adult participants also demonstrated reticence although perhaps less verbally explicit (OA 2-7). For example, OA 4 and OA 5 had very limited dietary intake most often consisting of at most sips of a beverage and some crackers or a portion of a

piece of toast yet OA 4 indicated "...when I get home I'll get something to eat" yet discharge was not imminent (P4 PO3) or OA 5 refused to eat both breakfast and lunch on her day of discharge, citing discharge as a reason to forego eating since she would eat at home (OA 4 PO 2-3). She ultimately drank sips of tea and ¼ of a piece of toast over these two meals. Even OA 6, who had stated she had no appetite, would choose select food items to eat such as coffee and a fruit and would thereafter hold the empty dish up like a trophy, proud of herself for eating something (P6 PO 2-3).

### **c. Summary of Stage 3**

During stage 3, older adult negotiation with self, the older adult participant weighed their options before deciding what to eat. Decisions were variable based upon acculturated foodways, the importance of eating to health, their hunger, and hospital foodways or the meaning of the hospital food and meal to them. While all older adult participants identified differences between their acculturated foodways and hospital foodways, what became obviously apparent during analysis were the extremes between OA 1 and OA 8 in their acceptance of these differences identified as affirmations or reticence. Affirmations expressed by OA 1 indicated her willingness to negotiate acculturated foodways for hospital foodways thereby accepting the meaning of the hospital food and meal and the importance of health and hunger. This was in contrast with OA 8 wherein his reticence was indicative of an unwillingness to negotiate acculturated foodways for hospital foodways despite the importance of health and hunger. Other participants were also reticent in their perceptions of hospital foodways. The obvious disparity between acculturated foodways, importance of eating, hunger, and hospital foodways required the older adult participant negotiate a decision based upon



meaning of the hospital meal as they perceived it. This decision or outcome of negotiation determined what action the older adult would take related to dietary intake.

According to symbolic interactionism, new situations such as eating behavior while hospitalized sometimes require redefinition of the act and development of a new line of activity. Development of a new line of activity required deliberation and negotiation as the new line of activity was similar or altered dependent on how the participant perceived the situation. Development of a new line of activity was negotiated by the older adult participant. The new line of activity or action was reflected by their dietary intake.

#### **4. Stage 4-Older Adult Action**

Older adult action or dietary intake, defined as the ingestion of solid or liquids, is the last stage of the Theory of Compromised Eating Behavior (see Figure 7). According to symbolic interactionism, people act toward objects based upon the meaning of the object to them. During this inquiry, dietary intake was indicative of the meaning of the hospital food and meal to older adult participants, having been determined by the theoretical stages of self-indication and joint action. The third stage of the theory, negotiation, required the older adult patient to choose a course of action, the outcome of which was dietary intake. Dietary intake was either adequate or inadequate.

Dietary intake was quantified based upon the assessment method identified by Berrut et al. (2002). Using this method, individual food items were assessed for percentage consumed based upon portions wherein 0% indicated less than one quarter of the food item was consumed, 50% if one quarter to three quarters of the food item were consumed, and 100% if more than three quarters of the food item was consumed. These

percentages were then averaged for a total overall percentage of meal consumed. Quantification of dietary intake was established so as to determine adequate versus inadequate intake. Adequate intake was determined to mean less than 75% (Peterson, Sheean, & Braunschweig, 2011) however during present inquiry older adult participants with inadequate intake consumed 50% of their meal or less.

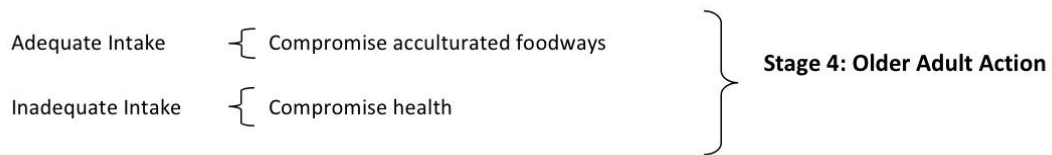


Figure 7: Stage 4- Older Adult Action

**a. Adequate Intake**

Adequate dietary intake required the older adult participant compromise their acculturated foodways. One older adult participant (OA 1) chose to compromise her acculturated foodways by eating 100% of observed meals. Dietary intake remained consistent (adequate or inadequate) for those participants observed during multiple mealtimes (see Figure 8).

**b. Inadequate Intake**

Inadequate dietary intake required the older adult participant compromise their health. Findings indicate that most older adult participants chose to compromise their health rather than acculturated foodways as seven participants chose to compromise their health by eating 0-50% of their meals (OA 2-7). Dietary intake remained consistent (adequate or inadequate) for those participants observed during multiple mealtimes (see Figure 8).

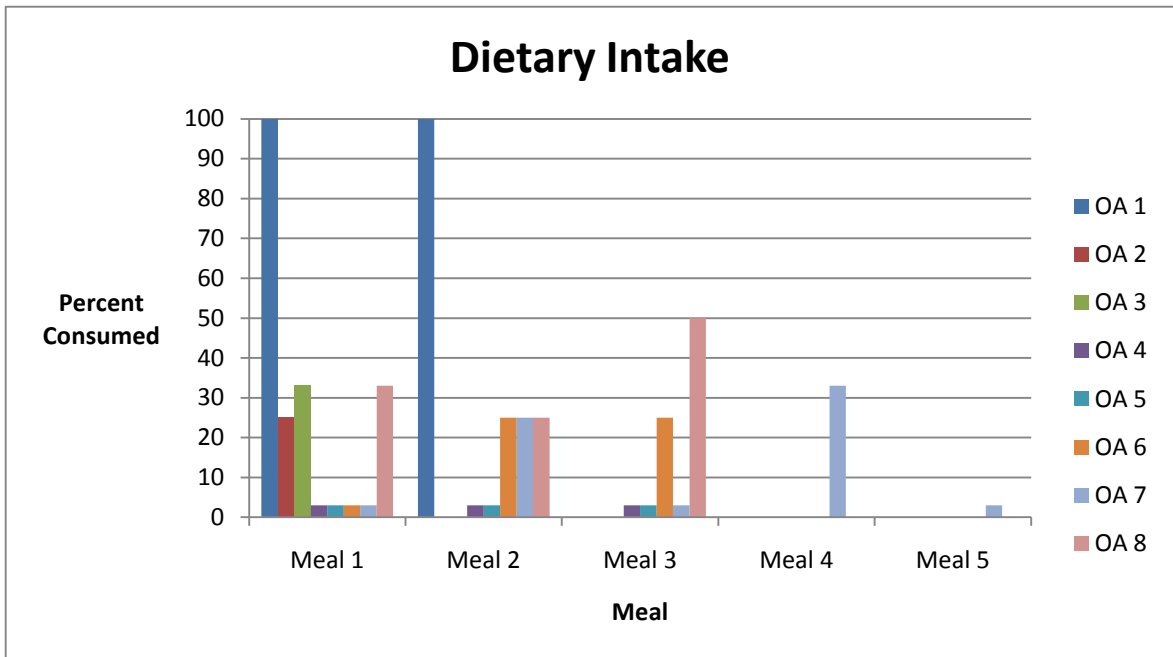


Figure 8: Dietary Intake of Older Adult Participants

**c. Summary of Stage 4**

Older adult action or dietary intake was determined after older adult negotiation with the self and was predicated upon the meaning of the hospital food and meal to the older adult participant. Symbolic interactionism suggests that people act toward objects based upon the meaning those objects have for them thus older adult participants could chose to act by eating or not eating based upon their perception of the meaning of the hospital food and meal. These actions required the older adult compromise their acculturated foodways should they eat or compromise their health should they not eat. Based upon quantification of dietary intake during inquiry, dietary intake was consistently adequate or inadequate across participants and time. One participant out of eight chose to compromise her acculturated foodways by eating 100% of her meals whereas seven participants out of eight chose to compromise their health by eating 50%

or less of their meals. These results indicate that most older adult participants chose to compromise their health rather than their foodways.

## **5. Summary of Chapter 5**

The Theory of Compromised Eating Behavior has four stages, which occur during each mealtime for the hospitalized older adult. During the first stage, older adult self-indication, the older adult judges whether the hospital food and meal meets with their food preferences and meal expectations based upon their acculturated foodways. Stage two, older adult-healthcare provider joint action, describes the interaction between the older adult and healthcare provider during mealtimes. Both directly and indirectly the healthcare provider has opportunity to both facilitate and provide surveillance during older adult mealtimes thereby assigning meaning to the hospital meal. The older adult also has opportunity to act based upon the meaning of the hospital food and meal. In stage 3, the older adult negotiation stage, the older adult reconciles with the self as to whether to compromise acculturated foodways or health. The final stage of the Theory of Compromised Eating Behavior is older adult action or dietary intake. Action by the older adult as dietary intake reflects the decision to compromise either acculturated foodways or health. Health is compromised should the older adult not eat or eat inadequately while acculturated foodways are compromised should the older adult eat foods or in ways that are non-traditional. As described, the Theory of Compromised Eating Behavior is supported by both inquiry into the perceptions and actions of the hospitalized older adult and healthcare providers as well as the symbolic interaction perspective. According to Blumer (1969):

The participants may fit their acts to one another in orderly joint actions on the basis of compromise, out of duress, because they may use one another in achieving their respective ends, because it is the sensible thing to do, or out of sheer necessity (p. 76).

These results suggest that hospitalized older adult dietary intake is often inadequate. Inadequate dietary intake by hospitalized older adults has the propensity to lead to undernutrition, associated complications, and negative health outcomes. Hospitalized older adult eating behavior was shown to be influenced by a process of compromise. How the Theory of Compromised Eating Behavior assimilates with extant literature, existing theory, and implications for nursing will be discussed in Chapter 6.

## **CHAPTER 6**

### **THEORETICAL RELEVANCE**

#### **A. Introduction**

The Theory of Compromised Eating Behavior describes the process of compromise engaged in by hospitalized older adults during mealtimes. Older adults, during mealtimes while hospitalized, compromise their nutritional health by not eating or alternatively compromise their acculturated foodways by eating foods or in ways that are unfamiliar or non-traditional for them. Therefore, whether the older adult eats or not; they must compromise their eating behavior. Additionally, healthcare providers compromise their beliefs relative to older adult eating should the older adult not eat as they also consider eating while hospitalized important. As indicated in Chapter 5, dietary intake by older adult participants was often inadequate, which suggests older adults compromise their health rather than compromise their acculturated foodways. The finding of inadequate dietary intake by hospitalized older adults is consistent with current literature.

How the Theory of Compromised Eating Behavior relates with reviewed literature, current relevant literature as well as extant theory substantiates the significance of this theory and provides context for further application into nursing research, education, and practice. As was indicated in Chapter 1, the problem of undernutrition in hospitalized older adults has been well studied yet the social process that accounted for this problem had not been described. The Theory of Compromised Eating Behavior describes the social process that influences the eating behavior of hospitalized older adults.

## **B. The Theory and the Review of the Literature**

The Theory of Compromised Eating Behavior is supported by the literature reviewed in Chapter 2 as indeed hospitalized older adult's dietary intake was often inadequate both as reported in the literature (Charles et al., 1999; Mudge et al., 2011; Sullivan et al., 1999) as well as in present inquiry. Also, the two major underlying variables, identified in the review of the literature in Chapter 2, such as appetite for food and access to food were also noted during development of the Theory of Compromised Eating Behavior.

In the review of the literature in Chapter 2, Mowe and Bohmer (2002) found that hospitalized older adults had decreased appetites as compared to their community dwelling counterparts. Yet what remained unclear was whether appetites were influenced by disease processes or illnesses such as COPD, heart failure (Gariballa & Forster, 2007), mood (Chen et al., 2007; German et al., 2008), cancer, or infection (Mudge et al., 2011), or whether other processes were involved. Based upon present inquiry, appetite for food was related to either lack of appetite for all food or alternatively an appetite for traditional foods consistent with the older adults' acculturated foodways. During present inquiry, one participant experienced lack of appetite or anorexia based upon a physiological condition however the majority of older adults did not have an appetite for available food due to lack of acceptable food choices or acceptable flavors of foods as they had distinct preferences and expectations of the food and meal. Again these choices were based upon acculturated foodways.

Access to food was the other underlying variable identified in the review of the literature in Chapter 2 as accessing food was noted to be problematic secondary to

prolonged NPO status (Sullivan et al., 1999) or the ability of the older adult to access the meal tray due to functional ability (Tsang, 2008; Xia & McCutcheon, 2006) .

Additionally, Chen et al. (2007) found that having lower functional status was predictive of poor nutritional status while Incalzi et al. (1998) found that being functionally dependent was predictive of inadequate dietary intake, thus suggesting that perhaps functional dependency inhibits access to food. Access to food was also noted during present inquiry as older adult participants had difficulty accessing foods based upon positioning during mealtimes, packaging of food items, inappropriate texture of food due to edentulism, et cetera. Failure to access food contributed to decreased dietary intake in that older adults did not ask for or receive assistance and consequently would not eat or would eat only those food items they could access independently. These findings related to food access are consistent with other findings in that food access problems have been positively correlated with age such that hospitalized older adults have been shown to have more difficulty accessing their food than their younger counterparts (Naithani, Thomas, Whelan, Morgan, & Gulliford, 2009).

Also, noteworthy was the discrepancy between the perceptions of the healthcare providers as to amount of assistance provided during mealtimes per healthcare provider interview versus what was observed as healthcare providers indicated that they provided more assistance than they actually did. This finding was also described by Xia and McCutcheon (2006). Lack of healthcare provider facilitation and surveillance of nutritional aspects of care were consistent with existing literature (Incalzi et al., 1998; Sullivan et al., 1999; Ross et al., 2011; Volkert et al., 2010; Xia & McCutcheon, 2006).



Yet consistent identification of these underlying variables still did not answer the fundamental question as to why inadequate dietary intake continues to occur despite access to a variety of nutritional resources. Present inquiry however identified a fundamental variable- that of the meaning of the hospital food and meal to the hospitalized older adult. The meaning of the hospital food and meal from the older adult perspective ultimately determined dietary intake. This meaning was derived via a process of compromise wherein the older adult and the healthcare provider assigned meaning (or lack thereof) to the hospital meal despite their belief that eating while hospitalized was important. Hence the Theory of Compromised Eating Behavior provides insight into why many hospitalized older adults do not eat adequately. Moreover, the hospital food and meal may actually be symbolic of sickness or illness thus influencing older adult eating behavior however further inquiry is needed to establish this. Hetherington (2002) indicates that food aversions can occur when particular foods are associated with sickness. During interview OA 8 described his quintessential breakfast as “two eggs over easy with a couple slices of bacon” (OA 8) yet during hospitalization his breakfast was often oatmeal. He stated he had never eaten oatmeal prior to hospitalization and declared “let me tell you something, when I die I’m going out happy and full” indicating that oatmeal would not be his breakfast food choice once discharged.

The review of the literature as described in Chapter 2 provided fodder for additional inquiry into the social process that influences the eating behavior of hospitalized older adults. Now that the Theory of Compromised Eating Behavior has been developed, literature that supports this Theory need be discussed. Literature from the disciplines of human nutrition and nursing were found to be relevant.

### **C. The Theory and Relevant Literature**

Based upon the Theory of Compromised Eating Behavior, the meaning of the hospital food or meal to the older adult determined eating behavior and dietary intake. Food and mealtimes have been known to be associated with both personal and social identity in that “As we eat we not only survive corporally, we express ourselves socially...the symbolic significance attached to foods can thus demonstrate the human ability to construct a world of ideas that imbues the material environment with meaning” (Murcott, 1988). Thus, food and mealtimes represent more than solids or liquids to ingest or a time and place to ingest them. Literature from human nutrition included a plethora of food choice literature as well as literature related to therapeutic diet, dietary restriction, and modified texture diet, which was found to be consistent the Theory of Compromised Eating Behavior. Nursing literature as it relates to the concept of compromise will also be discussed.

#### **1. The Theory and Food Choice Literature**

More recently, Furst, Connors, Bisogni, Sobal, and Falk (1996) studied food choice and found that multiple factors such as life course, a person’s ideals, psychological and physiological traits, resources, social framework, and food contexts, as well as values and sensory perceptions influenced the process of food choice. Furthermore, based upon a conceptual model developed from this research, additional inquiry was extrapolated to older adults (Falk et al., 1996). Findings from the older adult population suggest that ideals and social frameworks become more influential to the food choice process with age. Ideals represented strongly held beliefs and attitudes about what characterized proper food and meals often as developed in childhood as well as the social

context of a meal i.e. companionship so much so that food choice became secondary to social interaction.

Findings suggest that food-related behavior albeit food choice, eating behavior or dietary intake is influenced by inherent personal and social factors, which thereby provide meaning to the food and meal to the older adult. The Theory of Compromised Eating Behavior describes a process wherein the older adult assesses and judges the hospital food and meal based upon acculturated foodways or the inherent meaning of food and the meal to the older adult. This assessment occurs in Stage One of the Theory of Compromised Eating Behavior, Self-Indication, during which food preferences including food choices and characteristics of foods were identified.

Meal expectations based upon acculturated foodways or perhaps what constituted proper food and meal to the older adult was also identified during present inquiry. Meal expectations including the ability to choose foods, timing of meals, meal rituals, and availability of familiar foods all suggest people have routines related to eating. This finding is supported by Jastran, Bisogni, Sobal, Blake, and Devine (2009) in that people demonstrate repetitive eating behavior such as food and drink consumed, context for consumption as well as time, location, activity, social setting, mental processes, and physical condition for eating episodes (mealtimes).

Furthermore, people were found to use negotiation when values related to food choice were in conflict (Connor, Bisogni, Sobol, & Devine, 2001) and that food choice values were found to be highly individualized. Negotiation was also identified in Stage 3 of present inquiry, since older adult participants were required to choose between eating to maintain health or their acculturated foodways resulting in a negotiation with the self,

perhaps related to conflict associated with their values in food choice. Whether findings from present inquiry can be attributed to food choice alone is unknown however similarities between findings in food choice literature and present inquiry as it relates to the eating behavior of hospitalized older adults provides substance for the Theory of Compromised Eating Behavior.

The social context of the meal was less obvious in present inquiry as older adults seemed to outwardly accept the social aspects of mealtimes within the hospital environment i.e. lack of social facilitation and ambiance perhaps since characteristics of the hospital environment were symbolic of eating behavior within this setting. Yet, hospital food became solids or liquids to ingest and hospital mealtimes became a time and place to ingest them rather than an expression of personal and social identity. Thus the meaning of the meal from the system perspective (hospital) versus from the older adult perspective (patient) is incongruous. This way of thinking is shared by Ferrie (2010), in which she describes the “medicalized treatment of food” during hospitalization wherein food is served for its nutritional value and is devoid of all hedonic value resulting in compromise of food flavor or satisfaction (p. 439). This medicalized treatment of food was evidenced in present inquiry wherein OA 8 was asked if he had consulted a dietitian about his dissatisfaction with the food served to him during hospitalization and his denial stating “they only tell me what I can’t eat, not what I can” (OA 8 PO 2).

## **2. The Theory and Therapeutic Diet Literature**

Upon admission to the hospital, older adults are prescribed therapeutic diets based on admitting diagnosis and preexisting comorbidity. As was evidenced from the food

choice literature, older adult perceptions of what constitutes proper food or meals as well as the social context of the meal are important to the older adult and the hospital setting presents an environment where traditional ideals of food and meals and social context of the mealtime are challenged. The prescription of therapeutic diets for older adults' remains controversial since dietary restriction of some nutrients can help prevent complications of chronic disease, which is especially poignant during hospitalization for an acute exacerbation of disease yet these same dietary restrictions can contribute to inadequate dietary intake (Darmon, Kaiser, Bauer, Seiber, & Pichard, 2010). Therefore risk versus benefit of dietary therapy need be determined.

During present inquiry, 7/8 older adult participants were prescribed therapeutic diets (see Table 1). Food preferences and meal expectations identified during present inquiry suggest that therapeutic diets and associated dietary restrictions contributed to inadequate dietary intake as these diets were often not consistent with their acculturated foodways. As OA 7, who was prescribed a "diabetic and heart" diet, stated when asked if her therapeutic diet affected whether she ate or not responded, "Ah ya, it kills food. Yes, food is not nearly as good on those diets" (OA 7 I). The affect of therapeutic diet on dietary intake was also described by HCP 1 as she indicated she would "liberalize" a diet or rather discontinue the therapeutic diet if the older adult was eating inadequately although only one occurrence of liberalizing a diet was noted during this inquiry despite widespread inadequate dietary intake.

Modified diet texture has also been shown to negatively affect dietary intake (Wright, Cotter, Hickson, & Frost, 2005). During present inquiry, two older adults were noted to be edentulous yet had normally textured diets prescribed thereby inhibiting their

dietary intake. Yet, a healthcare provider indicated that older adults would often not bring their dentures to the hospital for fear of losing them. Although not a practice observed during inquiry, a healthcare provider indicated that they would order mashed potatoes for older adults since that was the only food that older adults would eat on a modified texture diet. This again suggests that modified diet texture may be inconsistent with acculturated foodways (whether due to the availability of dentures or due to other pathology) thereby influencing dietary intake, requiring the older adult compromise their health.

Literature associated with food choice, therapeutic diets, and modified texture diets as well as findings based upon the development of the Theory of Compromised Eating Behavior suggest that hospital food and meals are different from traditional food and meals for the older adult. These differences influence the eating behavior and consequently the dietary intake of hospitalized older adults. The hospital food and meal imbues meaning; a meaning that is perhaps associated with the hospital, illness, dietary restrictions, et cetera and less with the essence of who the older adult is and was personally and socially.

### **3. The Theory and Compromise**

The concept of compromise pervades the literature throughout various disciplines. While each discipline considers this concept based upon ontology, the nature of the concept suggests a departure from *what is* from *what ought to be* (Cohen-Almagor, 2006) or *what is desired* from *what is practical* (Gallimore & Lopez, 2002). Furthermore, by definition, compromise can involve a mutually agreeable outcome.

During present inquiry, the compromise experienced by older adults occurred during mealtimes whereby older adults chose between hospital foodways and

acculturated foodways resulting in the older adult eating adequately or inadequately. The act of compromise existed between what the older adult thought *ought to be* (acculturated foodways) versus what *was* (hospital foodways). Additionally, healthcare providers experienced the act of compromise believing older adults should eat adequately while hospitalized (*what ought to be*) versus not eating adequately while hospitalized (*what was*). Most often this resulted in a mutually agreeable unspoken outcome between the older adult and the healthcare provider; inadequate dietary intake by the older adult and lack of facilitation and surveillance of nutritional aspects of care by the healthcare provider.

Nursing literature related to the concept of compromise is limited however a semblance as to *what ought to be* versus *what is* also exists within the discipline. The issue of compliance with medical regime versus patient autonomy often requires compromise between patient and healthcare provider. For example, Philip and Komesaroff (2006) found that palliative care providers including nurses experienced compromise when it came to providing care to patients who wanted to die at home where quality of care might be less than ideal versus in a medical facility where quality care would be provided. Draper (1996) found that nurses used tactics such as compromise to limit patient choices thereby maintaining some patient individuality yet continuing to comply with a medical regime. While the term patient compliance is currently frowned upon in nursing, the issue of patient autonomy and advocacy versus beneficence continues to exist and can present as an ethical dilemma or compromise for the nurse.

Scott (1997) suggests that when principles are in conflict rather than compromise principles, principles are prioritized. Present inquiry indicates that eating while

hospitalized is important to health and that acculturated foodways are important to eating while hospitalized. Perhaps following Scott's logic, during present inquiry acculturated foodways were prioritized over health. Yet, requiring the hospitalized older adult prioritize either of these principles resulted in compromised eating behavior as both were found to be important to the hospitalized older adult. Healthcare literature relative to the concept of compromise from the patient perspective is warranted.

The prescription of a therapeutic diet within the hospital setting to manage symptoms of disease yet provide nutrition is consistent with beneficence however the Theory of Compromised Eating Behavior describes the importance of acculturated foodways in the eating behavior and adequate dietary intake of hospitalized older adults, also important to beneficence.

#### **E. Summary of the Theory and the Literature**

Reviewed literature consistent with the Theory of Compromised Eating Behavior included literature related to the prevalence of inadequate dietary intake by hospitalized older adults and other similar findings such as the influence of appetite for food, access to food, food choice, eating routines, therapeutic diet, modified texture diets on eating behavior. These findings consistent with present inquiry suggest that eating is a personal and social event that has meaning to the older adult. Present inquiry also suggests that the established meaning of the food and meal is challenged during hospitalization and this accounts for changes in eating behavior and dietary intake. The meaning of the hospital food and meal as a symbol of illness and hospitalization requires further inquiry.

The literature also provides substance to the concept of compromise as compliance with medical regime versus patient autonomy has been identified as a basis



of compromise for both the older adult patient as well as the healthcare provider. Hospital foodways consistent with a medical regime were not consistent with the older adults' acculturated foodways, resulting in an alteration in eating behavior and inadequate dietary intake. Literature that is consistent with the concept of compromise based upon this perspective is lacking. Perhaps compromise from the patient perspective has been considered non-compliance from the healthcare provider perspective. Nonetheless further inquiry from the patient perspective is warranted.

### **F. The Theory and Extant Theory**

The Theory of Compromised Eating Behavior posits that hospitalized older adults must compromise either their acculturated foodways in favor of hospital foodways or rather compromise their health. Present inquiry suggests that the majority of older adults chose to compromise their health rather than their acculturated foodways. Maintenance of acculturated foodways by the hospitalized older adult may be explained by existing psychosocial theory. Additionally, physiological changes with aging consistent with biological theory also provide support for the Theory of Compromised Eating. Lastly, the Theory of Managing Personal Integrity provides additional support of the Theory of Compromised Eating Behavior such that the older adult demonstrates autonomy by their eating behavior thereby preserving personal integrity to survive hospitalization. Each theory and its applicability to the Theory of Compromised Eating Behavior will be discussed in detail in the following sections.

#### **1. Continuity Theory**

Continuity theory is a psychosocial theory of aging as described by Atchley in 1989. Continuity theory posits that as people age, they utilize adaptive strategies to cope

with changes associated with aging. In doing so, they preserve internal and external structures from their past to provide continuity in their psychological and social being wherein elements of themselves and their experiences are preserved. Some basic concepts of continuity theory include internal and external continuity and adaptive capacity. Internal continuity includes the self, personal goals and belief systems whereas external continuity includes lifestyle, social relationships, and activity profile (Atchley, 1999, p. 153). Adaptive capacity is defined as “the extent to which an individual has the social resources and orientation needed to adapt to significant changes in physical and social circumstances” (Atchley, 1999, p. 78). Thus, continuity is an adaptive strategy used by older adults to cope with change and adaptive capacity is the degree to which the older adult can deal with discontinuity or significant departure from past patterns of behavior.

Continuity Theory is supportive of the Theory of Compromised Eating Behavior in that as older adult participants coped with changes in their health and being hospitalized, they call upon past patterns of behavior, such as their eating behaviors. Thus maintaining acculturated foodways was an adaptive strategy used by most participants to cope with changes in their personal and social selves during illness while hospitalized. Additionally, the identification of affirmation versus reticence in Stage Three of the Theory of Compromised Eating Behavior signifies the adaptive capacity of older adult participants as according to Atchley (1999), “adaptive capacity can be assessed by the degree to which morale is maintained in the face of discontinuity” (p. 154-155). This was demonstrated in the present inquiry wherein OA 1 was able to maintain morale as indicated by her frequent affirmations and adequate dietary intake despite discontinuity

while other older adult participants indicated reticence and inadequate dietary intake, thus demonstrating their capacity for adaptation.

## **2. Biological Theory**

The Theory of Compromised Eating Behavior may also be supported by biological theory of aging as aging results in cellular, organic, and systemic changes, which may influence eating behavior relative to the flavor of foods. For example, the Free Radical Theory of Aging (Harmon, 1956), suggests that cellular metabolism produces free radicals, which results in changes in cellular and tissue function and ultimately causes aging and death. Studies are conflicting as to whether changes in number and function of taste detecting cells or taste buds, necessary for the detection of food flavor, decline with aging (Bradley, 1988). However, studies do suggest that detection and recognition of tastes change with age such that increased concentrations of certain flavors i.e. salty and sweet are needed for detection (taste thresholds) in older adults as compared to younger adults (Schiffman & Warwick, 1993). These findings are further enhanced when the older adult has chronic disease or takes multiple medications. Therefore, as the older adult ages, acquires more chronic disease, and consequently takes more medications, therapeutic diets prescribed to manage these diseases may become more restrictive thereby limiting salty or sweet flavors thus affecting the older adults' perception of food flavor.

Throughout present inquiry, many older adult participants indicated that hospital food was flavorless. Additionally, most older adult participants had chronic disease and were taking multiple medications (see Table 1). Furthermore, the majority of older adult participants were prescribed therapeutic diets, which restricted either salty (cardiac) or

sweet flavors (calorie restricted). While some older adult participants indicated that they followed a therapeutic diet at home (OA 5, OA 7, & OA 8) the stringency to which they adhered to the therapeutic diet at home versus within the hospital setting is unknown. Thus, based upon the Theory of Compromised Eating Behavior, if food was not traditional in taste or flavor as consistent with the older adult participants acculturated foodways, the meaning of the food and meal was compromised thereby influencing dietary intake.

### **3. The Theory of Managing Personal Integrity**

The Theory of Managing Personal Integrity describes the older adults' experience of surviving hospitalization by managing personal integrity (Jacelon, 2004). Jacelon (2004) found that being in the hospital threatened the older adult's personal integrity. Personal integrity was shown to have three properties: health, dignity, and autonomy. Older adult's used introspective, interactive, and active strategies to manage their personal integrity during hospitalization. Introspective strategies included individual perceptions and sense of self, interactive strategies included interaction with others and meaning based upon the interaction, and active strategies included actions by the older adult based upon meaning similar to Stages 1, 2, and 4 or Self-Indication, Joint Action, and Action respectively as described in The Theory of Compromised Eating Behavior.

Additionally, the concept of autonomy from the Theory of Managing Personal Integrity is relative to present theory. Based upon the Theory of Managing Personal Integrity (Jacelon, 2004), autonomy is defined as the older adult's freedom and ability to act on their own behalf. Autonomy has two attributes; independence or the ability to act in a situation and control or the older adult's perceived power in a situation. Jacelon

found older adult independence and control were jeopardized by hospitalization due to changes in health status as well as characteristics of the hospital environment. Based upon these findings and present inquiry, it is conceivable that older adults used eating behavior as a strategy to increase their autonomy whereby the older adult participant decided to eat, not eat, or rather what they would eat.

### **G. Summary of the Theory and Extant Theory**

The Theory of Compromised Eating Behavior describes the social process that influences the eating behavior of hospitalized older adults. Existing theory such as Continuity Theory, biological theory such as the Free Radical Theory of Aging, and the Theory of Managing Personal Integrity all provide support for the Theory of Compromised Eating Behavior yet do so within different concepts. Again using the QHOM as a conceptual framework, Continuity Theory and the Free Radical Theory of Aging describe individual patient (client) characteristics such as personal and social identity, social experiences, and biophysical changes that occur with aging, disease, and medication use and how these characteristics influence older adult eating behavior. Continuity Theory and the Theory of Managing Personal Integrity help explain how patient characteristics assimilate within the hospital setting. The Theory of Compromised Eating Behavior describes the process of compromise engaged in by older adults as they reconcile eating behavior based upon acculturated foodways, representative of their personal and social self versus hospital foodways, perhaps representative of disease, illness, and loss of autonomy.

## **H. The Theory and Nursing**

Grounded theory methodology, based partially upon pragmatism, dictates that theory be practical and useful (Glaser & Strauss, 1967). Prior research has indicated that older adult dietary intake while hospitalized is often inadequate and that certain variables i.e. disease or function influence appetite and consequently dietary intake. However, the Theory of Compromised Eating Behavior offers an alternative explanation for inadequate dietary intake as appetite for food was more often influenced by food preferences and meal expectations rather than disease however even more fundamentally eating behavior was influenced by the meaning of the hospital meal to the older adult. Thus, the Theory of Compromised Eating Behavior describes a process that provides a possible explanation as to why hospitalized older adults have inadequate dietary intake and how older adults become undernourished during hospitalization despite the availability of nutritional resources. Additionally, the Theory of Compromised Eating Behavior provides a possible explanation as to why healthcare providers do not facilitate nor provide surveillance of older adult eating behavior. Findings from present inquiry may be used to inform nursing research, education, and practice.

### **1. Nursing Research**

The Theory of Compromised Eating Behavior describes a process that occurred during mealtimes involving older adults within a particular setting. The ability to transfer these results to other settings is limited since contexts in other settings involving other participants may result in different findings. Therefore, the Theory of Compromised Eating Behavior must be tested in other settings and with other populations of older

adults and their healthcare providers to identify similar findings. Similar findings would provide validity for the Theory of Compromised Eating Behavior.

Proposal for the inclusion of healthcare provider participants, during present inquiry, suggested that healthcare provider perspective would help identify the process that influenced the eating behavior of hospitalized older adults. What became apparent during inquiry and throughout analysis was that the perceptions of healthcare providers and more specifically nurses as to what influenced the eating behavior of hospitalized older adults differed from the perspectives of the older adult participant themselves. While unanticipated, this finding remained informative and indicates the need for additional inquiry from the nurse perspective.

Variations between older adult populations and younger populations identified in the food choice literature suggest that the meaning of food and meals evolves with age. Although beyond the scope of present inquiry, healthcare provider participants also identified variations in eating behavior between younger adults and older adults. Additional inquiry that considers the differences in eating behaviors across the lifespan may provide increased understanding of changes in eating behavior with age.

The concept of compromise is used in many ways by many disciplines. While its use as a concept in nursing literature is limited, present inquiry identified a process of compromise that occurred when the hospital food and meal did not meet the older adults' expectations of food and meal. The concept of compromise requires further analysis. Findings suggest that perhaps older adults must compromise when the reality of the medical model or regime is incongruous with their perception of reality. In this inquiry, compromise threatened the older adults' health presenting a paradox. Additionally, this

incongruency may be responsible for what has been traditionally labeled patient non-compliance by healthcare providers. Regardless, identification of the concept of compromise that results in negative health outcomes indicates that further inquiry is warranted.

Also, inquiry based upon concepts identified such as the hospital food and meal as symbols of illness, disease, and hospitalization, intervention aimed at meeting older adult's meal expectations and food preferences, barriers to healthcare provider facilitation and surveillance, and testing of other interventions that will add meaning to the hospital meal both at the individual as well as system level of care present opportunities, which would enhance our understanding of this phenomenon.

Outcomes research was developed realizing that quality measures of structure and process contribute to healthcare outcomes (Burns & Grove, 2005). In addition, the QHOM was developed to guide outcomes research sensitive to nursing intervention. The Theory of Compromised Eating Behavior emphasizes the significance of the relationship between the system and the patient and that regardless of nutritional resources available, if the individual needs of each patient are not considered outcomes remain negative. While some system characteristics such room design are less subject to nursing intervention, the nurse as the coordinator of patient care has both the responsibility and ability to affect in some capacity the meaning of the hospital food and meal for the older adult via nursing facilitation and surveillance of eating behavior. Delegation of eating assistance to other healthcare providers i.e. PCT or sitters does not lessen the nurses' responsibility to each patient. Nursing research that reflects nursing intervention that may



further enhance the meaning of the hospital food and meal and barriers to such is warranted as is nursing education and changes in nursing practice.

## **2. Nursing Education**

Theories described throughout this inquiry indicate that older adults are a unique population with unique attributes. As such nurses need be educated about these unique attributes so that the quality of care reflects this knowledge. The Theory of Compromised Eating Behavior suggests that the meaning of food and meals to the older adult is challenged during hospitalization. Therefore education of staff nurses should include the importance of continuity and the personal and social significance of food and meals to older adults, changes in physiology that occur with aging and how these changes affect eating behavior as well as the importance of maintaining older adult autonomy during hospitalization and the effect of autonomy on eating behavior.

Core competencies in the care of older adults including nutritional aspects of nursing care have been developed (Mezey, Quinlan, Fairchild, & Vezina, 2006) and can be utilized to assure competence for hospital nurses in caring for older adults. The Theory of Compromised Eating Behavior also emphasizes the need for basic nursing education to include nursing care relative to the general healthcare needs of the older adult population. As the older adult population grows, this need also grows. Presently, about one third of baccalaureate nursing programs have a course dedicated to the study of older adults (Berman et al., 2005).

Present inquiry provides nurses with verbatim description of the perspectives of older adults about hospital food and meals, which based upon present inquiry was not common knowledge for nurses. Information as well as theory associated with this inquiry

can be utilized to inform nurses about what is important to the older adult so that intervention that enhances meaning of the food and meal can be implemented during hospitalization.

### **3. Nursing Practice**

Limited healthcare provider facilitation of eating behavior was identified in present inquiry. During Stage 2 or Joint Action, a cycle of older adult-healthcare provider interaction indicated that the hospital meal had little meaning for both the older adult and the healthcare provider. Nursing intervention during this Stage would convey the importance and thereby meaning of eating during hospitalization. Interventions such as anticipating older adult needs in relation to eating i.e. assisting with positioning to eat, assistance with accessing food items, offering food alternatives, providing education about the importance of eating to maintain health would all suggest to the patient that eating was indeed important.

Limited healthcare provider surveillance of eating behavior was also noted during present inquiry. Nursing intervention which includes assuring patients receive meals and that meals are appropriate for patient condition, initiating consultation when dietary intake is inadequate, or encouragement when intake is inadequate would indicate to the patient that eating is important and is meaningful. Formal assessment of dietary intake as to what constitutes adequate versus inadequate intake would provide for additional intervention and consultation for older adults when intake is inadequate beginning with the first meal during hospitalization.

Upon admission older adults were informally assessed by the nurse as to functional level whereby the nurse would “eyeball” the patient to determine if they would

indeed be able to order a meal independently or eat independently. Assessment of older adult functional status using a formal assessment tool would provide the nurse with a more valid method to assess function thereby anticipating eating related assistance needed. Indeed a systems issue related to the ordering of meals had been identified as HCP 1 indicated an experimental program was being implemented wherein dietary department personnel would assist patients with meal ordering, providing the patient more food choice options. However this service was limited to special care units i.e. oncology and not necessarily to medical units that provide care to older adults.

Patient-centered care is not a new concept in nursing however a plan of care which incorporates older adults' acculturated foodways is indicated based upon present inquiry and the Theory of Compromised Eating Behavior. Patient centered care is designed to alleviate patient vulnerabilities related to physiological state and threats to identity within the acute care setting (Hobbs, 2009). Thus, a plan of care that incorporates acculturated foodways is indicated, as maintenance of nutrition and identity is essential to the well-being of the older adult. This thinking is echoed by Onega and Tripp-Reimer (1997) wherein they indicated that continuity theory be utilized in the development of a plan of care since integration of the life course perspective provides individualized, holistic care seemingly essential for quality care of older adults.

Thus, micro-level system intervention identified must be implemented to prevent negative health outcomes associated with undernutrition in the hospitalized older adult. Intervention at the nurse-patient level of care will be further described by using OA 4 as an exemplar. OA 4 was a 74 year old male admitted to the hospital for mental status changes associated with liver failure (see Table 1). He had been prescribed a protein-

restricted, low sodium diet. His dietary intake while observed was inadequate (0%). During interview and subsequent observations it was apparent that OA 4 was unable to access his food for a variety of reasons. His physiological condition i.e. significant bilateral hand tremors and rotund abdomen limited his ability to access his food or his meal tray (see pages 99-100). He also had no upper teeth and only two lower teeth on opposing sides of his mouth as his wife indicated during observation that his dentures were at home. Yet he had been prescribed a regular texture diet. Had a valid functional assessment been conducted by the nurse, the assessment would have revealed that OA 4 was unable to eat independently as he was unable to position himself upright to accommodate eating, could not bring the food from plate to mouth independently due to his hand tremor and location of meal tray due to his imposing abdomen, nor chew the regularly textured food due to his edentate state.

Additionally, use of a valid assessment dietary intake tool would have revealed that he indeed had no dietary intake (OA PO1-3). A valid assessment of dietary intake would also have identified his missing meal tray (see page 103). Hospital policy and procedure that incorporates standards for valid assessment of older adult functional status and dietary intake, as well as protocol for notification and treatment of inadequate dietary intake by older adults within this setting is warranted.

OA 4 indicated during interview and subsequent observations that hospital food was “blagh”, which contributed to his lack of appetite for hospital food. He had a non-select diet ordering option, indicating meals would be delivered at standardized times and with a standard menu, limiting his food choice options. While it was apparent that OA 4 would indeed be functionally unable to manipulate the telephone and the menu to utilize

the room service option; the room service option would have afforded him more food choices. OA 4 had definitive likes and dislikes when it came to food choices thus offering him additional food choices may have stimulated his appetite to eat. Thus a program that assists the older adult with this diet ordering option would be beneficial. Also, partnering with OA 4 to develop an acceptable menu based upon his acculturated foodways would have indicated to OA 4 that the hospital food/meal is indeed meaningful. Development of a patient-centered care plan would have identified and allowed for the provision of acceptable food choices as well as perhaps enlisted family members to be present during mealtimes to provide further facilitation. Ultimately, if OA 4, despite nutritional intervention aforementioned continued to have inadequate dietary intake, hospital policy should indicate that the nurse consult with the dietitian to liberalize the therapeutic diet as the risk versus the benefit of the prescribed therapeutic diet versus undernutrition need be considered.

The timing of medication administration should be reconfigured so as to not coincide with meals as medications may be anorexic or rather the administration of many medications may promote satiety thereby affecting appetite to eat food. While observing, I noted that the nurse administered medications to OA 4 during his meal yet review of his medications did not indicate that any of his prescribed medications had indications to be administered with meals. The nurse administered several pills and 30 milliliters of lactulose while the meal tray sat before OA 4 virtually untouched yet the parting words of the nurse as she left the room were “Try the soup. They say it’s pretty good”. OA 4 did not “try the soup” or any aspect of the meal thereafter.

Considering the system perspective, as according to symbolic interactionism, the system is but participants acting based upon their interpretation of the situation at their position within the organization, system level intervention is warranted. Lack of facilitation and surveillance by healthcare providers as well as current system level policy, procedure, and protocol or lack thereof, contribute to the overall meaning of the hospital food/ meal to the older adult. This occurs at a time in the older adults' life when disease requiring hospitalization becomes more prevalent, prescribed diets become more restrictive, yet meanwhile traditional food and mealtimes become more meaningful. Thus, nutritional intervention as described at the nurse-patient level of care has the potential for improving outcomes, making eating behavior nurse-sensitive.

Macro-level system interventions, although perhaps more difficult to implement, must also be considered when planning quality care for older adults so as to prevent negative health outcomes associated with hospitalization. Environmental characteristics particular to the hospital setting contributed to the meaning of the hospital food and meal. Hospital room design which allows for both occupants to eat out of bed in a chair while seated upright thereby allowing easier access to the meal tray as well as the addition of improved dining ambience may indicate to the older adult that mealtimes while hospitalized remain important. Acute Care of the Elderly Units (ACE) units were designed to meet the unique needs of older adults during hospitalization both in design as well as in resources as these units are intended to meet the needs of older adults, especially in the maintenance of function (Landefeld, Palmer, Kresevic, Fortinsky, & Kowal, 1995). Nutritional status impacts function (Covinsky et al., 1999). The Theory of Compromised Eating Behavior indicates that food and meals need to be consistent with

the older adults' acculturated foodways otherwise nutritional status is affected. Thus unit structure and processes associated with eating behavior need to be considered. Present inquiry, occurred on an acute medical unit that was not an ACE unit. Development of an ACE unit within this setting or with pertinent eating-related aspects of an ACE unit such as designated dining areas, accommodation of family during mealtimes, improved ambience in the dining area, provision of foods consistent with traditional foodways, and nurses specialized in geriatric care, et cetera would be beneficial.

### **I. Summary of Chapter 6**

The literature as well as extant theory provides support for the Theory of Compromised Eating Behavior. Variables from current literature such as appetite for food and access to food were also identified during present inquiry. The relationship between morbidity and nutrition identified in the literature is speculative based upon present inquiry as an indirect relationship was found between disease, prescribed therapeutic diet, flavor of food, and eating behavior. Limitations of healthcare provider surveillance of nutritional care were identified in both the current literature as well as present inquiry. The Theory of Compromised Eating Behavior helps to explain why appetite for and access to hospital food as well as healthcare provider surveillance is limited in that the meaning of hospital food and meal differs from the meaning of traditional food and meals and may actually be symbolic of illness. Older adults and healthcare providers act based upon this meaning of the hospital food and meal to them.

Relevant literature from human nutrition including food choice, eating routines, and therapeutic or modified textured diets suggest that eating behavior is individualized based upon a person's acculturated foodways and that food choice and perhaps

acculturated foodways become more meaningful with age. Food choice literature also suggests eating is a very personal and social event whereas eating during hospitalization is not. Healthcare provider compromise as it relates to patient compliance with a medical regime versus patient autonomy has been documented however patient compromise with medical regime from the patient perspective has been relatively unsubstantiated. The Theory of Compromised Eating Behavior considers the older adult patients' perspective and describes the process of compromise that the older adult patient experiences when traditional foodways are challenged.

Extant theory that is supportive of the Theory of Compromised Eating Behavior includes Continuity Theory, the Free Radical Theory of Aging, and the Theory of Managing Personal Integrity. Continuity Theory explains why acculturated foodways are so meaningful to older adults and why some older adults are able to adapt to changes in foodways more readily than others. The Free Radical Theory explains why flavor of food was such a predominant finding and how prescription of therapeutic diet based upon disease might influence eating behavior and dietary intake. The Theory of Managing Personal Integrity explains why the older adult uses eating behavior as a means of maintaining autonomy during hospitalization wherein personal integrity is under threat.

The Theory of Compromised Eating Behavior provides fodder for nursing research, education, and practice. Present findings elicit additional questions to be answered by nursing research such as does replication of this inquiry identify similar findings, what does the concept of compromise mean, or does the hospital food and meal symbolize disease, sickness, and hospitalization. The Theory of Compromised Eating Behavior also has implications for nursing education. Existing theory indicates that older



adults are a unique population with unique needs and as such nurses need specialized education in the care of older adults. Nutritional aspects of nursing care as identified by the Theory of Compromised Eating Behavior suggests that geriatric nursing education include the importance of nutrition and those factors influencing nutrition specific to the older adult population. Implications for nursing practice based upon findings from present inquiry suggest that quality improvement projects include formal, reliable assessment of functional status and dietary intake, development of a plan of care that considers the unique foodways of each older adult, and consideration of the affect of the hospital environment on the eating behavior of hospitalized older adults.

The Theory of Compromised Eating Behavior describes the social process that influences the eating behavior of hospitalized older adults. This compromise is problematic since the older adult must choose to either compromise their health already under threat due to disease or illness or rather compromise their acculturated foodways predicated by their personal and social self, which is also under threat due to illness and hospitalization. Patient characteristics such as the nature of disease or acculturated foodways are unlikely to change over the course of hospitalization. Therefore intervention aimed at enhancing the meaning of the hospital food and meal for the older adult is warranted. Thus systemic changes need to occur otherwise negative health outcomes associated with undernutrition will continue as according to Mitchell et al. (1998):

The connection between system and client [characteristics] indicates the hypothesis that no single intervention acts directly through either system or client alone. The effect of an intervention is mediated by client and system characteristics, but [the intervention] is thought to have no independent direct effect (p.44).

## APPENDIX A

### EXAMPLES OF INTERVIEW SCHEDULES

#### OLDER ADULT PARTICIPANT QUESTIONS (12/13/09)

1. Tell me about eating here in the hospital.
2. Tell me about feeling hungry before meals...after meals.
3. Tell me about how you manage eating in the hospital.
4. Tell me about eating before you came to the hospital.
5. Tell me how eating here is different than before you came here...and how it is similar.
6. Tell me what helps you to eat...what hinders you?
7. How important is it to eat while you are in the hospital
8. Is there anything else you would like to tell about eating in the hospital?

#### HEALTHCARE PROVIDER PARTICIPANT QUESTIONS

1. How are you involved in patient eating?
2. Tell me about patient eating here in the hospital.
3. Do patient seem hungry before meals...after meals?
4. What influences patient eating...positive influences...negative influences?
5. What do you do to help patients eat...does this help?
6. How important is it for patients to eat while in the hospital?
7. How has room service affected patient eating?
8. Is there anything else you would like to tell me about patient eating in the hospital?

### OLDER ADULT PARTICIPANT QUESTIONS (01/12/10)

1. Tell me about eating here in the hospital.
2. Tell me about feeling hungry before meals...after meals.
3. Tell me about how you manage eating in the hospital.
4. Are you on a special diet?
5. Do you have room service or non-select dining?
6. Tell me about your eating before you came to the hospital.
7. Do you live alone or with others?
8. Tell me how is eating in the hospital similar to before you came here...and how it is different.
9. Do you prepare your food at home?
10. Tell me what helps you to eat here in the hospital...what hinders you?
11. How important is it to eat while you are in the hospital?
12. What are your favorite foods to eat?
13. Describe what you do at mealtimes here in the hospital.
14. Is there anything else you would like to tell me about eating in the hospital?

### HEALTH CARE PROVIDER PARTICIPANT QUESTIONS

1. How are you involved in patient eating?
2. Tell me about patient eating here in the hospital.
3. Do patients seem hungry before meals...after meals?
4. What influences patient eating...positive influences...negative influences?
5. What do you do to help patients eat...does this help?
6. How important is it for patients to eat while hospitalized...with decreased length of stay?
7. How has room service affected patient eating?
8. Who determines whether a patient has room service or non-select?
9. How is dietary intake communicated among healthcare providers?
10. What do you do if a patient does not eat a meal...meals?
11. Is there anything else you would like to tell me about patients eating in the hospital?

APPENDIX B

INFORMED CONSENT- OLDER ADULT

Baystate Medical Center  
 INSTITUTIONAL REVIEW BOARD  
 Date Approved 8/27/09 Date Expires 8/27/10 (AD)  
 Renewal \_\_\_\_\_ Date \_\_\_\_\_  
 Approved \_\_\_\_\_ Expires \_\_\_\_\_  
 Renewal \_\_\_\_\_ Date \_\_\_\_\_  
 Approved \_\_\_\_\_ Expires \_\_\_\_\_  
 Renewal \_\_\_\_\_ Date \_\_\_\_\_  
 Approved \_\_\_\_\_ Expires \_\_\_\_\_

RESEARCH CONSENT FORM

Title of Project: Social Processes and Eating Behavior of Hospitalized Older Adults

Study

Sponsor: Baystate Medical Center

IRB: 09-153

Principal

Investigator: Christine Gryglik APRN MS BC PCCN

Co -Investigator: Ellen Furman PhDc RN

Study Participant:

**WHY ARE YOU BEING ASKED TO TAKE PART IN THIS RESEARCH?**

I am talking to you about this research study because you are a hospitalized older adult, 65 years of age or older. You are being asked to participate in this research study because your eating-related behavior or your thoughts, actions, or intent to eat are of interest to the investigator.

Whether or not you take part in this study is up to you. If you choose not to participate in the study it will not affect the quality of medical care you will receive.

This consent form gives you important information about the study so that you can make an informed decision about participation. Please read it carefully and ask questions before you make a decision. You may want to talk about this research study with your family, your friends, and your other health care providers. Please take your time. You should not sign this form until all of your questions are answered.

**WHY IS THIS RESEARCH STUDY BEING DONE?**

The purpose of this research study is to find out what influences your eating while here in the hospital.

**HOW IS THIS RESEARCH STUDY BEING FUNDED?**

This research study is not being funded.

**HOW MANY PEOPLE WILL TAKE PART IN THIS STUDY?**

This research is being conducted only at Baystate Medical Center. We expect to enroll 12 patients who are 65 years of age or older and 25 healthcare providers. Healthcare providers may include nurses, physicians, aides, dieticians, and therapists.

### **HOW LONG WILL YOU BE IN THIS STUDY**

Your participation in this research study is expected to last for the length of your hospital stay and as long as you eat food by mouth. Dependent on your length of hospital stay, you may be contacted by telephone after your discharge so that the investigator can make sure that her interpretation of what you said is accurate.

Your participation in this study may be stopped if the study sponsor thinks (1) it is in your best interest to stop, (2) if you no longer eat food by mouth or (3) or if the study is stopped for any reason.

The study sponsor will tell you about new information that might affect your health or could change your decision to be in this study. If this occurs, you may be asked to sign a new consent form.

### **PARTICIPATION IN THIS STUDY IS VOLUNTARY**

**Taking part in this study is voluntary. You may choose not to take part or to leave the study at any time. Your decision will not affect your relationship with your doctor or with Baystate Medical Center and will not result in any penalty or loss of benefits to which you are otherwise entitled.**

**You can stop taking part in this study at any time.** Tell the study investigator if you are thinking about stopping or have decided to stop. If you decide to withdraw from this study, you will be asked if the information (data) collected to date about you may be used. If you agree, the information will be used; if you do not agree the information about you will be destroyed.

### **WHAT WILL YOU DO IN THIS STUDY?**

- You will be approached by the investigator to see if you would like to participate in the study
- After reading this document and agreeing to participate you will be asked to sign this document
- Once you have agreed to participate and have signed this document you may be observed during and around mealtimes and may be asked questions by the investigator based upon the investigator's observations during and around your mealtimes. You may also be asked questions (interviewed) about what your eating was like before your hospitalization as well as during your hospitalization. All interviews will be audiotaped. If you agree to participate and to be interviewed, your interview will be audiotaped for accuracy. Questions might include:
  1. Tell me about eating here in the hospital.
  2. Tell me about feeling hungry before meals...after meals.
  3. Tell me about how you manage eating in the hospital.
  4. Tell me about eating before you came into the hospital.
  5. Tell me how eating in the hospital is different than before you came here...how is it similar?

6. Tell me what helps you to eat...what hinders you?
7. How important is it to eat while in the hospital?
8. Is there anything else you would like to tell me about eating in the hospital?

<b>When</b>	<b>What happens</b>
Day 1	<ul style="list-style-type: none"> <li>• Meet with investigator and discuss participation in the study</li> </ul>
Day 1 or next visit	<ul style="list-style-type: none"> <li>• Decide to participate in study or not to participate in the study</li> <li>• If decision is to participate in the study, sign this document (informed consent)</li> </ul>
Next visit(s)	<ul style="list-style-type: none"> <li>• You may be observed before, during, and after mealtimes</li> <li>• Sometimes the investigator may ask you questions about your eating during these observations</li> </ul>
Next visit (s)	<ul style="list-style-type: none"> <li>• The investigator may arrange a date and time (appointment) with you to discuss your eating or ask you questions about your eating. These interviews will be taped with a tape recorder.</li> </ul>
After discharge from hospital	<ul style="list-style-type: none"> <li>• The investigator may call you on the telephone to review what you told her to make sure she understood you correctly</li> </ul>

**WHAT RISKS OR PROBLEMS COULD YOU HAVE BY BEING IN THIS STUDY?**

There are no known risks associated with this study however a possible inconvenience may be the time it takes to complete the study and possible discomfort you may experience while being observed. The investigator will be aware of your tolerance and limit observation and interview accordingly. Questions you find sensitive or difficult to answer, you may choose not to answer.

**WILL YOU BENEFIT FROM BEING IN THIS STUDY?**

You will not benefit from being in this study. What we learn from this study may help other hospitalized older adults in the future.

**WHAT OPTIONS OTHER THAN THIS STUDY ARE AVAILABLE TO YOU?**

You may choose not to participate in this study.

**WILL THERE BE ANY COSTS TO YOU?**

As a participant in this study, you will not incur any expenses for participation.

**WILL YOU RECEIVE ANY COMPENSATION?**

You will not receive any compensation (reimbursement) for participation in this study.

**WHAT HAPPENS IF YOU HAVE A COMPLICATION?**

There is no risk of physical injury associated with participation in this study.

**HOW WILL YOUR PRIVACY BE PROTECTED?**

We will protect your privacy as a participant in this research study and the confidentiality of your research information.

If we publish information from this research study your name will not be used.

- All reference to you, to what you say or to what you do while being observed or interviewed will be referred to in the study by a code (pseudonym), which will identify you only as a patient and as a number. For example, if you are the first patient observed or interviewed, you would be known as patient 1; observation1, patient 1; interview 1 or patient 1; observation 2 etc.
- Any PHI gathered for this study such as your name, age, diagnoses, the diet the doctor ordered for you, how long you've been in the hospital, where you lived before you were admitted to the hospital, where you are going to live after you are discharged from the hospital, your body mass index (BMI) or height and weight, the number of medications you are taking, and how much you eat will be identified by using the code number assigned to you only. Only the investigator will be aware of your assigned code.
- Any identifying information gathered for use in this study will be known only to the investigator. All information gathered about you will be kept in a secured area (password protected computer), which will be accessed only by the investigator. All identifying information gathered about you for this study will be destroyed once the study is completed.

Audiotapes will be made of your interview. These tapes will be transcribed into text, which will be de-identified and coded with a code number particular for you. Once the study is completed, the audiotape will be erased.

**INFORMATION ABOUT THE PRIVACY OF PROTECTED HEALTH INFORMATION**

Baystate Medical Center, its employees, and its affiliates are required by law to protect the privacy of information that identifies you. If you enroll in this research study, your protected health information (referred to as **PHI** in the rest of this section) may be used and shared with others as explained below.

**What PHI will be used and shared with others for this research study?**

- Information gathered from your medical records.
- New information created as a result of this study such as observation notes or interview transcripts.

**Why will your PHI be used and shared?**

- We need to use and share your PHI in order to conduct this research study, monitor your safety and the safety of the study as a whole, and to ensure that the research meets legal, institution, and accreditation standards.

**Who may use and share your PHI?**

- The study investigators
- Other people within Baystate Medical Center and its affiliates such as those who oversee research, process bills and payments, conduct quality assurance, and provide legal advice.
- Insurers and their agents as necessary.
- The study sponsor(s): Baystate Medical Center and those it hires to do and oversee the research.
- Organizations that accredit hospitals and research programs.

In order to check that we are conducting research properly, government agencies may access information that could identify you. For example, the following people/groups may inspect research records:

- The Office of Human Research Protections in the U.S. Department of Health and Human Services.
- State agencies such as the Department of Public Health.
- Other domestic and foreign government agencies if required.

Once your PHI has been released it may no longer be protected by federal law.

**Can you see your research records?**

- You can ask to see your research records but sometimes that can only happen after the research study is completed. If you would like to see your research records please call: Ellen Furman at (413) 218-3510.

**How long will your PHI be used and shared for this research study?**

- Since research is an ongoing process, there is no scheduled date at which your PHI will be destroyed.

**What if you decide that you no longer want your PHI used or shared for this research study?**

- You can withdraw your permission at any time for us to use and share your PHI by contacting the investigator. You will not be able to continue in the research study once you withdraw your permission.

**WHO DO YOU CONTACT IF YOU HAVE STUDY QUESTIONS OR CONCERNS?**

If you have any questions about this study, please contact: Ellen Furman (413) 218-3510. If you experience a complication or injury that you believe may be related to this study, please contact: Christine Grylik (413) 794-0679. After hours, please call Ellen Furman (413) 218-3510.



If you would like to discuss your rights as a research participant, or wish to speak with someone not directly involved in the study, please contact the Baystate Medical Center Institutional Review Board at (413) 794-4356.

**STATEMENT OF VOLUNTARY CONSENT**

I have read this form or have had it read to me. I have been told what to expect if I take part in this study, including possible risks and possible benefits. I have had a chance to ask questions and have had them answered to my satisfaction. I have been told that the people listed in this form will answer any questions that I have in the future. By signing below, I am volunteering to be in this research study.

Participant's Name (Print): \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**STUDY REPRESENTATIVE STATEMENT**

I have explained the purpose of the research, the study procedures, the possible risks and discomforts, the possible benefits, and have answered all questions to the best of my ability.

Study Representative's Name (Print): \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_ Time Consent Obtained: \_\_\_\_\_

**You will receive a copy of this form after it has been signed and dated.**

APPENDIX C

INFORMED CONSENT-HEALTHCARE PROVIDER

Baystate Medical Center  
 INSTITUTIONAL REVIEW BOARD  
 Date \_\_\_\_\_ Date \_\_\_\_\_  
 Approved 8/27/09 Expires 8/27/10 *BT*  
 Renewal \_\_\_\_\_ Date \_\_\_\_\_  
 Approved \_\_\_\_\_ Expires \_\_\_\_\_  
 Renewal \_\_\_\_\_ Date \_\_\_\_\_  
 Approved \_\_\_\_\_ Expires \_\_\_\_\_  
 Renewal \_\_\_\_\_ Date \_\_\_\_\_  
 Approved \_\_\_\_\_ Expires \_\_\_\_\_

RESEARCH CONSENT FORM

Title of Project: Social Processes and Eating Behavior of Hospitalized Older Adults

Study Sponsor: Baystate Medical Center

IRB #: 09-153

Principal Investigator: Christine Gryglik APRN MS BC PCCN

Co-investigator: Ellen Furman PhDc RN

Study Participant:

**WHY ARE YOU BEING ASKED TO TAKE PART IN THIS RESEARCH?**

I am talking to you about this research study because you provide care related to the eating behavior of hospitalized older adults. You are being asked to participate in this research study because your actions, interactions, and perceptions related to older adult patient eating behavior is of interest to the investigator. Whether or not you take part in this study is up to you.

This consent form gives you important information about the study so that you can make an informed decision about participation. Please read it carefully and ask questions before you make a decision. Please take your time. You should not sign this form until all of your questions are answered. Whether or not you decide to participate in this study, it will not affect your employment nor your performance evaluations here at BHS.

**WHY IS THIS RESEARCH STUDY BEING DONE?**

The purpose of this research study is to find out what influences hospitalized older adults eating behavior.

**HOW IS THIS RESEARCH STUDY BEING FUNDED?**

This research study is not being funded.

**HOW MANY PEOPLE WILL TAKE PART IN THIS STUDY?**

This research is being conducted only at Baystate Medical Center. We expect to enroll 12 patients who are 65 years of age or older, have an oral diet order, and who are able to provide informed consent as well as 25 healthcare providers. Healthcare providers may include nurses, physicians, aides, dieticians, and therapists.

### **HOW LONG WILL YOU BE IN THIS STUDY**

This research study is expected to last 12 months. Your participation in this study will involve being observed in 2-4 hour increments during and around patient mealtimes. Interviews, scheduled at your convenience, are expected to last 1/2-1 hour per interview. Your participation in this study may be stopped if the study sponsor thinks (1) it is in your best interest to stop, (2) if you do no longer meet inclusion criteria or (3) or if the study is stopped for any reason.

The study sponsor will tell you about new information that could change your decision to be in this study. If this occurs, you may be asked to sign a new consent form.

### **PARTICIPATION IN THIS STUDY IS VOLUNTARY**

**Taking part in this study is voluntary. You may choose not to take part or to leave the study at any time. Your decision will not affect your relationship with Baystate Medical Center and will not result in any penalty or loss of benefits to which you are otherwise entitled.**

**You can stop taking part in this study at any time.** Tell the study investigator if you are thinking about stopping or have decided to stop. If you decide to withdraw from the study, you will be asked if the information (data) collected about you may be used. If you agree, the information will be used; if you do not agree, the information about you will be destroyed.

### **WHAT WILL YOU DO IN THIS STUDY?**

- You will be approached by the investigator to see if you would like to participate in the study
- After reading this document and agreeing to participate you will be asked to sign this document
- Once you have agreed to participate and have signed this document you may be observed and may be asked questions by the investigator based upon the investigator's observations during and around patient mealtimes. You may also be asked questions (interviewed) about patient eating behavior. All interviews will be audiotaped. If you agree to participate and to be interviewed, your interview will be audiotaped for accuracy. Questions might include:
  1. How are you involved in patient eating?
  2. Tell me about patient eating here in the hospital.
  3. Do patients seem hungry before meals...after meals?
  4. What influences patient eating...positive influences vs. negative influences?
  5. What do you do to help patients eat...does this help?
  6. How important is it for patients to eat while in the hospital?
  7. Is there anything else you would like to tell me about patient eating in the hospital?

<b>When</b>	<b>What happens</b>
Day 1	<ul style="list-style-type: none"> <li>• Meet with investigator and discuss participation in the study</li> </ul>
Day 1 or next visit	<ul style="list-style-type: none"> <li>• Decide to participate in study or not to participate in the study</li> <li>• If decision is to participate in the study, sign this document (informed consent)</li> </ul>
Next visit(s)	<ul style="list-style-type: none"> <li>• You may be observed before, during, and after patient mealtimes</li> <li>• Sometimes the investigator may ask you questions about patient eating during these observations</li> </ul>
Next visit (s)	<ul style="list-style-type: none"> <li>• The investigator may arrange a date and time (appointment) with you to discuss patient eating. These interviews will be audiotaped for accuracy.</li> </ul>
Next visit (s)	<ul style="list-style-type: none"> <li>• The investigator may contact you to review what you told her to make sure she interpreted you correctly</li> </ul>

**WHAT RISKS OR PROBLEMS COULD YOU HAVE BY BEING IN THIS STUDY?**

- There are no known risks associated with this study however a possible inconvenience may be the time it takes to complete the study. Observation will occur during your usual work shift. Appointments for interview will be made for a time and place that is convenient for you so as not to interfere with your work schedule or patient care.
- All reference to you, to what you say or to what you do while being observed or interviewed will be referred to in the study by a code (pseudonym), which will identify you only by your healthcare provider role, and as a number. For example, if you are the first nurse observed or interviewed, you would be known as nurse 1; observation1, nurse 1; interview 1 or nurse 1; observation 2 etc.

**WILL YOU BENEFIT FROM BEING IN THIS STUDY?**

You will not benefit from being in this study. What we learn from this study may help hospitalized older adults and their healthcare providers in the future.

**WHAT OPTIONS OTHER THAN THIS STUDY ARE AVAILABLE TO YOU?**

You may choose not to participate in this study.

**WILL THERE BE ANY COSTS TO YOU?**

As a participant in this study, you will not incur any expenses for participation.

**WILL YOU RECEIVE ANY COMPENSATION?**

You will not receive any compensation (reimbursement) for participation in this study.

**WHAT HAPPENS IF YOU HAVE A COMPLICATION?**

There is no risk of physical injury associated with participation in this study.

**HOW WILL YOUR PRIVACY BE PROTECTED?**

We will protect your privacy as a participant in this research study and the confidentiality of your research information.

Any information gathered for this study from you will be identified by using the code number assigned to you only. Only the investigator will be aware of your assigned code.

Any information gathered for this study from you will be known only to the investigator. All information gathered about you will be kept in a secured area (password protected computer), which will be accessed only by the investigator. All identifying information gathered about you for this study will be destroyed once the study is completed.

If we publish information from this research study your name will not be used. Audiotapes will be made of your interview. These tapes will be transcribed into text, which will be de-identified and coded. Once the study is completed, the audiotape will be erased.

**WHO DO YOU CONTACT IF YOU HAVE STUDY QUESTIONS OR CONCERNS?**

If you have any questions about this study, please contact: Ellen Furman at (413) 218-3510. If you experience a complication or injury that you believe may be related to this study, please contact Christine Grylik at (413) 794-0679. After hours, please call Ellen Furman (413) 218-3510.

If you would like to discuss your rights as a research participant, or wish to speak with someone not directly involved in the study, please contact the Baystate Medical Center Institutional Review Board at (413) 794-4356.

**STATEMENT OF VOLUNTARY CONSENT**

I have read this form or have had it read to me. I have been told what to expect if I take part in this study, including possible risks and possible benefits. I have had a chance to ask questions and have had them answered to my satisfaction. I have been told that the people listed in this form will answer any questions that I have in the future. By signing below, I am volunteering to be in this research study.

Participant's Name (Print): \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**STUDY REPRESENTATIVE STATEMENT**

I have explained the purpose of the research, the study procedures, the possible risks and discomforts, the possible benefits, and have answered all questions to the best of my ability.

Study Representative's Name (Print): \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Time Consent Obtained: \_\_\_\_\_

**You will receive a copy of this form after it has been signed and dated.**

## APPENDIX D

### AUDIT TRAIL

10/27/09 Meet with unit staff  
10/27/09-CO  
memo-who does what  
10/29/09 CO  
memo -?food reheated  
10/31/09 CO  
memo - who initiates eating  
- is eating a priority  
-who decides where someone eats  
-what food choices are available  
-do OAs still eat at traditional meal times  
-who tracks how much is eaten  
11/10/09 CO  
memo- does condition of roommate/provision of care influence eating  
11/15/09 CO  
memo-meals delivered around traditional meal times despite room service  
11/15/09 OA 1 I  
memo-is there an expectation about food  
11/15/09 OA 1 PO1  
memo-is there a quota for food  
-smells  
11/17/09 OA 1 PO 2  
memo-mechanized eating  
-eating due to boredom  
-influence of setting on eating  
11/24/09 OA 2 I  
memo-importance  
-why the disparity  
11/24/09 OA 2 PO 1  
memo-access to tray  
-adaptive equipment?  
11/24/09 OA 3 I  
11/24/09 OA 3 PO 1  
memo-role of sitter?  
12/04/09 OA 4 I  
12/04/09 OA 4 PO 1  
12/05/09 OA 4 PO 2  
12/05/ 09 OA 4 PO 3  
12/13/09 OA 5 I  
12/13/09 OA 5 PO 1  
12/13/09 OA 6 I  
12/13/09 OA 6 PO 1  
12/14/09 OA 5 PO 2  
12/14/09 OA 5 PO 3  
12/14/09 OA 6 PO 2  
12/12/09 update interview schedule  
memo-does length of stay influence eating?  
-role of illness  
-no one seems concerned about intake  
-influence of role at home

-function at home vs. hospital

12/14/09 OA 6 PO 3

12/20/09 BSP identified

12/24/09 HCP 1 I

12/24/09 HCP 1 PO 1

01/05/10 update interview schedule

01/17/10 HCP 2 I

01/17/10 HCP 2 PO 1

memo-perceptions and actions different

- delegation of eating assistance
- no conversation while assisting to eat

01/19/10 HCP 3 I

memo-providing food does not=eating food

- if unable to call must have non-select limiting choices. More disease; less options

01/19/10 HCP 3 PO 1

01/23/10 HCP 4 I

01/23/10 HCP 4 PO 1

memo-flavor ?

01/23/10 OA 7 I

01/23/10 OA 7 PO 1

memo-role of culture

- assessments
- disparity?

01/23/10 OA 7 PO 2

01/24/10 OA 7 PO 3

01/24/10 OA 7 PO 4

01/24/10 OA 8 I

01 /24/10 OA 8 PO 1

memo-routines how do they influence eating

- young vs. old

01 /25/10 OA 7 PO 5

01/25/10 OA 8 PO 2

01/25/10 OA 8 PO 3

02/06/10memo-compromise/preserve/accept

02/16/10memo- does the act of eating have the same meaning for OA and HCP?

02/20/10memo-say it's important to eat but do not act like it's important to eat

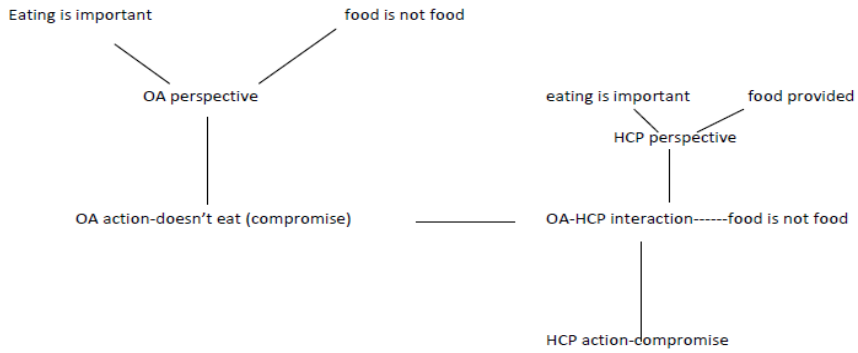
02/21/10memo-does room service absolve HCP of oversight?

- hospital is obliged to feed; HCP obliged to care if OA eats; OA does not eat; compromise; food is provided; feeding will occur

02/23/10memo-system of compromises=hospital provides food but not eaten; OA important to eat but does not; HCP important to eat but OA does not eat



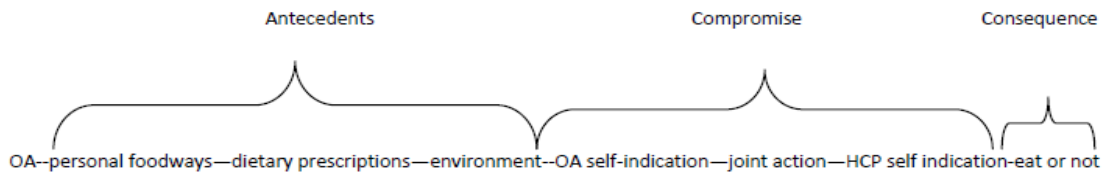
02/28/10 Schematic



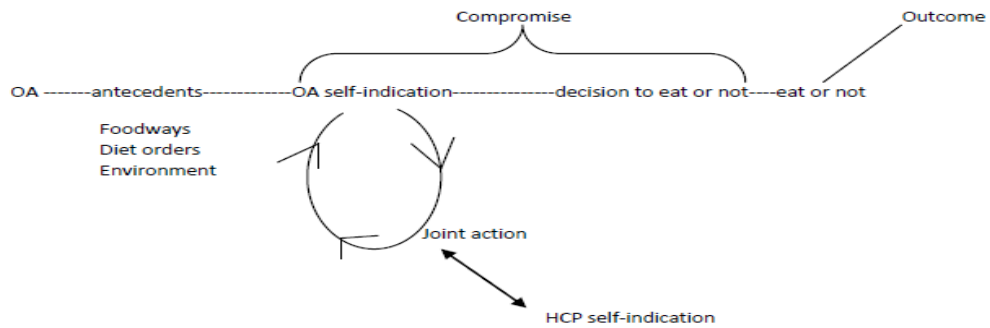
03/06/10 CO memo-not bargain; not negotiate; compromise

- HCP does not set up or oversee; system does not provide flavorful meals; familiar foods; decreased meaning; OA takes cue from self and HCP

05/25/10 Schematic



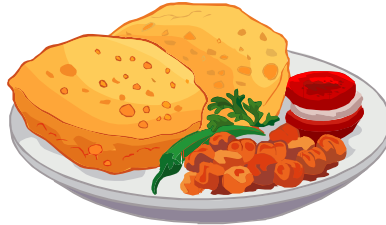
06/14/10 Schematic



## APPENDIX E

### INQUIRY NOTIFICATION

# NOTICE OF NURSING RESEARCH



A nursing research study entitled “Social Processes and Eating Behavior of Hospitalized Older Adults” (IRB09-153; 2009-0407) is beginning on Springfield 3. The aim of the study is to describe those processes that influence whether older adult inpatients eat or not. The study involves both observation of patient mealtimes and eating related activities as well as interview of patients and staff about their perceptions related to older adult inpatient eating.

The study involves English-speaking patients who are 65 years of age or older, who have an oral diet order, and who are able to voluntarily give consent to participate as well as healthcare providers such as nurses, aides, physicians, dietitians, and therapists who are involved with patient eating.

The goal of this research is to develop theory that describes the processes that influence the eating behavior of hospitalized older adults to inform subsequent research and practice. Inadequate dietary intake by hospitalized older adults contributes to undernutrition and negative health outcomes such as mortality, functional dependence, medical complications, increased length of hospital stay, and discharge to nursing homes.

Please contact Ellen Furman at (413) 218-3510 or [efurman@student.umass.edu](mailto:efurman@student.umass.edu) if you would like to know more about this research study or would like to participate.

Thank you.

Ellen Furman PhDc RN

APPENDIX F

CITI TRAINING CERTIFICATE

**Human Research Curriculum Completion Report**

Printed on 4/21/2011

**Learner:** Ellen Furman (username: ellenfurman)

**Institution:** Baystate Medical Center

**Contact Information**

Department: Nursing

Phone: 4132183510

Email: ellen@furman.com

**Good Clinical Practice and ICH:**

**Stage 2. Refresher Course Passed on 04/21/11** (Ref # 5900954)

<b>Required Modules</b>	<b>Date Completed</b>	<b>Score</b>
Refresher Course 200 Introduction	04/21/11	no quiz
Overview of New Drug Development -	04/21/11	5/5 (100%)
International Conference on Harmonization	04/21/11	5/5 (100%)
Informed Consent : An Ongoing Process	04/21/11	4/4 (100%)
FDA Regulated Research and ICH	04/21/11	3/3 (100%)
Conducting Investigator-Initiated Studies According to FDA Regulations and Good Clinical Practices	04/21/11	4/4 (100%)
Investigator Obligations in FDA-Regulated Clinical Research	04/21/11	5/5 (100%)
Managing Investigational Agents According to GCP Requirements	04/21/11	5/5 (100%)
Conducting Clinical Trials of Medical Devices	04/21/11	6/6 (100%)
Detection and Evaluation of Adverse Events	04/21/11	8/8 (100%)
Reporting Serious Adverse Events	04/21/11	3/3 (100%)
Monitoring of Clinical Trials by Industry Sponsors	04/21/11	10/10 (100%)
Audits and Inspections in Clinical Trial	04/21/11	8/8 (100%)
Completing the CITI GCP Course	04/21/11	no quiz
1. GCP Introduction	04/21/11	3/3 (100%)
International Conference on Harmonization - Part 2	04/21/11	no quiz

**For this Completion Report to be valid, the learner listed above must be affiliated with a CITI participating institution. Falsified information and unauthorized use of the CITI course site is unethical, and may be considered scientific misconduct by your institution.**

Paul Braunschweiger Ph.D.

Professor, University of Miami

Director Office of Research Education

CITI Course Coordinator

APPENDIX G

IRB APPROVAL -INQUIRY SETTING

Baystate  Medical Center

759 Chestnut Street Springfield, Massachusetts 01199 413-794-0000 baystatehealth.com

**INSTITUTIONAL REVIEW BOARD - FWA #: 00004355**

**IRB #:** IRB09-153

**Principal Investigator:** Christine Gryglik, APRN, MS, BC

**Department/Division:** Nursing / Patient Care Services

**Sponsor:** Department of Nursing / University of Massachusetts/Amherst

**Sponsor I.D. No.:**

**Expiration Date:** 8/27/2010

**TITLE:** Social Processes and Eating Behavior of Hospitalized Older Adults

This action involves:

**Corrected Initial Application (received on 8/24/2009)**

- **Preparatory Research Activities Forms (received on 8/3/2009)**

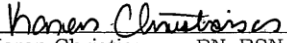
This is to certify that the above referenced research proposal/protocol received **Expedited review** by the Institutional Review Board on **8/27/2009** and the following action was taken:

**Approved**

In compliance with federal regulations the approval of this project is valid for a period of one year or less from the time of the most recent IRB review. Approval for this study expires on: 8/27/2010. The most recent protocol version is: Version 1, 7/21/2009. The most recent consent form is: (2 Consents) HCP Consent Version 1, 7/21/2009; Older Adult Consent Version 1, 7/21/2009.

A copy of the signed informed consent form used with this project is to be placed in the patient's medical record, and a copy kept for your records in your office.

All serious or unexpected adverse events/drug reactions must be reported to the Institutional Review Board within five business days.

  
Karen Christianson, RN, BSN, CCRP  
Director  
Human Subjects Protection Program

27 August 2009  
Date

BAYSTATE MEDICAL CENTER



THE WESTERN CAMPUS OF TUFTS UNIVERSITY SCHOOL OF MEDICINE



Proud to print on 100% post-consumer material - paper made from paper - helping to save trees and the environment.

## APPENDIX H

### IRB APPROVAL- UNIVERSITY



**University of Massachusetts Amherst**  
108 Research Administration Bldg.  
70 Butterfield Terrace  
Amherst, MA 01003-9242

**Research Compliance  
Human Research Protection Office (HRPO)**  
Telephone: (413) 545-3428  
FAX: (413) 577-1728

#### Certification of Human Subjects Approval

**Date:** September 25, 2009  
**To:** Ellen Furman, Nursing  
**Other Investigator:** Cynthia Jacelon, Nursing  
**From:** Priscilla Clarkson, Chair, UMASS IRB

Protocol Title: Social Processes and Eating Behavior of Hospitalized Older Adults  
Protocol ID: 2009-0407  
Review Type: EXPEDITED - NEW  
Paragraph ID: 7  
Approval Date: 09/25/2009  
Expiration Date: 09/24/2010  
OGCA #:

This study has been reviewed and approved by the University of Massachusetts Amherst IRB, Federal Wide Assurance # 00003909. Approval is granted with the understanding that investigator(s) are responsible for:

**Modifications** - All changes to the study (e.g. protocol, recruitment materials, consent form, additional key personnel), must be submitted for approval in e-protocol before instituting the changes. New personnel must have completed CITI training.

**Consent forms** - A copy of the approved, validated, consent form (with the IRB stamp) must be used to consent each subject. Investigators must retain copies of signed consent documents for six (6) years after close of the grant, or three (3) years if unfunded.

**Adverse Event Reporting** - Adverse events occurring in the course of the protocol must be reported in e-protocol as soon as possible, but no later than five (5) working days.

**Continuing Review** - Studies that received Full Board or Expedited approval must be reviewed three weeks prior to expiration, or six weeks for Full Board. Renewal Reports are submitted through e-protocol.

**Completion Reports** - Notify the IRB when your study is complete by submitting a Final Report Form in e-protocol.

Consent form (when applicable) will be stamped and sent in a separate e-mail. Use only IRB approved copies of the consent forms, questionnaires, letters, advertisements etc. in your research.

Please contact the Human Research Protection Office if you have any further questions. Best wishes for a successful project.

APPENDIX I  
CURRICULUM VITAE

**Ellen F. Furman**

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692 Main Road  
Granville, MA 01034-9796  
ellen@furman.com  
4132183510

**Education**     Doctor of Philosophy Degree, Nursing (expected graduation 2012),  
University of Massachusetts, Amherst, Massachusetts

Master of Science Degree, Nursing (2006)  
University of Massachusetts, Amherst, Massachusetts

Bachelor of Science Degree, Nursing (2003)  
University of Massachusetts, Amherst, Massachusetts

Diploma Nursing School (1976)  
Worcester City Hospital School of Nursing, Worcester, Massachusetts

**Experience**     Jewish Nursing Home of Western Massachusetts, Longmeadow,  
Massachusetts (2006-present)  
Director of Staff Education

Renaissance Manor of Westfield, Westfield, Massachusetts (2005-2006)  
RN Charge Nurse

Baystate Medical Center, Springfield, Massachusetts (2001)  
RN Staff Nurse Respiratory Care Unit

Western Massachusetts Hospital, Westfield, Massachusetts (1995-2000)  
RN Charge Nurse Respiratory Care Unit

Stay- at -home mother of four children (1979-1995)

Baystate Medical Center, Springfield, Massachusetts (1979)  
RN Staff Nurse Coronary Care Unit

Worcester City Hospital, Worcester, Massachusetts (1976-1979)  
RN Staff Nurse Medical Intensive Care Unit

- Teaching** Jewish Nursing Home of Western Massachusetts (2006-2011)  
Director of Staff Education
- University of Massachusetts, Amherst, School of Nursing  
Guest Lecturer, RN to BS Program, Vulnerable Populations (2005-2010)  
on-line  
Graduate Nursing Program, Healthy Aging (2009) classroom  
Graduate Nursing Program, Qualitative Research (2008, 2010) classroom  
Undergraduate Nutrition Program, Medical Nutrition Therapy (2007),  
classroom
- University of Massachusetts, Amherst, School of Nursing  
Interim Clinical Faculty (2006)
- Awards** Graduate Assistance in Areas of National Need Scholar (GAANNS)  
Fellowship (2006-2009)
- University of Massachusetts Peace and Social Responsibility Award  
(2003)
- Genesis Eldercare Gerontology Leadership Award (2003)
- Inducted Sigma Theta Tau International Honor Society of Nursing (2003)
- Circle of Excellence Award Winner, Western Massachusetts Hospital  
(1999)
- Publications** Jacelon, C., Furman, E., Rea, A., Macdonald, B., & Donoghue, L. (2011).  
Creating a professional practice model for postacute care: Adapting the  
chronic care model for long-term care. *Journal of Gerontological Nursing*,  
37(3).53-60.
- Furman, E. (2006). Undernutrition in older adults across the continuum of  
care: Nutritional assessment, barriers, and interventions. *Journal of  
Gerontological Nursing*, 32(1). 22-27.
- Posters** Furman, E. (2009, March). The quality health outcomes model in nursing  
literature. Poster session presented at Eastern Nurses Research Society,  
Philadelphia, PA.
- Furman, E. (2008, April). Psychosocial aspects of malnutrition in older  
adults: The meaning of mealtimes, social facilitation, and ambience.  
Poster session presented at Scholarship Day Sigma Theta Tau, Holyoke,  
MA.

Jacelon, C., Furman, E., & Moore, J. (2006, November). Dignity in the dining room: A description of dining practices across levels of care. Poster session presented at Gerontological Society of America, Dallas, TX.

Furman, E., and Jacelon, C. (2006, April). Participant observation in dining rooms across levels of care. Poster session presented at Scholarship Day Sigma Theta Tau, Holyoke, MA.

Furman, E. (2005, April). Undernutrition in older adults across the continuum of care. Poster session presented at Scholarship Day Sigma Theta Tau, Holyoke, MA.

**Service** Roger L. Putnam Vocational Technical High School. Springfield, Massachusetts, Allied Health Advisory Board (2009-2011)

**Professional** Eastern Nurses Research Society (2006-2011)

**Membership**

Sigma Theta Tau International Honor Society of Nursing (2003-2011)

The Gerontological Society of America (2011)

**Licensure** Massachusetts Licensed Registered Nurse #133205

**Certification** CPR Instructor Certified

IV Certified



## APPENDIX J

### TIMELINE

	Proposal Defense	IRB Approval Setting	IRB Approval Univ.	Data Collection	Data Analysis	BSP Identified	IRB Renewal Setting	IRB Renewal Univ.	Theory Development	Writing
5/09	X									
6/09										
7/09										
8/09		X								
9/09			X							
10/09				X	X				X	
11/09				X	X				X	
12/09				X	X	X			X	
1/10				X	X				X	
2/10				X	X				X	
3/10				X	X				X	
4/10					X				X	
5/10					X				X	
6/10					X				X	
7/10					X		X		X	
8/10					X			X	X	
9/10					X				X	
10/10					X				X	
11/10					X				X	
12/10					X				X	
1/11										X
2/11										X
3/11										X
4/11										X
5/11							X			X
6/11										X
7/11										X
8/11										X
9/11								X		X
10/11										X

## BIBLIOGRAPHY

- Adams, N. E., Bowie, A. J., Simmance, N., Murray, M., & Crowe, T. C. (2008). Recognition by medical and nursing professionals of malnutrition and risk of malnutrition in elderly hospitalized patients. *Nutrition & Dietetics*, 65(2), 144-150.
- Atchley, R.C. (1989). A continuity theory of normal aging. *The Gerontologist*, 29(2), 183-190.
- Atchley, R.C. (1999). *Continuity and adaptation in aging: Creating positive experiences*. Baltimore, MD: The Johns Hopkins University Press.
- Atlas.ti. (2009). *Atlas.ti: Key functions*. Retrieved April 3, 2009 from <http://www.atlas.ti.com>
- Bartali, B., Salvini, S., Turrini, A., Lauretani, F., Russo, C. R., Corsi, A. M., ... Ferrucci, L. (2003). Age and disability affect dietary intake. *Journal of Nutrition*, 133(9), 2868-2873.
- Belbraouet, S., Tebi, A., Chau, N., Toto, A., & Debry, G. (1998). Serum protein status according to age and disease in hospitalized elderly. *Nutrition Research*, 18(10), 1677-1689.
- Berrut, G., Favreau, A.M., Dizo, E., Tharreau, B., Poupin, C., Gueringuili, M., ... Ritz, P. (2002). Estimation of calorie and protein intake in aged patients: Validation of a method based on meal portions consumed. *Journal of Gerontology: Medical Sciences*, 57A(1), M52-M56.
- Berman, A., Mezey, M., Kobayashi, M., Fulmer, T., Stanley, J., Thornlow, D., & Rosenfeld, P. (2005). Gerontological nursing content in baccalaureate nursing programs: Comparison of findings from 1997 and 2003. *Journal of Professional Nursing*, 21(5), 265-275.
- Blumer, H. (1969). *Symbolic interactionism: Perspective and method*. Englewood Cliffs, NJ: Prentice Hall.
- Bos, C., Benamouzig, R., Bruhat, A., Roux, C., Valensi, P., Ferriere, F., & Tome, D. (2001). Nutritional status after short-term dietary supplementation in hospitalized malnourished geriatric patients. *Clinical Nutrition*, 20(3), 225-233.
- Bradley, R.M. (1988). Effects of aging on the anatomy and neurophysiology of taste. *Gerodontology*, 4(5), 244-248.
- Brombach, C. (2001a). The EVA-study: Meal patterns of women over 65 years. *Journal of Nutrition, Health & Aging*, 5(4), 263-265.

- Brombach, C. (2001b). The EVA-study: Nutrition behavior in the life course of elderly women. *Journal of Nutrition, Health & Aging*, 5(4), 261-262.
- Burns, N. & Grove, S.K. (2005). *The practice of nursing research: Conduct, critique, and utilization* (5<sup>th</sup> Ed). St. Louis, MO: Elsevier.
- Castel, H., Shahar, D., & Harman-Boehm, I. (2006). Gender differences in factors associated with nutritional status of older medical patients. *Journal of the American College of Nutrition*, 25(2), 128-134.
- Charles, R., Mulligan, S., & O'Neill, D. (1999). The identification and assessment of undernutrition in patients admitted to the age related health care unit of an acute Dublin general hospital. *Irish Journal of Medical Science*, 168(3), 180-185.
- Charmaz, K. (2000). *Grounded theory: Objectivist and constructivist methods*. In N.K. Denzin & Y.S. Lincoln (Eds.). *Handbook of Qualitative Research* (pp. 509-535). Thousand Oakes, CA: Sage.
- Chen, C. C., Bai, Y. Y., Huang, G. H., & Tang, S. T. (2007). Revisiting the concept of malnutrition in older people. *Journal of Clinical Nursing*, 16(11), 2015-2026.
- Cohen-Almagor, R. (2006). On compromise and coercion. *Ratio Juris*, 19(4), 434-455.
- Compromise. (2011). In Oxford English dictionary. Retrieved from <http://www.oed.com.silk.library.umass.edu/view/Entry/37904>
- Connor, M., Bisogni, C.A., Sobol, J., & Devine, C.M. (2001). Managing values in personal food systems. *Appetite*, 36(3), 189-200.
- Covinsky, K. E. (1999). The relationship between clinical assessments of nutritional status and adverse outcomes in older hospitalized medical patients. *Journal of the American Geriatrics Society*, 47(5), 532-538.
- Darmon, P., Kaiser, M.J., Bauer, J.M., Seiber, C.C., & Pichard, C. (2010). Restrictive diets in the elderly: Never say never again?. *Clinical Nutrition*, 29, 170-174.
- deCastro, J. M. D. (2002). Age-related changes in the social, psychological, and temporal influences on food intake in free-living, healthy, adult humans. *Journal of Gerontology. Series A, Biological Sciences and Medical Sciences*, 57(6), M368-M377.

- DiFrancesco, V., Zamboni, M., Zoico, E., Mazzali, G., Dioli, A., Ommizolo, F.,...Bosello, O. (2006). Unbalanced serum leptin and ghrelin dynamics prolong postprandial satiety and inhibit hunger in healthy elderly: Another reason for the “anorexia of aging”. *American Journal of Clinical Nutrition*, 83, 1149-1152.
- Donini, L. M., Savina, C., Piredda, M., Cucinotta, D., Fiorito, A., Inelmen, E. M.,...Cannella, C. (2008). Senile anorexia in acute-ward and rehabilitations settings. *Journal of Nutrition, Health & Aging*, 12(8), 511-517.
- Draper, P. (1996). Compromise, massive encouragement and forcing: A discussion of mechanisms used to limit choices available to the older adult in hospital. *Journal of Clinical Nursing*, 5, 325-331.
- Dubé, L., Paquet, C., Ma, Z., St-Arnaud McKenzie, D., Kergoat, M. J., & Ferland, G. (2007). Nutritional implications of patient-provider interactions in hospital settings: Evidence from a within-subject assessment of mealtime exchanges and food intake in elderly patients. *European Journal of Clinical Nutrition*, 61(5), 664-672.
- Elsner, R. J. F. (2002). Changes in eating behavior during the aging process. *Eating Behaviors*, 3, 15-43.
- Falk, L.W., Bisogni, C.A., & Sobal, J. (1996). Food choice processes of older adults: A qualitative investigation. *Journal of Nutrition Education*, 28(5), 257-265.
- Fawcett, J. (1980). Framework for analysis and evaluation of conceptual models of nursing. *Nurse Educator*, 5(6), 10-14.
- Ferrie, S. (2010). Invasion of the body snatchers: Food, feeding, and power in hospitals. *Cultural Studies and Critical Methodologies*, 10(6), 437-444.
- Fischler, C.(1988). Food, self and identity. *Social Science Information*, 27(2), 275-292.
- Foodways. (2011). In Oxford English dictionary. Retrieved from <http://www.oed.com.silk.library.umass.edu/view/Entry/262118>
- Forster, S., & Gariballa, S. (2005). Age as a determinant of nutritional status: A cross sectional study. *Nutrition Journal*, 4(28), 28-32.
- Furman, E.F. (2006). Undernutrition in older adults across the continuum of care: Nutritional assessment, barriers, and interventions. *Journal of Gerontological Nursing*. 32(1), 22-27.
- Furman, E. (2009, March). *The quality health outcomes model in nursing literature*. Poster session presented at the meeting of Eastern Nurses Research Society, Philadelphia, PA.

- Furst, T., Connors, M., Bisogni, C.A., Sobal, J., & Falk, L.W. (1996). Food choice: A conceptual model of the process. *Appetite*, 26, 247-266.
- Gallimore, R. & Lopez, E.M. (2002). Everyday routines, human agency, and ecocultural context: Construction and maintenance of individual habits. *The Occupational Therapy Journal of Research*, 22, 70S-77S.
- Gariballa, S. & Forster, S. (2006). Effects of acute-phase response on nutritional status and clinical outcome of hospitalized patients. *Nutrition*, 22, 750-757.
- Gariballa, S. & Forster, S. (2007). Associations between underlying disease and nutritional status following acute illness in older people. *Clinical Nutrition*, 26(4), 466-473.
- Gariballa, S., Forster, S., Walters, S., & Powers, H. (2006). A randomized, double-blind, placebo-controlled trial of nutritional supplementation during acute illness. *American Journal of Medicine*, 119(8), 693-699.
- Gazzotti, C., Arnaud-Battandier, F., Parello, M., Farine, S., Seidel, L., Albert, A., & Petermans, J., (2003). Prevention of malnutrition in older people during and after hospitalization: Results from a randomized controlled clinical trial. *Age and Ageing*, 32(3), 321-325.
- German, L., Feldblum, I., Bilenko, N., Castel, H., Harman-Boehm, I., & Shahar, D. R. (2008). Depressive symptoms and risk for malnutrition among hospitalized elderly people. *Journal of Nutrition, Health & Aging*, 12(5), 313-318.
- Gibbons, M. R. D. & Henry, C. J. K. (2005). Does eating environment have an effect on food intake in the elderly? *Journal of Nutrition, Health & Aging*, 9(1), 25-29.
- Glaser, B.G. (1978). *Theoretical sensitivity: Advances in methodology of grounded theory*. Mill Valley, CA: The Sociology Press.
- Glaser, B.G. (1992). *Basics of grounded theory analysis*. Mill Valley, CA: The Sociology Press.
- Glaser, B.G. (2002, September). Constructivist grounded theory?. *Forum: Qualitative Social Research*, 3(3). Retrieved from <http://www.qualitative-research.net/fqs/fqs-eng.htm>
- Glaser, B.G. & Strauss, A.L. (1967). *The discovery of grounded theory: Strategies for qualitative research*. Piscataway, NJ: Aldine Transaction.

- Guigoz, Y., Vellas, B., & Garry, P.J. (1994). Mini nutritional assessment: A practical assessment tool for grading the nutritional state of elderly patients. *Facts and Research in Gerontology*, 15-59.
- Harman, D. (1956). Aging: A theory based on free radical and radiation chemistry. *Journal of Gerontology*, 11(3), 298-300.
- Hetherington, M.M. (2002). The physiological-psychological dichotomy in the study of food intake. *Proceedings of the Nutrition Society*, 61, 497-507.
- Hickson, M., Bulpitt, C., Nunes, M., Peters, R., Cooke, J., Nicholl, C., & Frost, (2004). Does additional feeding support provided by health care assistants improve nutritional status and outcome in acutely ill older in-patients? -- a randomized control trial. *Clinical Nutrition*, 23(1), 69-77.
- Hobbs, J.L. (2009). A dimensional analysis of patient-centered care. *Nursing Research*, 58(1), 52-62.
- Incalzi, R. A., Capparella, O., Gemma, A., Landi, F., Pagano, F., Cipriani, L., & Carbonin, P., (1998). Inadequate caloric intake: A risk factor for mortality of geriatric patients in the acute-care hospital. *Age and Ageing*, 27(3), 303-310.
- Ismail, Z., Herrmann, N., Rothenburg, L.S., Cotter, A., Leibovitch, F.S., RafiTari, S., ...Lanctot, K.L. (2008). A functional neuroimaging study of appetite loss in Alzheimer's disease. *Journal of the Neurological Sciences*, 271, 97-103.
- Jacelon, C.S. (2004). Managing personal integrity: The process of hospitalization for elders. *Journal of Advanced Nursing*, 46(5), 549-557.
- Jastran, M.M., Bisogni, C.A., Sobal, J., Blake, C., & Devine, C.M. (2009). Eating routines: Embedded, value based, modifiable, and reflective. *Appetite*, 52. 127-136.
- Joosten, E., & Vander Elst, B. (2001). Does nutritional supplementation influence the voluntary dietary intake in an acute geriatric hospitalized population? *Aging, Clinical and Experimental Research*, 13(5), 391-394.
- Kagansky, N., Berner, Y., Koren-Morag, N., Perelman, L., Knobler, H., & Levy, S. (2005). Poor nutritional habits are predictors of poor outcome in very old hospitalized patients. *The American Journal of Clinical Nutrition*, 82(4), 784-91.
- Landefeld, C.S., Palmer, R., Kresevic, D.M., Fortinsky, R.H., & Kowal, J. (1995). A randomized trial of care in a hospital medical unit especially designed to improve the functional outcome of acutely ill older patients. *New England Journal of Medicine*, 332(20). 1338-1344.

- Larrieu, S., Letenneur, L., Berr, C., Dartigues, J. F., Ritchie, K., Alperovitch, A., ...Barberger-Gateau, P. (2004). Sociodemographic differences in dietary habits in a population-based sample of elderly subjects: The 3C study. *Journal of Nutrition, Health & Aging*, 8(6), 497-502.
- Lincoln, Y. S. & Guba, E. G. (1985). *Naturalistic inquiry*. Beverly Hills, CA: Sage Publications.
- Liu, L., Bopp, M. M., Roberson, P. K., & Sullivan, D. H. (2002). Undernutrition and risk of mortality in elderly patients within 1 year of hospital discharge. *Journals of Gerontology Series A: Biological Sciences & Medical Sciences*, 57A (11), M741-746.
- Locher, J. L., Robinson, C. O., Roth, D. L., Ritchie, C. S., & Burgio, K. L. (2005). The effect of the presence of others on caloric intake in homebound older adults. *Journals of Gerontology. Series A, Biological Sciences and Medical Sciences*, 60(11), 1475-1478.
- Martins, C., Correia, J. R., & Amaral, T. F. (2005). Undernutrition risk screening and length of stay of hospitalized elderly. *Journal of Nutrition for the Elderly*, 25(2), 5-21.
- Mezey, M., Quinlan, E., Fairchild, S., & Vezina, M. (2006). Geriatric competencies for RN's in hospitals, *Journal for Nurses in Staff Development*, 22(1), 2-10.
- Mitchell, P. H., Ferketich, S., & Jennings, B. M. (1998). Health policy. quality health outcomes model. *Image: Journal of Nursing Scholarship*, 30(1), 43-46.
- Mowe, M., & Bohmer, T. (2002). Reduced appetite. A predictor for undernutrition in aged people. *Journal of Nutrition, Health & Aging*, 6(1), 81-83.
- Mudge, A.M., Ross, L.J., Young, A.M., Isenring, E.A., & Banks, M.D. (2011). Helping understand nutritional gaps in the elderly (HUNGER): A prospective study of patient factors associated with inadequate nutritional intake in older medical inpatients. *Clinical Nutrition*, 30(3), 320-325. doi: 10.1016/j.clnu.2010.12.007
- Murcott, A. (1988). Sociological and social anthropological approaches to food and eating. *World Review of Nutrition and Dietetics*, 55, 1-40.
- Naithani, S., Thomas, J.E., Whelan, K., Morgan, M., & Gulliford, M.C. (2009). Experiences of food access in hospital: A new questionnaire measure. *Clinical Nutrition*, 28, 625-630.

- Nijs, K. A. N. D., Graaf, C. d., Siebelink, E., Blauw, Y. H., Vanneste, V., Kok, F. J., van Staveren, W.A. (2006). Effect of family-style meals on energy intake and risk of malnutrition in Dutch nursing home residents: A randomized controlled trial. *Journals of Gerontology. Series A, Biological Sciences and Medical Sciences*, 61(9), 935-942.
- Onega, L.L. & Tripp-Reimer, T. (1997). Expanding the scope of the continuity theory: Application to gerontological nursing. *Journal of Gerontological Nursing*, 23(6), 29-35.
- Paquet, C., St-Arnaud-McKenzie, D., Kergoat, M. J., Ferland, G., & Dube, L. (2003). Direct and indirect effects of everyday emotions on food intake of elderly patients in institutions. *The Journals of Gerontology. Series A, Biological Sciences and Medical Sciences*, 58(2), 153-158.
- Persson, M. D., Brismar, K. E., Katzarski, K. S., Nordenstrom, J., & Cederholm, T. E. (2002). Nutritional status using mini nutritional assessment and subjective global assessment predict mortality in geriatric patients. *Journal of the American Geriatrics Society*, 50(12), 1996-2002.
- Peterson, S.J., Sheean, P.M., & Braunschweig, C.L. (2011). Orally fed patients are at high risk of calorie deficit in the ICU. *Current Opinion in Clinical Nutrition and Metabolic Care*, 14, 182-185.
- Philip, J.A.M. & Komesaroff, P. (2006). Ideals and compromises in palliative care. *Journal of Palliative Medicine*, 9(6), 1339-1347.
- Plata-Salaman, C.R. (1996). Anorexia during acute and chronic disease. *Nutrition*, 12(2), 69-78.
- Ross, L.J., Mudge, A.M., Young, A.M., & Banks, M. (2011). Everyone's problem but nobody's job: Staff perceptions and explanations for poor nutritional intake in older medical patients. *Nutrition & Dietetics*, 68, 41-46. doi:10.1111/j.1747-0080.2010.01495x
- Schiffman, S.S. & Warwick, Z.S. (1993). Effect of flavor enhancement of foods for the elderly on nutritional status: Food, intake, biochemical indices, and anthropometric measures. *Physiology & Behavior*, 53, 395-402.
- Scott, P.A. (1997). Compromise and its limits. *Nursing Ethics*, 4(2), 147-157.
- Shahar, D. R., Schultz, R., Shahar, A., & Wing, R. R. (2001). The effect of widowhood on weight change, dietary intake, and eating behavior in the elderly population. *Journal of Aging & Health*, 13(2), 186-199.



- Shatenstein, B., Kergoat, M. J., & Reid, I. (2007). Poor nutrient intakes during 1-year follow-up with community-dwelling older adults with early-stage alzheimer dementia compared to cognitively intact matched controls. *Journal of the American Dietetic Association*, 107(12), 2091-2099.
- Sheiham, A., & Steele, J. (2001). Does the condition of the mouth and teeth affect the ability to eat certain foods, nutrient and dietary intake and nutritional status amongst older people? *Public Health Nutrition*, 4(3), 797-803.
- Stratton, R. J., King, C. L., Stroud, M. A., Jackson, A. A., & Elia, M. (2006). 'Malnutrition universal screening tool' predicts mortality and length of hospital stay in acutely ill elderly. *British Journal of Nutrition*, 95(2), 325-330.
- St-Arnaud-McKenzie, D., Paquet, C., Kergoat, M.J., Ferland, G., & Dube, L. (2004). Hunger and aversion: Drives that influence food intake of hospitalized geriatric patients. *Journal of Gerontology: Medical Sciences*, 59(12), 1304-1309.
- Sullivan, D. H., Bopp, M. M., & Roberson, P. K. (2002). Protein-energy undernutrition and life-threatening complications among the hospitalized elderly. *Journal of General Internal Medicine*, 17(12), 923-932.
- Sullivan, D. H., Sun, S., & Walls, R. C. (1999). Protein-energy undernutrition among elderly hospitalized patients: A prospective study. *JAMA: Journal of the American Medical Association*, 281(21), 2013-2019.
- Thorsdottir, I., Jonsson, P. V., Asgeirsdottir, A. E., Hjaltadottir, I., Bjornsson, S., & Ramel, A. (2005). Fast and simple screening for nutritional status in hospitalized, elderly people. *Journal of Human Nutrition and Dietetics*, 18(1), 53-60.
- Tsang, M. F. (2008). Is there adequate feeding assistance for the hospitalized elderly who are unable to feed themselves? *Nutrition & Dietetics*, 65(3), 222-228.
- Van Nes, M., Herrmann, F. R., Gold, G., Michel, J., & Rizzoli, R. (2001). Does the mini nutritional assessment predict hospitalization outcomes in older people? *Age & Ageing*, 30(3), 221-226.
- Volkert, D., Saeglit, C., Gueldenzoph, H., Seiber, C.C. & Stehl, P. (2010). Undiagnosed malnutrition and nutrition-related problems in geriatric patients. *The Journal of Nutrition, Health, & Aging*, 14(5), 387-392.
- Westergren, A., Unosson, M., Ohlsson, O., Lorefält, B., & Hallberg, I. R. (2002). Eating difficulties, assisted eating and nutritional status in elderly (>= 65 years) patients in hospital rehabilitation. *International Journal of Nursing Studies*, 39(3), 341-351.

- Wikby, K., & Fagerskiold, A. (2004). The willingness to eat: An investigation of appetite among elderly people. *Scandinavian Journal of Caring Sciences, 18*(2), 120-127.
- Wright, L., Cotter, D., Hickson, M., & Frost, G. (2005). Comparison of energy and protein intakes of older people consuming a texture modified diet with a normal diet. *Journal of Human Nutrition and Dietetics, 18*, 213-219.
- Wright, L., Hickson, M., & Frost, G. (2006). Eating together is important: Using a dining room in an acute elderly medical ward increases energy intake. *Journal of Human Nutrition & Dietetics, 19*(1), 23-26.
- Wuest, J. (2007). Grounded theory: the method. In P.L. Munhall (Ed.), *Nursing Research* (pp. 239-271). Sudbury, MA: Jones and Bartlett.
- Xia, C., & McCutcheon, H. (2006). Mealtimes in hospital--who does what? *Journal of Clinical Nursing, 15*(10), 1221-1227.