Université de Montréal

Mealtime experiences of hospitalized older patients requiring a puree consistency diet

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Mémoire de maîtrise présenté à la Faculté de Médecine
en vue d'obtenir le grade de maître
en Administration des services de santé
Analyse et évaluation du système de la santé

Décembre, 2009

Université de Montréal
Faculté des études supérieures et postdoctorales

Ce mémoire intitulé :

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Résumé

Le concept d'Hôpital Promoteur de Santé (HPS) a pris beaucoup d'importance depuis son élaboration vers la fin des années quatre-vingt. Dans le contexte de la dernière réforme, le réseau montréalais des HPS et CSSS a été créé. Le Centre Universitaire de Santé McGill (CUSM) fait partie de ce réseau depuis 2007. Cette étude vise la création d'un milieu hospitalier promoteur de la santé pour les patients et s'adresse à l'expérience d'un repas pour les personnes âgées nécessitant une diète purée.

Une étude de cas qualitative a été utilisée pour explorer la perception de patients vis-à-vis les aspects relatifs à leur cabaret, l'assistance qu'ils recevaient et le contexte social de leur repas. Les impressions des professionnels de la santé quant à l'expérience des patients ont aussi été obtenues.

Les résultats indiquent que l'identification difficile des aliments en purée, la saveur, l'apparence et la variété sont tous des éléments qui affectent négativement leur expérience repas. Des sentiments d'impuissance ont aussi été rapportés par les patients et les professionnels de la santé. Le contexte social du repas a été souligné comme étant un aspect à cibler pour améliorer l'expérience des patients.

Un programme utilisant des purées formées pourrait contrecarrer les effets négatifs de la prescription d'une diète purée. Des changements dans les pratiques infirmières, à savoir la création d'une ambiance sociale agréable au moment des repas, semble être une option peu couteuse qui pourrait améliorer l'expérience repas des patients et diminuer les sentiments d'impuissance relevés par les professionnels de la santé à l'égard de cet aspect de soin.

Mots clés : Hôpital promoteur de santé, personnes âgées hospitalisées, dysphagie, purées formées.

Abstract

The Health Promoting Hospital (HPH) concept has gained much momentum since its development in Europe in the late nineteen eighties. The Montreal network of HPH was created in 2005, within the context of the last reform. The McGill University Health Center (MUHC) is a part of this network since 2007. This study focuses on the creation of a health promoting hospital setting for patients and addresses the mealtime experience of older hospitalized patients requiring a puree diet.

A qualitative case study design was used to explore patients' perceptions of aspects of their puree meal tray, assistance provided by staff and the social context in which the meal was taken. Health professionals' view of the patients' experience were also obtained.

Results indicate that the difficult identification of food items, flavour, appearance and variety were all important factors negatively affecting the mealtime experience. Feelings of loss of control were also reported by patients and staff. The social context in which the meal was taken was highlighted as an area which could be targeted to improve mealtimes.

A program using formed puree food items could help lessen the negative impact of the prescription of a puree diet. Changes in nursing practices regarding the creation of a pleasant social atmosphere were identified as an inexpensive option to improve the mealtime experience for patients and decrease feelings of lack of control for staff in this aspect of care.

Key words: Health Promoting Hospitals, hospitalized older patients, dysphagia, formed puree.

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List of Abbreviations

AUH : Affiliated university hospitals

CHSLD : *Centre hospitalier de soins de longue durée* (Long- term care centers)

CLSC : *Centre local de services communautaires* (local community service centre)

CSSS: *Centre de santé et de services sociaux*

g/dL: grams per decilitre

HPH: Health Promoting Hospital

HSSC: Health and Social Services Center

mg/dL: milligrams per decilitre

MGH: Montreal General Hospital

MUHC: McGill University Health Center

PEG: Pericutaneous endoscopic gastrostomy

RUIS: *Réseau universitaire intégré de santé* (University integrated health network)

RVH: Royal-Victoria Hospital

UHC: University health centers

WHO: World health organization

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1. RESEARCH CONTEXT:

In December 2003, the Quebec Bill 25 provided for a major structural reorganisation (i.e. networks of integrated service organisations). To organize primary care services, 95 Health and Social Services Centres (HSSC) were created by merging, in most cases, local hospitals, community health centers (CLSCs), residential and long-term care centres (CHSLD). Each HSSC must implement a local health and social services network in its territory to provide access to a broad range of primary social and health services, including prevention, assessment, diagnostic, treatment, rehabilitation and support services. For more specialized care, the HSSC has to establish agreements with the University Integrated Health Network (RUIS) which consists of University Health Centres (UHC), affiliated hospitals (AUH) and University Institutes (IU). The MUHC (McGill University Health Center) is a member of one of the RUIS, the McGill University Integrated Health Network (Côté, 2007). In the context of the reform, the MUHC also joined in 2007 the Montreal Health Promoting Hospitals and HSSC Network created by the *Agence de santé et services sociaux de Montréal* in 2005 (http://www.santemontreal.qc.ca/En/hps/menu.html). A steering committee was set up by the MUHC to incorporate the HPH concepts, values, strategies and standards as defined by the World Health Organization (WHO). Future plans thus include health promotion in the scope of services of these networks (Levine, 2005). This would allow to capitalize not only on the potential for health promotion (Pelikan et al, 2001) in the five hospitals members of the MUHC, but also in an entire network of establishments. In consequence, it would heighten the possibility of having an impact on structures and professional practices (Groene, 2005). In this context of adoption of the HPH concept, the present study looked at older patients' perceptions of a puree meal tray prepared in one of the MUHC hospitals. Health promotion was defined by the Ottawa Charter for health promotion as "enabling people to increase control over, and to improve their health" (World Health Organization, 1986), which is strongly related to the population approach adopted in the context of the recent health care reform (Levine, 2005). The Vienna Recommendations (World Health Organization, 1997) outlined a series of

guidelines, which should be targeted when putting forth health promoting hospitals (HPH). These include:

"1. Promote human dignity, equity and solidarity, and professional ethics, acknowledging differences in needs, values and cultures of different population groups.

2. Be oriented towards quality improvement, the wellbeing of patients, relatives and staff, protection of the environment and realization of the potential to become learning organizations.

3. Focus on health with a holistic approach and not only on curative services.

4. Be centered on people providing health services in the best way possible to patients and their relatives, to facilitate the healing process and contribute to the empowerment of patients.

5. Use resources efficiently and cost-effectively, and allocate resources on the basis of contribution to health improvement.

6. Form as close links as possible with other levels of the health care system and the community."

The fundamental principles outlined in the Vienna Recommendations set the stage for the formal development of health promoting hospitals. The philosophy encourages hospitals to provide not only quality comprehensive medical services, but also to take on the aims of health promotion as a corporate identity (Groene & Garcia-Barbero, 2005). According to Lobnig et al (1999), HPH target the health of individuals (patients, staff and population in the local community) but also the health of the hospital organization in the sense of creating a sustainable organization capable of learning and adapting to changing environments, combining the need to adapt with the aim of maximizing health gain (Lobnig et al., 1999). Eighteen core strategies were developed to put the HPH policy into action (Pelikan, 2007). They target the three most important stakeholder populations whose health is related to or affected by the hospital: patients (and relatives), staff (and relatives) and the population in the community served by the hospital.

This study focuses on one of the patient-oriented strategies: the development of health promoting living conditions in the hospital setting. Nutrition is an important aspect of care and is part of patients' living conditions. It is receiving increased attention in aged care because of the increasing proportion of the ageing population and the deterioration of elderly patients' nutritional status during hospitalization (Gazzotti et al, 2003). Nutrition in older patients requiring a puree diet is particularly of great concern as 35 to 60% of institutionalized older adults are affected (Germain et al, 2006) and are prone to increased morbidity and mortality (Lieu et al, 2001). This aspect of living conditions in a hospital setting is important to consider within the HPH context as well as in the context of the population approach to care embraced by the Quebec health care reform.

To improve patients' dietary intake, the MUHC adopted an innovative program in the fall of 2007. A more visually appealing puree meal tray was proposed (appendix 1) to all patients on a puree diet. This program was implemented at the Montreal General Hospital and the Royal Victoria Hospital in Montreal. It is in line with patient-oriented strategies "that aim to increase patients' health gains (measured as clinical outcomes, quality of life, patient satisfaction) by making everyday life in the hospital, the clinical processes and the physical and socio-cultural hospital setting as health promoting as possible" (Pelikan, 2007). According to Pelikan, "these factors to which patients are exposed constantly during their hospital stay have a major influence on the development of their health outcome. These patient-oriented strategies which aim at further developing the health promoting quality of hospital core services and setting for patients should therefore be performed by all Health Promoting Hospitals".

Some modifications had to be made to the initial protocol of our study. Due to technical problems, the new program was only implemented at the Montreal General Hospital and recruitment problems prevented us to conduct the study in this hospital. The question raised in this study is thus: What is the experience of hospitalized older patients requiring a puree diet? To our knowledge, no study has made a formal evaluation of the impact of a puree diet on elderly patients' intake or elderly patients' perceptions of meal appeal.

The objectives of this masters' thesis are therefore to document hospitalized older patients' experiences with their unmodified puree diet at the Royal Victoria Hospital and to look for patterns that may help provide patients' perceptions of their diet and its impact. Results will help tailor this aspect of care to the elderly patients' specific needs.

2. RESEARCH PROBLEM:

In the region of Montreal, 15% of the population is over the age of 65. It has been reported that the emergency room as well as geriatric units in hospitals have admitted a higher percentage of older adults (Verdon, 2006). An increase in the number of patients admitted to transition care wards has also been noted.

Swallowing difficulties are very prevalent in an elderly population (Lieu et al, 2001) with approximately 10-15% of transition care patients requiring a modified consistency diet at the MUHC and 35-60% of institutionalized elderly (Germain et al, 2006). The onset of swallowing difficulties is multi-factorial, but can include etiologies such as cerebral vascular accidents, dementia, and Parkinson's. In many cases, these disorders lead to the adjustment of a patient's meals to a puree consistency (Kemp, 2001). Several studies indicate that this consistency of diet can lead to poor nutritional compliance, malnutrition, dehydration, and decreased quality of life (Langmore, 1999, Perry & McLaren, 2004, Micelli, 1999). It has also been noted that food and eating are no longer seen as enjoyable (Perry & McLaren, 2004). In most cases, adjustments are necessary for the safety of the patients due to the greater ease of swallowing purees. Conversely, one must appreciate the impact that these changes can have (Langmore 1999) on the recipient of a puree diet.

"The uniform appearance of a plate of pureed food is not only unappetizing, but leaves one guessing about the identity of its constituents" (Langmore, 1999). Texture and appearance of food have, however, been said to be vital to maintain appetite (Kemp, 2001). In addition, sensory perception of salt, sweet, sour and bitter is said to decrease from the sixth decade onward (Ferreira & Silva, 2004). All

of these factors combined make for a potentially very dissatisfying eating experience.

Eating and food are culturally and socially significant (Mennel et al, 1992). One need only think of the last family dinner, holiday season or outing with friends to fully understand the impact that food has on one's life. Participation in these common activities is impaired for people with swallowing difficulties. Therefore, eating and food take on a much greater importance for them (Perry & McLaren, 2003).

Despite the importance associated to the experience of dining, little attention has been paid to nutritional issues (Perry & MacLaren, 2004). Several studies have examined patients' perspectives on hospital food (Allison, 2003, Stanga et al, 2003, Réglier-Poupet et al, 2005, Barton et al, 2000), but the patients included in these studies had not mentioned swallowing or eating disabilities. Studies have considered the management of dysphagia and swallowing disorders through interdisciplinary feeding and positioning programs (Steele et al 1997, Langmore, 1999, Miceli, 1999, Kemp, 2001, Jacquot et al, 2001, Lieu et al, 2001, Rodrigue, 2002, Marken, 2004, Nazarko, 2008, Easterling & Robbins, 2008, White et al, 2008, Wright et al, 2008,). Experiences with eating disabilities were studied by Perry & McLaren (2003 & 2004) in stroke survivors, but did not exclusively include individuals requiring a puree diet. One study was found, which documents nutrient intake in dysphagic elderly patients receiving a formed puree diet (Germain et al, 2006), but from a purely quantitative perspective. Thus, the perceptions of elderly patients requiring a puree diet are yet to be considered. The high incidence of swallowing difficulties indicates that this area needs to be further developed.

Therefore, efforts are needed to better understand the dining experience of these patients in order to improve it. Also, at present time, "there are no consistent standards that warrant hospitals to serve food that promotes patients' overall well-being" (Feldman, 2005) making this issue one of great importance for clinicians and policy makers (Perry & McLaren, 2004). Our purpose will therefore be to gain

insight on mealtime experiences of elderly patients with swallowing disorders, an important aspect of care.

3. LITERATURE REVIEW:

To fully understand the experience of eating a hospital puree meal for an elderly hospitalized clientele, five key topics will be developed as follows. First, we will present the concepts of health promotion and health promoting hospitals in order to illustrate the context of the research. Then, an overview of age-related changes in nutrition, and a description of swallowing difficulties and their associated consequences will be presented as well as issues related to hospitalized elderly patients. Finally, qualitative research involving older adults will be discussed.

3.1 Health Promotion

Health promotion has been defined by WHO (World Health Organization, 1986) as "enabling people to increase control over and to improve their health". It implies that people can at least partially control some of the determinants of their health. It encompasses improvements of lifestyles, prevention of chronic illnesses and the assurance of optimal health for individuals. As such we depart from the traditional distinction made by some between promotion, prevention and protection. The concept has often been used with an aging population on topics such as physical activity and nutrition. These will be presented as well as the movement towards health promoting hospitals, of particular interest as it creates the ideal setting in which can be studied the experiences of hospitalized elderly needing a puree diet.

Health promotion can be defined as "alterations in human behavior and environmental situations manifested by actions that directly or indirectly promote health and prevent illness" (Davidhizar et al, 2002). The concept of prevention is paramount in health promotion and three main categories have been used to add further precision: primary, secondary and tertiary prevention. Primary prevention

refers to immunization, diet, lifestyle and other efforts, which aim to prevent the occurrence of disease. Secondary prevention will aim to minimize effects of an early condition or preventing it from becoming more serious. This can be done through screening and modifying risky behaviors. Finally, the goal in tertiary prevention is to reduce disability and frailty associated to a condition or disease through case management, or chronic disease programs (Infeld & Whitelaw, 2002).

Many examples of health promotion projects exist internationally. Canada presents several, including, for example, the Canadian Food Guide, offering suggestions to ensure optimal healthy intake. The Physical Activity Guide for Older Adults also serves as a tool to encourage older adults to remain physically active and therefore healthy (Health Canada, 2006). The United-States distributes similar documents, which to a great extent mirror the Canadian versions.

3.1.1 Health Promoting Hospitals:

According to Pelikan (2007), the evolution of the concept of health promoting hospitals (HPH) occurred in five overlapping phases. In phase one, from 1988 to 1992, based on the Ottawa Charter, which outlined recommendations for health promotion (WHO, 1986), a draft concept for HPH was developed, a feasibility study and model project were undertaken in Vienna. The WHO HPH network was then created and the Budapest Declaration of 1991 led to the European Pilot Hospital Project, in which the concept of HPH was formally implemented and tested. The Declaration stated that promoting hospitals should provide opportunities for health promotion and health education programs for targeted client groups based on identified needs. It also reiterated the importance of the participation of patients and the community in these programs.

In the second phase (1993-1997), following the pilot project, the vision and concept were refined, as documented in the Vienna Recommendations. From 1998-2000, the third phase, the project gained more momentum as more regional and national networks were created. The fourth phase, from 2001-2006, was marked by a movement towards evidence-based practice, which led to the definition of core strategies, strategies for implementation as well as tested

standards for implementation. Since 2006, the movement is in its fifth phase and is focusing on the autonomous management of the international network and has been extended to include other kinds of health care institutions.

Eighteen core strategies were developed during the fourth phase to put the HPH policy into action (Pelikan, 2007) (Table 1). These core strategies offer a clear reference point under which this study is situated: the development of health promoting living conditions in a hospital setting (PAT-3).

Table I: Health Promoting Hospital Core Strategies.

	HP for ... / HP by ...	Patients	Staff	Community
HP quality development	**1. Enabling for HP self management in living**	PAT-1: HP living in the hospital for patients	STA-1: HP work life in the hospital for staff	COM-1: HP access to the hospital for citizens
	2. Enabling for HP Co-production of health in care	PAT-2: HP Co-production of patients in treatment	STA-2: HP Co-production of staff in work processes	COM-2: HP Co-production with services in region
	3. Development of a HP hospital setting	PAT-3: HP hospital setting for patients	STA-3: HP hospital setting for staff	COM-3: HP hospital setting for citizens
HP stratetic (re-)positioning	**4. Enabling for HP illness management**	PAT-4: HP illness managment for patients	STA-4: HP illness management for staff	COM-4: HP illness management for citizens
	5. Enabeling for HP lifestyle development	PAT-5: HP lifestyle development for patients	STA-5: HP lifestyle development for staff	COM-5: HP lifestye development for citizens
	6. Development of a HP community setting	PAT-6: HP community setting for patients	STA-6: HP community setting for staff	COM-6: HP community setting for citizens

Pelikan (2007) *Published with the approval of Prof. J. Pelikan: table originally published in "Health Promoting Hospitals- Assessing developments in the network", page 266, Italian Journal of Public Health (4, 4) 2007.*

In 2006, the World Health Organization stated that health promotion should be included in written policies as part of an organization's quality improvement system and as a result, a self-assessment tool was created to ensure that hospitals

were adhering to the vision of health promoting hospitals. The concept of health promoting hospitals has more recently been extended to health promoting HSSCs and health promoting networks (Dedobbeleer et al., 2008) In Montreal, in conjunction with the last health care reform, the 12 CSSS (*centre de la santé et des services sociaux*) were allocated a budget to appoint a senior manager in charge of health promotion and prevention (Côté, 2007). The MUHC established a health promotion directorate and the MUHC, incorporates the HPH concept in their overall vision.

3.1.2 HPH and nutrition:

Within the context of health promotion and health promoting hospitals, projects have been developed to target nutrition (Zagurskiene et al, 2004, Sommerger & Frühwald, 2007, Brunazzi et al, 2007, Tountas et al, 2007, Lin & Yuang, 2008, Yang et al, 2008). However, these projects do not address the needs of people requiring modified consistency diets.

Projects have been created, which address nutrition in the workplace Sacchi et al, 2004, Tountas, Rapti & Palikarona, 2007, Tountas et al, 2008), targeting staff rather than patients. Other WHO Health promoting hospital projects report that education to staff is often encouraged, but that the voice of the patient is often not heard. One project, set in Ireland (Flanagan, 2005), reported that staff assistance was lacking during meals in a long-term geriatric setting and offered suggestions for improvement. Another aimed to establish a dysphagia service to target inequalities in health (Ackermann, et al, 2006). A project in Thailand (Auakamul et al, 2005), set out to encourage healthy choices and increased intake in a community based geriatric population touched on social setting as a factor positively affecting intake. However, no project incorporating hospitalized older adults' perspectives were found. Perhaps as the HPH movement gains further momentum, documentation of programs involving older adults or dealing with swallowing disorders will be more readily available.

With this in mind, results of this proposed research will be a relevant source of information and will be complementary to existing data as it will add to the

perspective of the hospitalized older adult vis-à-vis a puree diet. This study will enable researchers to gain greater insight as to the experience of patients requiring a puree diet at meal times and will offer a new area of exploration for future HPH projects, putting the patient at the forefront of care planning (Enehaug, 2000).

3.2: Malnutrition and hospitalized elderly

Functional decline is well documented in hospitalized older adults (Xia et al, 2006, Singh et al, 2006, Correira et al, 2003, Doherty King 2006, Barton et al 2000, Hancock et al, 2003) including physical deterioration and malnutrition. Generally speaking, 34-50% of hospitalized elderly experience one form or another of functional decline between admission and discharge from hospital (Doherty King, 2006). This decline can affect many aspects of life such as ambulation and transfers, dressing, bathing, continence and eating. The management of patients with dysphagia becomes a topic of surging interest as functional decline is often correlated to diagnoses of dysphagia (Easterling & Robbins, 2008, White et al, 2008, Nazarko, 2008).

Nutrition has been said to be an underdeveloped topic, especially with respect to older adults (Neno &Neno, 2006). Allison (2002) indicates that there is a high prevalence of malnutrition in hospitalized elderly. Up to 65% of hospitalized elderly are or may become undernourished (Meyyazhagan & Palmer, 2002). Malnutrition in older adults is suspected when recent weight loss (within the last year) exceeds 10 pounds, when overall weakness is noted, when serum albumin levels are below 3g/dl and when cholesterol is below 150 mg/dl (Doherty King, 2006).

Malnutrition in the hospitalized elderly can potentially be explained through several factors. For one, diet is often times drastically changed (Doherty King, 2006) and consideration of cultural habits and rules relating to eating and the eating environment cannot always be respected (Allison, 2002, Snyder & Fjellstrom, 2005). This would include lack of privacy revolving around pre-eating rituals (prayer), lack of choice regarding time at which meals are taken among many other factors. In addition, foods rich in nutrients, but which require more chewing or

effort in swallowing can be overlooked by older adults due to poor fitting dentures or altogether missing dentition (Compher et al, 1998).

Moreover, diagnoses such as dementia, Parkinson's, stroke, constipation and mal-absorption can all have effects on intake (McReynolds & Rossen, 2004). Finally, anxiety, depression, prescribed medications, a history of alcohol abuse and the patient's lack of coordination or ability can all be associated to poorly met nutritional needs in hospitalized older adults (Meyyazhagan & Palmer, 2002). All of these possible explanations of malnutrition can be addressed and the associated consequences minimized with a concerted effort from the multi-disciplinary team. However, the prevalence of this issue as indicated by the important number of studies on malnutrition in hospitalized elderly portend that further efforts are required (Doherty King, 2006, Jacquot et al, 2001, Allison, 2002).

In another research, Singh noted that additional instruction in nutritional assessment is required in clinical training. A chart review indicated that 69% of patients were malnourished, when only 1 patient had been flagged as malnourished by clinical staff. A subsequent questionnaire administered to staff indicated low levels of knowledge related to nutritional assessment (Singh et al 2006). The evaluation of nutritional status may therefore not be done well or in a consistent way. A Canadian research in long term care further outlined these inconsistencies as it indicated that the management and diagnosis of patients with dysphagia seems to have developed into a distinct field of practice, but that it lacks a base of evidence. Therefore, this area needs to be considered further as some commonly used interventions are inefficient and potentially hazardous (Campbell-Taylor, 2008). Also of interest is a Latin American epidemiological study indicating that malnutrition increases with length of stay (Correira et al, 2003).

3.2.1 Sensory Impairment:

From a sensory standpoint, impaired vision, smell and taste will all have impacts on motivation towards eating and therefore may lead to malnutrition (Lieu et al 2001, Langmore, 1999). Not all of these senses are necessarily affected in

every older adult, but even difficulty in one can potentially lead to decreased intake.

Impaired vision due to cataracts or macular degeneration can make eating a frustrating experience as it is said that we eat with our eyes (Kemp, 2001). Not being able to visually recognize what is being eaten will have an impact on engagement in the eating process and therefore quantities ingested.

Noted decreases in older adults' abilities to smell and taste (Ferreira & Silva, 2004, Neno &Neno, 2006) will also affect intake as both senses are very closely related to eating. Recognition of salt, sweet, sour and bitter flavours can decrease from sixty years on (Ferreira & Silva, 2004). Perception of viscosity is also decreased (Lieu et al, 2001). Jacquot et al (2001) also indicated that acid and salty stimuli will bring about fluid salivary production, which tends to encourage the swallowing reflex whereas sweet and milky stimuli will provoke a thicker saliva production, which may hinder swallowing.

Therefore, for hospitalized older adults, depleted functional reserve (Lieu et al 2001), combined with decreased sensory perception, physiological changes, factors associated to medication, diagnosis and institutional environment, the experience of eating can be one marked with difficulties and risks of inadequate intake.

3.3 Swallowing:

When an older adult is then also confronted with a swallowing disorder, it is not surprising that mortality and morbidity rates are high (Compher et al, 1998, Langmore, 1999, Kemp, 2001, Lieu et al, 2001, Miceli 1999). Thus far, nutritional requirements in older adults and age related changes have been considered. The issue of swallowing difficulties will now be outlined. Physiological components, consequences of having a swallowing disorder and various management strategies will be described.

The swallowing process is highly complex, controlled and coordinated. It comprises three phases. The first one, the oral phase, refers to the production of saliva, the formation of a bolus on the hard palate and displacement of the bolus to

the pharynx. This is followed by the pharyngeal phase in which the epiglottis will close over the larynx to prevent aspiration and the bolus will then move towards the esophagus, marking the start of the esophageal phase, which will move the bolus of food to the stomach through peristalsis (Kemp, 2001). A swallowing disorder will occur if one aspect of this process is affected. For example, there could be a delay in the epiglottis closing over the larynx or a delay or incapacity in moving the tongue to initially form the bolus. It is estimated that 10-15% of acute care or hospitalized older adults have a swallowing disorder (Kemp, 2001, Lieu et al, 2001, Miceli, 1999). This number can climb up to 74% of long-term care patients (Kemp, 2001, Miceli, 1999). The usual and most effective treatment of this disorder is to prescribe a modified diet to facilitate swallowing (Wright et al, 2008).

Indeed, puree consistency foods require no chewing, are easily transported to the pharynx and travel at a slower rate than liquids, thus making swallowing easier and avoiding permanent obstruction (Langmore, 1999). In cases of severe dysphagia, where even puree foods are not safely swallowed, more invasive measures can be considered such as nasal-gastric feeding or the insertion of a PEG (pericutaneous endoscopic gastrostomy) for complete enteral feeding (Rodrigue, 2002). In this research, we will focus on older people requiring puree consistency diets.

Consequences of requiring a puree diet as a result of a swallowing disorder are many and can often be very negative. The situation for some will be permanent and will require an adjustment to a less-than-appetizing menu (Kemp, 2001, Langmore, 1999). Many aspects of a person's life may be affected such as communication, cognitive capacity, and overall physical function, but food and eating link biological needs to social and cultural needs (Snyder & Fjellstrom, 2005). Therefore, swallowing difficulties can profoundly affect a person's life and deprive them of quality of life (Kemp, 2001, Langmore, 1999, Miceli, 1999, Perry & McLaren, 2002).

Even when one is not able to follow a conversation or partake in a more physical activity, the act of eating a regular meal with friends and family partly

restores normality. Thus, the consequences of having to be fed an unpalatable menu can lead to psychosocial deterioration, refusing to eat in public, depression and disengagement or loss in the joy of eating (Perry & McLaren, 2002). Moreover, swallowing disorders put people at risk of developing pulmonary complications (due to aspiration), cognitive decline, skin breakdown, decreased nutrition, and dehydration (Miceli, 1999). In fact, many people with swallowing disorders are unable to manage the volume of puree needed to meet nutritional and hydration needs (Kemp, 2001).

The impact that a puree diet has on a person's life is therefore significant. No other food alterations are known, which will offer the same safety as puree food in the treatment of swallowing disorders. Moreover, several other methods used in the management of dysphagia have been studied with no significant outcome noted (Jacquot et al, 2001). Some of the methods available are described below.

Management of dysphagia issues refers to the education, collaboration and planning with other disciplines as well as changes made or recommended to the eating environment and behaviors taught to caregivers to help the patient swallow safely (Langmore, 1999). Three main objectives can be set in the management of dysphagia: ensure adequate intake, prevent complications and promote quality of life (Jacquot et al, 2001). In order to fulfill these objectives, several programs exist, which address intake and aim to avoid complications, but few consider the overall experience of eating with the same attention. For example, some programs recommend positioning tips to ensure proper swallowing: adopting a seated position with head and shoulders positioned slightly to the front, head flexion, and the Mendelsohn maneuver, which involves the stopping or interrupting of swallowing to allow time for required muscles to react (Jacquot et al, 2001, Miceli, 1999).

Classification of patients according to level of help needed has also been suggested in some nursing units with the purpose of providing personalized care as a means of improving quality of life (Miceli, 1999). Jacquot et al (2001) suggest limiting distractions during the feeding process, but Snyder & Fjellstrom (2005) indicate that offering a pleasant social environment had better effects. Studies also

suggest that smaller, more frequent portions can encourage a greater intake in older adults (Barton et al, 2000, Allison, 2002). Finally, other techniques included exercises suggested to strengthen muscles required in swallowing, enhancing flavor to further stimulate appetite and swallowing and surgery, which is very seldom appropriate (Jacquot et al, 2001). The use of puree consistency food shaped in the form of its solid form has also been used, but with no formal evaluation of impact on intake or appeal.

All of these studies call upon a multi-disciplinary approach to patient care and deal primarily with staff interventions as opposed to patient perceptions. Perry and McLaren did, however, consider patient perspectives of consequences of a puree diet on quality of life in stroke survivors. Their studies (2003, 2004) indicated that food and eating related impairments were integral parts of life and therefore of the rehabilitation process.

Nutrition in the elderly hospitalized patient is important. In the case of those requiring a puree diet, some information is available, but when patient perspectives are concerned, more information is needed to guide staff and caregivers.

3.4 Hospitalized elderly and mealtimes:

From a nutritional standpoint, studies indicate issues relating to mealtimes. In a descriptive study, adopting both qualitative and quantitative research methods, researchers observed staff and patients during mealtimes and supported their observations with interviews with the patients. It was noted that older patients did not receive enough help during meals and that social interaction was neglected (Xia et al, 2006). Dickinson et al (2008) studied the mealtime experience of hospitalized older adults by using an action research design to change the way staff addressed mealtimes and nutrition for these patients. No other studies known to us exist, which address either mealtime experiences of patients, or the experience of patients requiring a puree diet. This strongly supports the pertinence of this proposed study, especially given the introduction of a new program.

In an effort to address the global issue of malnutrition in older adults and poor intake at mealtime, researchers have looked at reducing portion sizes and fortifying menus to increase intake (Barton et al, 2000, Allison, 2002) as well as develop mealtime management programs. More recently, a study presented a review of evidence-based practice strategies supporting feeding, hydration and meal time pleasure for patients with dementia (Easterling & Robbins, 2008). These included ensuring a consistent environment, providing spicy, sweet and sour foods to maximize sensory stimulation, and making food visually appealing. Another research described a targeted feeding assistance program for dysphagic patients, which helped to increase overall intake and personalized the approach to nutrition for these patients (Wright et al, 2008).

Other studies have looked at the quality of the food. As an example, one study "followed" the food from the main kitchen to its delivery to the patient, noting time delays and errors. The author mentioned time of delivery and staff availability as well as food temperature as areas for improvement (Réglier-Poupet et al, 2005). In another project, older patients were interviewed to gain insight as to their perspectives about hospital food (Stanga et al, 2003). Finally, a quick ethnography was used to evaluate the decision-making process as it relates to dietary issues in hospital. It found that no consistent guidelines are followed in any decisions relating to food provision (kinds of food, overall nutritional concerns, food production methodologies etc.) thus diminishing the importance of nutrition within a hospital setting (Feldman, 2005).

In another paper, authors also looked at quality of life with respect to nutrition in stroke survivors. Perry & McLaren found that eating disablement was a numerically small, but significant indicator of quality of life (2004). The authors also concluded that food and eating were very important aspects of the studied patients' lives.

Germain et al (2006) was the only study that documented the use of formed purees with an elderly institutionalized population. The study looked at BMI, weight and nutrient intake, but did not consider the perceptions of the patients of the study. Results showed that the program had success in increasing intake.

It is important to note that few of these studies (Germain et al, 2006, Xia et al, 2006, Perry & McLaren, 2004) specifically considered patients with swallowing disorders. As a result, information pertaining to this population segment is in need of further development. In addition, we found no studies considering elderly patients perceptions of their mealtimes.

3.5 Qualitative research:

Studies involving older adults can pose several challenges, but are crucial to the "examination and improvement of hospital care and outcomes" (Berkman et al, 2001). These challenges include sensory changes, comprehension, time needed to administer questionnaires, tolerance issues, privacy, and frequent interruptions (Hancock et al, 2003). As this study will consider patients' perspectives, it is qualitative in design, in that it aims to describe a social phenomenon rather than test a hypothesis (Giacomini & Cook, 2000). It is therefore important to use methods that will ensure rigor to increase the weight that results of the study will have. Lincoln and Guba describe criteria for rigor in qualitative research differently from those used in quantitative methods (validity and reliability). The criteria include credibility, transferability and dependability (Lincoln & Guba, 1989, as cited in Koch, 1994). Credibility refers to the "internal validity" of the study and asks that the researcher describes his experience in terms of decisions made, reactions to various processes (This can also be referred to as a decision trail). In most cases, this is done by keeping a field journal. Credibility can also be established by asking the participants themselves to discuss preliminary patterns and study findings. Since discussion with elderly patients may be difficult, keeping a journal may be the best solution. Transferability refers to the "applicability" of the study findings. In order to enable this, the study context must be adequately described to allow evaluation of "fittingness", if results can be transposed to another context. Dependability ("consistency") asks whether or not another researcher would arrive at similar conclusions if the same decisions were made.

Reflexivity is another criterion for ensuring rigor, which will lead to confirmability. Reflexivity is defined as being aware of one's biases, expectations.

Being aware of one's inclinations and documenting them can lead to higher confirmability, indicating whether or not results were determined by the participants or by the influence of the researcher's perspectives (Seale, 1999). In order to further achieve this neutrality and in order to ensure completeness of the data collected, the qualitative researcher will use a triangulated approach; the use of several sources of information to collect data. Triangulation can be a combination of data collection methods, for example interview and observation, or it can take the form of a combination of information sources, such as patients and families or staff.

4. ANALYSIS FRAMEWORK:

The aim of this project is to gain insight in the following hospital-based issue: mealtime experiences of hospitalized older adults requiring a puree consistency diet. A puree meal will be the main course in a puree consistency meal tray. Fluids may be of regular consistency or thickened.

In this study, we will examine patients' perceptions of their puree diet, and factors positively or negatively impacting their experience with a puree consistency meal. Eating and appetite are affected by several factors, including mood, personal values, wholesomeness, food, environment and fellowship (Wikby & Fagerskiold, 2004). Information collected from patients and staff will allow us to identify themes emerging and may help address potential problems related to the meal time experience. Interpretations of these results will be done based on results obtained from previous studies on the social and aesthetic aspects of dining, the concept of social support (Heaney & Israel, 1991), and the educational and ecological diagnosis of the PRECEDE-PROCEED model (Green & Ottoson, 1999).

Langmore (1999), Perry & McLaren (2004), Ruigrok & Sheridan (2006) all noted that appearance of the patient's food tray affects the mealtime experience. Other study results reveal that assistance (Marken, 2004, Pfeiffer, 2005) and positioning during the meal (Jacquot, et al 2001; Miceli, 1999) also influence the mealtime experience, as does the social environment in which the meal is taken (Ruigrok & Sheridan, 2006; Pfeiffer et al 2005; Snyder & Fjellstrom, 2005). Mood and health issues further impact the experience of a meal in hospital (Meyyazhagan

& Palmer, 2002; Wikby & Fagerskiold, 2004). These results tie in with the concept of social support and the PRECEDE-PROCEED model.

Social support cannot be viewed as "a theory itself, but rather concepts that describe the structure, process and functions of social relationships" (Heaney & Israel, 1991). Despite there being other definitions, this study will consider social support as "the individual belief that one is cared for and loved, esteemed and valued, and belongs to a network of communication and mutual obligations" (Cobb 1976).

According to House (1981), there are 4 main types of social support: emotional (love and trust), appraisal (feedback, social comparison), informational (advice, directives, suggestions) and instrumental (financial help, time, explicit interventions on the person's behalf). Cassel (1976) stated that social support is a "key protective factor in an individual's health". This was supported by a literature review conducted by Heaney and Israel (1991), which showed that social relationships had an important causal effect on health, stress and the association between stress and health. Cohen and Syme (1985) described this interaction as a buffering effect, where the social support available helped avoid stress or better cope with it.

In 2000, Berkman identified three different pathways through which social relationships can affect health. Health behavioral pathways include social relationships, which influence a person's health (i.e. a person may be more inclined to smoke in the absence of social support). Psychosocial pathways see social support affecting mental health through self-esteem and self-efficacy. Physiological pathways view social relations strengthening the "coping abilities of a person and hereby reducing stress and its negative physiological effects on health".

More recently, in 2008, Heaney and Ashida found that regular contact with members of a social network lead to "perceived social connectedness". This concept was significantly positively associated to health. According to the authors, the notion of "social connectedness may be more important to an older adult's health than the perceived availability of social support".

If we use social support as a basis to better understand hospitalized elderly patients' experience of a puree meal, we might assume that older adults tend to live longer and have fewer health problems when a social network is present, which may include family and friends, but also professionals. This may be a direct result of having someone to rely on when in need, but results of research also suggest to consider the types of social support available to patients as well as the pathways through which social support is offered. In this project, we will collect information on the social context during meals as well as on the assistance received during meals. Not having someone to adequately assist or support one during meals may have an effect on the patient's appetite and may help understand the poor reaction towards a puree consistency meal. In this case, assistance will be considered as any help offered to the patient by the attending staff including, but not limited to cueing, feeding, opening containers. The patients' perception of their mealtime experience may therefore shed light on areas needing to be improved relating to social support, such as the type of support offered or absent in the patient's life.

The health promotion planning model PRECEDE-PROCEED (Green & Ottoson, 1999) is used as a framework to plan, develop and evaluate health promotion programs. To produce a clear understanding of the actions and conditions affecting a population's problem or need, five diagnoses are called for (i.e. social, epidemiological, behavioral and environmental, educational and ecological and administrative and policy diagnoses). These diagnoses help to identify potential points of intervention. In the educational and ecological diagnosis of the model, three groups of factors are related to health behaviors. Predisposing factors include socio-demographic and personality factors and beliefs, values, knowledge, attitudes and perceptions that motivate a behavior prior to its occurrence. In this case, socio-demographic and personality factors, beliefs about the act of eating puree foods, perception of puree foods may have an impact on the mealtime experience of hospitalized older adults. Reinforcing factors refer to rewards or punishments thought to maintain the behavior over time. These factors could include the influence that nursing staff, patient attendants and family members have on the patient in terms of their reactions towards the meal. One

could also posit that the social context in which a meal is taken might also play a role in whether or not the patient will adopt the wanted behavior of consuming the meal. Enabling factors encompass environmental characteristics as well as person's skills, which are required for the occurrence of a behavior. These could consist of available human resources to support the patient within the context of having a puree diet prescribed to them. One could further look at the types of foods available and the practicality and feasibility of offering a wide array of pureed food in an institutional setting. Findings of our study will be examined in light of the PRECEDE-PROCEED model. We will discuss the usefulness of the model to understand the problem of mealtimes for hospitalized older adults and to guide the development of interventions.

5. METHODS:

5.1 Research Strategy:

Since the goal of the project is to better understand the experience of hospitalized older patients requiring a puree diet, an exploratory qualitative case study design was used to assess patients' perceptions of a puree meal tray proposed to hospitalized elderly with swallowing difficulties (Appendix 1).

Information was gathered on the experience of hospitalized elderly patients eating a regular, unmodified puree meal tray at the RVH. The pertinence of the study was not diminished by the modification in the protocol as elderly patients' perceptions of their puree meal tray have not been documented formally in previous research. Thus, data gathered from the patients at the RVH will help better understand the experience of eating a puree diet in a hospital setting and may help justify the expenditure related to upgrading the equipment at the RVH and subsequently implementing the more visually appealing meal trays.

We bound the study by one case: patients receiving a puree meal tray at the Royal-Victoria Hospital.

Multiple sources of information were used to provide the detailed in-depth picture of the mealtime experience of hospitalized elderly patients having a puree diet. In using several sources of information, the study will therefore have greater

internal validity (Yin, 2003). As such, patients' interviews were used in conjunction with observational data and impressions and statements about patients' experience with their diet gathered from health care professionals working with the included patients.

The project was conducted over the course of 8 months. A more long-term evaluation of the experience of these patients was not feasible in the MUHC setting since patients' length of stay is highly variable due to potential discharges and because of increased mortality risk in an older hospitalized clientele.

5.2 Subjects:

All patients were hospitalized at the Royal-Victoria Hospital at the time of the study. A convenience sample of patients, over the age of 65, requiring a puree consistency meal was chosen. The purpose is credibility not representativeness. A 56 year old was included, despite not meeting the 65 year old criteria originally set as this patient was in transitional care and exhibited several chronic and social issues traditionally classified as geriatric affectations. His situation was in no way significantly different from other patients included and therefore he was deemed to be eligible for the study. Selected patients were those accepting to participate in the study and adhering to the following criteria: speaking either English or French, no hearing problems, ability to express themselves and to understand questions and able to endure the interview and non participant observation conducted by the researcher. This was verified beforehand by the attending physician or nurse. All patients had a *Mini Mental Status Examination* (Folstein et al, 1975), the results were equal to or more than 24/30. The clinical nurse specialist recruited all participants. In total, 8 patients were considered eligible. Two patients were excluded later on. One patient's answers were too monosyllabic to be included as they did not yield any significant information. Another patient was exhibiting some distress during the interview, which was interrupted and not completed and hence not included in the analysis. Therefore, 6 patients were included in the study. The sample included four women and two men, mean age was of 80 years,

ranging from 56 to 102. No new information was provided after results obtained from the six patients.

Staff members selected for the study also spoke English or French and included nurses and patients' attendants (*préposés aux bénéficiaires*). They all had direct contact at mealtime with the patients included in the study and the information they provided was complementary to that obtained by the patient's interview. A staff member was selected for interview for each patient having been included. Staff was only interviewed about one patient per day so as to not confound the information being given on each patient.

All patients and staff members involved were given and explained the informed consent form (Appendix 2).

5.3 Data Collection:

Different methods were used to collect data on patients' mealtime experience: patients and staff interviews, non participant observation and patients' charts (table 2).

Semi-structured interviews were conducted with the patients as well as with nursing staff or patients' attendants assigned to them. One patient interview and one staff interview was conducted for each patient. Two interview guides were developed. Patients were interviewed by the primary researcher on the importance of having a good meal, their perception of the puree diet and the meal they just had, their usual appetite, their morale, the assistance received during the meal as well as the social context in which the meal was taken and suggestions for improvements. Several researchers have used this method in studies considering aspects of older adults' lives and have had good results (Jonas-Simpson et al, 2006, Lee et al, 2007, Perry & McLaren, 2003, Koch, 1994). The interviews were conducted in a way to least hinder or affect participants. As much as possible, they were carried out in a quiet environment in order to minimize distraction or were conducted in the patient's room if they preferred. They were interrupted if the patient was deemed to be in any sort of distress, as indicated by the patient voicing discomfort, visibly

appearing uncomfortable (grimacing) or fatigued (yawning, eyes closing). This was the case for one of the selected patients.

Staff members were interviewed and asked to provide information on their perception of the patient's morale, the patient's reactions to the meal, the patient's appetite, the patients' intake, the assistance provided during the meal as well as the impact of the social context on the mealtime experience. Staff members were also asked to provide suggestions for improving the mealtime experience. Interviews with staff were conducted on the same day as those with the patients. They were scheduled at a convenient time for the staff member so that he/she did not feel pressured to answer questions and thus perhaps omit important information.

Since the population being considered is prone to have overall low activity tolerance and potential underlying cognitive impairments, the process of gathering information was short for patients (10 to 15 minute interviews) further completed by non-participant observation during mealtime. Interviews with staff members were kept short as well, at 10 to15 minutes, to avoid interfering with their daily tasks. The observation grid (Appendix 4) used was previously validated and used in another study (Steele et al, 1997). It was slightly modified to meet the project's needs. Specifically, the category "mealtime context" was added to indicate a social or isolated mealtime experience. In addition, the categories "specific eating problems" and "challenging behaviors" were removed as selected patients did not present these conditions included in this grid (Steele et al, 1997). "Mealtime observed" was also removed since interviews and observations all occurred at lunch time. "Fluid viscosity" was removed as data on the severity of the swallowing disorder, and the type of fluids, were collected separately.

As a means of giving a full description of the population being studied thus aiming to achieve greater transferability, data were also collected on age, gender, diagnosis and length of time since prescription of a puree diet, severity of swallowing impairment and length of stay in hospital on a separate form. These data were collected through a review of the patients' chart, after consent was obtained through the informed consent form given to the patients.

The observation grid allowed the researcher to get an overall impression of patients' mealtime experience. Its aim was to collect information on the assistance provided during the meal, the patient's reaction to the meal as well as the social context of the meal. Since the primary researcher is regularly seen by the patients and the staff, her presence during the meal did not affect their reactions thus avoiding the Hawthorne effect. No changes were made to the patients' regular routine in the context of the observations. They were conducted once the patient had received the meal tray, from the entrance of the patient's room, whether they were in a single or four bedded room. No assistance of any kind was provided by the researcher to the patient during the observation. When assistance was provided to the patient at meal time, it was given by nurses or patient attendants. Interviews and observation grids were pre-tested with three patients and three staff members. No modifications had to be made.

The interviews with patients and with the staff in combination with the observation grid all provided information on patients' reactions to the meal, patients' appetite and morale, assistance provided, the social context thus ensuring a triangulated approach.

Sequencing of data collection occurred as follows. The interviews and observation were conducted on the same day to ensure that no biases were introduced. Lunchtime was selected as the optimal time to conduct interviews and observations as maximum staff is scheduled at that time, ensuring the least disruption in usual routine for patients and staff. Observation was done first, after informed consent was obtained. Interviews with the patients were conducted immediately after mealtime. The interview with the staff member was done after the patient's interview had been completed, on the same day to ensure consistency in the results.

In order to touch upon the concept of transferability, a field journal was kept throughout the process, noting any decisions made relating to the research as well as any contextual information worthy of mention and potentially affecting interpretation of results.

Table II: Type of information by source of data collection

Information source/ Information	Observations	Patient Interviews	Staff Interviews	Charts
Patient Characteristics (Gender, age, diagnosis, length of stay, diet)				X
Assistance provided	X	X	X	
Reaction to meal and diet	X	X	X	
Intake	X		X	
Social context	X	X	X	
Mood		X	X	
Importance of a meal		X		
Aspects of meal (taste, color, texture, smell, presentation)		X		
Usual appetite		X	X	
Suggestions to improve mealtime		X	X	

5.4 Data Analysis:

There are three data sets. Interviews were transcribed and then verified by the researcher. The transcriptions were carefully read. The identification of emergent themes and issues was done subsequently as well as the development of a coding scheme that was applied to the transcribed text of patients and staff interviews. Data matrices were created. In order to ensure the rigor of the study, and hence "internal validity", the transcriptions were reviewed by a clinical nurse specialist working on the units where patients were recruited from and well versed in qualitative research. She agreed with the analysis and themes identified. This ensured consideration of rival explanations that may have needed to be considered (Yin, 2003).

Descriptive statistics were used to analyze patients' observations. The different sources of information were used to cross validate findings, patterns and conclusions. A set of hypotheses and questions for future research are identified later.

5.5 Timeline and Budget:

The study took place from Spring 2008 to end of Summer 2008 as per the initial protocol. Scientific review took place in early 2008. Following approval, participants were recruited. Data collection occurred from June 2008 to October 2008 inclusively. Sequencing of activities as detailed earlier began as soon as participants signed consent forms. Participants continued to be recruited and included in the study until the researcher deemed that saturation of information had been attained. That is to say, interviews were transcribed upon completion and were preliminarily analyzed to determine when saturation had been reached. This occurred after six participants had been recruited. Final analysis of data as well as interpretation occurred last summer, with results available by end of August 2009.

Budget demands for the study were nominal as meal trays were provided by the hospital and one hospital staff member transcribed the interviews.

6. ETHICAL CONSIDERATIONS:

Several issues exist, which may hinder a clinical study with hospitalized patients including tolerance, comprehension and interruptions (Hancock, 2003). Another major component of research, more difficult to ensure, relates to consent and ethical concerns. Because of vulnerability and frailty, significant time and patience are needed to ensure that patients are fully informed and understand that they may withdraw from research at any point. Berkman (2001) highlighted these issues in a study of 240 participants in New York City in which he concluded that conducting research with older adults is possible, but awareness of their specific needs must be at the forefront of the researcher's methodology.

In light of this, care and attention were given throughout the study. Recruitment was done with the help of the clinical nurse specialist, aware of the study, but not directly involved, so as to avoid putting pressure on patients or family members. Interested participants were required to sign an informed consent form. Once selected, emphasis was put on the fact that disengagement in the process could happen at any time. During data collection and analysis, confidentiality was assured by changing the patient's and the staff's names into

numbers. All documentation was kept in a locked filing cabinet, accessible only to the primary researcher. Also, if at any point during the observation or the interview, patients were considered to be in any distress, ceasing of the activity was done immediately.

7. RESULTS :

Results of the study will be presented under four headings: patients demographics and medical characteristics, mealtime observations, patients perceptions, staff's perceptions and convergence among sources of information.

7.1. *Patients' demographic and medical characteristics*

The sample was composed of six individuals: four women and two men with ages ranging from 56 and 102. Mean age was 80.

All patients selected were on a puree diet. Three people received thickened liquids, whereas the others were allowed to have regular consistency beverages. Participants presented an array of diagnoses common in an elderly population, including CVA (cerebro-vascular accident), mild dementia, general deterioration (an overall deterioration of a persons cognitive and physical capacities) and loss of vision. Cardiac surgery and leukocytosis were also noted. Despite there being a primary diagnosis of dementia, the patient was able to understand the questions and express herself clearly. Her answers were shorter than other participants, but very meaningful. The length of time since the prescription of a puree diet ranged from 3 weeks to 12 months, with a mean time of 4.3 months. Length of stay in the hospital varied from 9 to 307 days, putting the average sojourn at 81 days.

Table III: Patient characteristics

Patient	Sex	Age	Food	Liquid	Time since Prescription	Diagnosis	Length of stay
1	M	56	Puree	regular	2 months	CVA/leg ulcer	307 days
2	F	102	puree	puree	3 months	General deterioration	42 days
3	M	74	puree	puree	12 months	Cardiac surgery	21 days
4	F	90	Puree	Puree	3 months	Dementia	51 days
5	F	86	Puree	Regular	2 months	Loss of vision	56 days
6	F	72	Puree	Regular	3 weeks	leukocytosis	9 days

7.2. *Mealtime observations*

All patients ate their meals in their room and had just received their tray at the time the observation was conducted.

We observed that no participant wore dentures; four chose not to wear any or were not financially able to procure some despite being edentulous or having few teeth. The other two had their own teeth and therefore needed no help with this aspect.

All patients selected needed assistance at mealtime. All but one participant needed help being positioned. This included being put in a chair for the meal, being propped up in bed as well as having the table height adjusted for meal. During the meal, five participants needed their containers opened and their tray set up. One of those five also needed some prompting during the meal. Only one patient needed to be fed during the entire the meal.

In terms of patients' attitude towards the meal provided by kitchen staff, three were showing interest for the meal placed in front of them and three were showing no interest at all. Interest for the tray was determined based on the patients' immediate reactions upon receiving their meal. Patients expressing interest in items on their tray, starting to eat as soon as the tray was received or showing facial expressions related to curiosity or anticipation were considered to be interested in their meal. Conversely, if patients did not react to their tray being delivered (ignored the tray) or if a look of apprehension (disgust in extreme cases) was observed, they were considered to be uninterested. Interest or disinterest had an

impact on the patients' food intake observed. Two patients ate ¾ or more of the meal, two ate about ½, and two ate ¼ or less.

The social setting in which patients had their meal varied from being completely alone (1) to eating with other patients only (4) and eating with other patients and staff (1). Additional observations, not included in the structure of the grid gave a more complete representation of mealtimes for the selected patients. Of note are the numerous interruptions that occurred during the meals, which were not related to providing any form of assistance with the meal. Indeed, roommates were taken to tests, medication was provided during the meal, physicians conducted examinations with roommates and staff entered and left the room. Also, it was noted that patients were eating with other patients; they ate their meal in silence. There was no communication at all, as roommates were either sleeping or silent. One patient had a private caregiver who would assist during all meals. In most cases, the delay of time from the receipt of the tray to the provision of assistance was over 10 minutes.

Table IV: Summary of observations

Aspect considered	Category	Items observed	Frequency
Assistance: Help provided to the patient during the meal.	Provision of mealtime assistance	No assistance provided	0
		Assistance provided	6
	Type of assistance provided before start of meal	Dentures given -Yes - No - N/A	 0 0 6
		Positioning assistance: - Yes - No - N/A	 5 0 1
	Type of assistance provided during meal	Tray set up (opening containers)	5
		Monitoring	0
		Prompting	1
		Some feeding	0
		Total feeding	1
Reaction to meal	Attitude towards meal	Interested	3
		Disinterested	3
		Rejects food	0
	Oral intake	¾ or more	2
		½	2
		¼ or less	2
Social Context	Mealtime context	Alone in room	1
		With staff in room	1
		With family or friends	0
		With other patients in room	4
		With staff and other patients in room	1
Additional observations:	-Many interruptions or disruptions - When with other patients, they are drowsy, non communicative between each other in the room - Long delay from receipt of tray to provision of assistance - Patient in activity room, but put back in bed before lunch - Private caregiver - Pt asked to go to bathroom before meal, told to eat first, uncomfortable		

7.3. *Patients' perceptions*

Analyses of patients' perceptions yielded several themes that are important in the experience of mealtimes for elderly patients requiring a puree diet. The theme that emerged most frequently from the data was the difficult identification of food items on the tray. Following the difficult identification, we found in decreasing frequency the flavour of the food, the loss of control associated with the diet and decisions pertaining to the meal, the social context and the lack of food variety. Food appearance was the least frequently mentioned.

Difficult identification of food

Throughout the patients' interviews, the difficult identification/recognition of food items stood out as an important factor affecting the experience of eating a puree meal. On the lunch trays provided, three modes of presentation are used to display the foods. In the first scenario, a rectangular box is given in which 3 strips of food are present. Usually, there is a strip of starch, a strip of one type of vegetable and a strip of meat. The starch strip is usually whitish-grey, the meat is beige to brown and the vegetable strip will have the most variety, ranging from carrot orange to green. The second scenario displays the same categories of food; starch, vegetable and meat, in three scoops on the plate. Finally, in the case of casseroles or composed dishes such as lasagne, only one scoop of food is present on the tray. Menu sheets accompany each tray indicating what each strip or scoop represents, but they are in small font, which makes it difficult for the patient to read. Staff members did not habitually read the menu sheet out to the patient. It can therefore be very difficult to identify what each food element is based solely on color and appearance/presentation. The meat strip will be brown whether the meat is beef or veal or beige for pork and chicken, the starch white to grey for pasta or potato. Only the vegetable will take on a more colourful palette, but will be similar for green peas, beans and broccoli. Therefore, if one is having chicken, potatoes and cauliflower, the color of the strips or the scoops will be very similar. This aspect of the puree meal took on great importance for participants as the following illustrates:

"Sometimes you can recognize the food and sometimes you cannot."
"It was three strips of 'have you discovered me yet."
"Yes, I see the colors. This one is potatoes and this is some kind of fruit."
[on the menu was puree zucchini and vegetarian lasagne]".
"I do not know what this is. Pureed zucchini and mashed potatoes."

Flavour

The lack of flavour or bad flavour was other important factors affecting the mealtime experience:

"The taste is the same: baby food."
"Of course, there is no flavour in the food of the hospital. (...) The taste is terrible."
"The potato soup is obnoxious".
"The only thing missing with the meal is seasoning."

The relationship between the identification of the food items on the tray and their flavour was very strongly highlighted by patients. Indeed, this symbiosis can be inferred from some of the following comments:

"One tasted like potatoes and one tasted like some kind of thing and the other was supposed to be some kind of vegetable puree."
"This is ok stuff. Sometimes you couldn't see the taste."

Feeling of loss of control

There might also be a sense of loss of control with respect to the prescription of having a puree diet. For these participants, having a puree diet is accepted and, in some cases, it is a choice made by themselves. There is an understanding that it is a safer diet and that it will avoid complications. However, the feeling of loss of control on this aspect of one's life is felt by all of them:

"Not that crazy about it, but it is something I have to eat."
"Not happy about eating puree foods"
"I do not like it. But I have to take it."

Social context:

Patients also mentioned that the social context in which the meal was taken was important in shaping their meal time experience. When directly asked about eating

with other people, most participants indicated a desire for an improved social atmosphere at meal times as the following indicates:

"I don't mind other people. I like somewhere to be alive."
"Yes, I would like that. I am a people person."
"I don't like eating alone."

Variety of food

Related to lack of variety is the feeling of loss of control. For example, patients indicated:

"For instance, 2 out of 3 times during the day, you get applesauce. (...) You get too much applesauce."
"Well, here in the hospital, we do not get much variety."
"I find all the soups are the same."

Patients further described the lack of variety of food:

"They can give me a fruit or a banana now and then. (...)I like a variety."

Appearance of the food

Finally, the last theme identified was the appearance of the food. Although this was not mentioned as frequently and with as much clarity, it was related to the stimulation of their appetite.

"I'd rather be eating in a restaurant (...) where they do something a little more towards presentation and taste and whatever."
"Not appetizing. Just the other day they had something and there was no movement to it."
"If it looks attractable I will try it. If not, I will not try it."

All these factors; the flavour, the appearance, the lack of recognition of food items, the desire for an improved social context, the lack of variety and the sense of loss of control help better understand the experience older patients have with a puree meal.

7.4 *Staff's perceptions*

The main themes emerging from the staff interviews are the perception of distaste of patients for the diet and the lack of control of staff members over specific elements: the difficulty of preparing puree foods, patients' mood, appetite,

and social support. Staff also made several suggestions, which they thought might improve the mealtime experience of patients.

Perception of patients' distaste

Perception of patients' distaste was the most frequently mentioned by staff. They realize the diet is unpalatable for the patients as they mentioned:

"Well, when I put it in her mouth, she was searching for a Kleenex, so she put [it in] the Kleenex. She did not like it. She did not like it".
"He was not too thrilled with [the tray]."
"So far, I think she is coping with it."
"He is tolerating it".

Professionals' lack of control

The frenzied pace at which health care staff work does not often allow them to spend extra time with patients when it is needed. Job tasks are made into a routine that allows for maximum productivity with little room for individualized attention, especially when unforeseen emergencies occur. When specifically asked if more was needed to help the patients at meal times, all staff members felt that nothing more could have been done. However, their suggestions indicate that certain aspects could be improved.

They echo the patients' feeling of lack of control over the situation. The feeling almost becomes a resignation that the situation itself cannot be helped as staff members feel that they do not have control over several factors: patients' mood, food preparation and availability of social support. For example, they understand the difficulty in preparing puree food items.

"There is not a lot to do. (…) How do you puree a pizza? Certain things are not possible."

There is also awareness that the patients' condition and mood will have an impact on their experience at meal times and that staff feel that they cannot do much to change this.

"There is not much really. If she would have more appetite… There is not much more we can do to help her."
"It depends on her mood."
"…if it is there and he is in the mood to eat, he will eat and if he isn't, he'll just leave it."

It's hard to say because he's difficult, but not difficult. (…)

Staff members were also concerned about the amount of social support available to patients as another element that would affect the meal time experience and over which they have no control.

"He doesn't have anyone who comes."
"She has a good social support system."
"Sometimes, when the friend is here, she will eat very good."

Professionals' suggestions of improvement:

Staff tried to control aspects they felt would better the situation for the patients. Suggestions are offered to improve the mealtime experience, but they sometimes come from someone else. Suggestions include the modification of the appearance of the tray:

"To improve it, it would help if the appearance was more visual, more appealing. That is for sure."

Other suggestions aim to ensure proper communication between patients, dietary staff and nursing staff.

"I do not know if he made the menu himself or if someone else did it."

Some suggestions refer to the social atmosphere in which the meal is taken and the amount of social support available to the patient:

"Maybe, she likes to go to the TV room or another area instead of always staying in her room. Maybe join a small group of people to eat. I think she would like that."
"I tried to convince him to go when you guys have a special lunch to join in."

Professionals' actions taken to improve the meal

Despite answering that they could do nothing more to help patients with meals, health professionals carry out actions to improve the mealtime. These actions aim to maximize patients' independence during the meal and with decisions pertaining to the meal:

"… he still tries to retain a lot of his independence with eating and stuff. (…) But I always tell him there are other options."

> *"I tried to give it to her and when I tried to put the milk in the cup, I let her hold it (...) to see what she could do. (...) We can always coach her to do it herself."*

Offering special orders is another area where staff will take action to improve the patients' meal time experience. Whenever possible, they will make the effort to order specific foods for the patients. Despite having the prescription of a puree diet, sometimes participants were allowed to have "regular" food items. This practice is used to encourage intake when malnutrition is a risk as well as to promote quality of life. It is always pre-approved by the attending physician and risks are discussed at length with the patient. .

Professionals reported the positive effect of these actions.

> *"At lunch time, she did not want what was on her tray. She had already requested a sandwich so I ordered it for her. (...) The sandwich came afterwards so actually, I just gave it to her. So she was happy that I gave her that sandwich."*
> *"When you guys were having the breakfast, I came out and grabbed some, which he ate and enjoyed."*

Participating staff members try to be accommodating and are genuinely concerned with the patients' welfare during the meal. However, it seems that finding a method to improve the actual meal tray was difficult as was providing an adequate social atmosphere. Staff also felt as though they were not able to have any control over some aspects. Encouraging independence and making special orders were regular actions taken by professionals.

7.5. *Convergence among sources of information*

The most frequently mentioned theme by patients was the difficult identification of food items; it was never mentioned by professionals.

The other meal tray related themes emerged with all three sources of information.

Meal tray related themes- flavour and appearance:

All three sources of data strongly indicated that aspects directly related to the meal tray were very important in shaping the experience of having a puree meal.

Patient interviews indicated that the flavour and the appearance of the food were all elements affecting their meal time experience. Staff specifically highlighted

appearance of the food as an area to target in improving the experience for patients. They also recognized the distaste that patients showed towards their meal trays, which seems to support the patients' feelings with respect to flavour. Observational analysis indicated that the majority of patients ate less than half of their tray and that half of them were disinterested in their tray, arguably indicating distaste and supporting staff and patient interview results.

Meal tray related themes: variety

Patient interviews highlighted lack of variety as an important theme. Staff interviews noted two elements that could potentially include the aspect of variety. One suggestion offered by staff was ensuring proper communication with dietary staff. This implies that their ensured implication might help address the issue of variety in that they have first hand knowledge of what is available and possible in puree food items. Staff also made efforts to provide extras or special orders to patients, whenever possible. These provided items are likely not usually available to patients, thus providing more variety in their diets.

The theme of loss of control was also directly stated in patient and staff interviews, and cannot be specifically inferred from the observational data.

Control related themes:

Both staff and patients touched on the notion of control at meal times. Although aspects on which there is lack of control are different for staff and patients, they are complementary. Patients reported having no control on the variety of food and the overall diet prescription. Staff felt they could not control certain patient characteristics: appetite, mood, social support available. These issues were considered to have an impact on intake and the overall meal time experience. They also identified areas where control could be regained, albeit in part only, in encouraging independence and catering to special offers whenever possible.

Themes related to social aspects of the mealtime were also highlighted in the three data sets.

Social aspect related themes:

According to observational data, all patients ate their meal in their room, but no social exchanges occurred even if other patients were present. Exchanges with staff were limited to the delivery of the tray and whatever assistance needed to be provided. Also noted, were the many interruptions that occurred during meals, coming from nurses, patient attendants and doctors, hindering any social atmosphere that may have been present. Patients indicated their desire to eat in a more social context, with other people and with a pleasant atmosphere. Staff also mentioned that social support and a pleasant social context might be helpful in improving meal time experiences.

8.0. DISCUSSION

Main themes:

The main themes that emerged in this study were the negative aspects of the meal tray (i.e. the difficult identification of food items, flavour of food, appearance of food, variety), the feeling of lack of control with respect to the diet itself as well as elements related to the patients themselves (i.e. mood, appetite and social support) and inadequate social context. On the other hand, health professionals' suggestions and actions aimed to help patients regain control over their meal (independence and special orders) and diminish the negative impact of the aspects of the meal tray. The study thus highlighted factors having a positive and negative impact on the experience of eating a puree consistency meal and the overall nutritional status of elderly hospitalized patients with swallowing problems. Results of the study corroborate results obtained in previous studies.

Meal tray related themes- identification, appearance:

Results indicate that the difficult identification of food items and the appearance of food are important factors in the experience of a puree meal for an elderly hospitalized patient. According to results obtained in other studies, these factors have a negative impact on appetite. Langmore (1999) found that uniform appearance and difficulty identifying food items negatively affect appetite. Kemp

(2001) and Ruigrok & Sheridan (2006) stated that not being able to visually recognize food and appearance of food were vital to maintaining appetite. This effect on appetite was illustrated in our study: only two patients consumed more than ¾ of their tray, indicating that intake was fair to poor.

Meal tray related themes- flavour **:**

Flavour of the food was also noted frequently in patients' interviews as a factor affecting their enjoyment of a puree meal. This aspect was studied by Easterling & Robbins (2008) who developed a program in which enhanced flavours (sweet and spicy) were said to increase pleasure during meal time for elderly patients'. Germain (2006) also indicated that their formed puree meal tray was successful in maintaining older patients' overall nutritional status.

The emergence of the themes of flavour, identification and appearance of food in this study is well supported by previous literature and indicates that the MUHC would be well served in continuing its formed puree program at the Montreal General Hospital and that it should encourage its application at the Royal-Victoria Hospital as well as in any other institution catering to this type of clientele in its RUIS. The program adeptly addresses the aspects of identification and appearance, factors directly associated to the tray itself. A similar type of study to this one could be conducted with recipients of the new trays to examine patients' perceptions of flavour and appearance of food in order to optimize the program.

*Meal tray related themes-variety***:**

No previous studies are known to highlight lack of variety as a factor affecting an elderly hospitalized patient's experience with a pureed meal. However, given that all patients indicated having difficulty in identifying food items on their tray, it is unclear if variety was truly lacking. Perhaps this area warrants further research, especially in cases where patients are prescribed this type of diet on a longer term.

Control related themes:

Observational data indicated that all participating patients had limited control over toileting schedule, time at which meals were taken, the social context in which the meal was taken and when staff was available to offer assistance. All patients required assistance during meals, which was tailored to their respective abilities.

Results highlight the sense of loss of control felt by patients having to follow this type of diet. As this study is innovative in that it looked specifically at elderly patients' perspective of their diet, no previous research is known, which examines this finding. Patients were unable to identify areas where they could exercise control. However, patients can have a certain control over their diet. They can choose to refuse the prescription altogether, provided they are willing to accept the risks associated (aspiration leading to pneumonia, choking and death). There were no patients refusing their diet in our study. The question is: should patients be able to choose between the possibility of living for a shorter time while eating the foods they enjoy and living for a longer time, but with potential unpleasant compromises such as lack of enjoyment at mealtimes, poor intake and dehydration? Future research in this area could target the steps taken by medical staff in discussing a puree diet prescription with patients to ensure that all information is properly delivered to patients.

Lack of control was also mentioned by staff members. They felt they could have no control over a patient's mood or appetite. However, staff can certainly have an impact on a patient's mood, which may in turn improve appetite. A relationship-centered (Yedidia, 2007) approach (a smile or a short conversation to hear a patient's concerns) may help to create a better mood for both patients and staff and subsequently affect appetite and intake. No studies were found, which document a relationship between these two aspects. Future studies considering this association would be helpful.

Health professionals' suggestions and actions

Suggestions made by staff to maximize independence during meals are an attempt to give more autonomy to patients during their mealtime and more control

over their overall health, which may lead to a more positive mealtime experience. No studies were found, which relate to independence during mealtimes. Patient interviews did not highlight this factor.

The theme of offering special orders has not been examined in previous studies. This modification of a patient's diet, which sometimes puts the patients at risk of aspiration, perhaps needs to be formally documented in the form of a care protocol. This would ensure that all other options are known to heath care workers and that the safety of the patient is always at the forefront of the process.

This issue of giving more control to patients and thus of empowerment of patients seems crucial to develop through further study. More information should be collected, which would allow the development of programs and methods to improve the experience of patients and the feelings of accomplishment felt by staff members. This topic of study could be included in a quality improvement program developed in the context of the HPH movement. Indeed health professionals included in the study identified areas where improvements can be made to the mealtime experience of patients requiring a puree diet. These can be translated into HPH programs targeting staff practices. Development of these programs relates back to the core strategies outlined by Pelikan (2007), and particularly to the development of a health promoting hospital setting for patients.

Social aspects related themes:

The social context in which the meal is eaten was seen as an important factor for staff as well as patients. This area was also noted to be lacking despite it being clearly mentioned as important. Previous studies suggest that this factor is important in providing the optimal environment in which a meal is taken (Snyder & Fjellstrom, 2005, Xia et al, 2006, Ruigrok & Sheridan, 2006). Xia mentions that this aspect is often neglected by staff. However, Jacquot et al (2001) indicates that distractions should be limited during meal times in order to increase intake. Our observational data indicates that several interruptions occurred during most of the observed meals. The nature of the interruptions was care-based. Staff asked patients (not necessarily involved in the study) to take medication or have their

blood pressure taken among other examples. There is debate as to whether health professionals can be an effective source of social support (Heaney and Israel, 1991). However, a practical application of the concept of social support can be made here by "enhancing the quality of social ties to provide support". It seems that there is a missed opportunity for staff. They mentioned that a better social context might help patients have a more positive mealtime experience. This implies a change of professionals' practices. If staff has to go into a room during mealtime, they could easily take a short moment to read out what is on the menu, engage roommates in a conversation and create a pleasant atmosphere in which the meal will then be taken. This change in practice would have no cost associated to its implementation. The notion of social connectedness clearly applies in this situation. Ashida and Heaney (2008) stated that "efforts to enhance older adults' social relationships can be focussed in developing friends and companions, allowing them to feel socially engaged in society". In this case, an increased effort to encourage patients to converse with each other could lead to them feeling more engaged in the social community that is the hospital.

Thus, it can be argued that if the social context is not properly managed, it may have a negative impact on the patient. Given the sources of data, personalized care for patients was not achieved regarding social context. Both the patients and the staff agreed that this element was important to meal times, but observations of how the meal tray was delivered and in what context the meal was taken show that this area can be improved.

In this regard, further study is needed to clarify what the optimal social context should comprise in order to develop subsequent programs geared to this aspect of care. These findings corroborate previous research looking specifically at social support in that it still remains unclear what specific type of social support will have the best protective effect on a person's health (Heaney and Israel, 1991).

Also of note; studies have been conducted, which present the shortcomings of staff with respect to care of patients requiring a puree diet at meal times (Xia, 2006, Jacquot et al., 2001, Singh et al., 2006, Campbell-Taylor, 2008), but no study has polled them to gain their perspective on how the mealtime experience could be

improved by staff. This study provided information on staff's perception of this aspect of care. They were concerned about patients and their intake at meals, but felt powerless over certain aspects (mood and appetite). These insights will allow for the development of programs targeting staff practices. Dissemination of study results to staff via in-services or other forms of training would be helpful to raise awareness of the mechanized routine adopted at mealtimes and pinpoint the areas where little effort is required to improve this aspect of care for both staff and patients. These types of interventions may help return feelings of control to staff over the impact they can have at mealtimes.

The PRECEDE-PROCEED model

All themes emerging from the patient and staff interviews can be classified in the educational and ecological diagnosis of Green's PRECEDE-PROCEED health promotion planning model (2004). This model can thus help better understand issues related to patients' overall experience of the meal. Indeed, predisposing factors explaining the meal time experience of participants include perception of control, level of independence, mood and appetite. Reinforcing factors refer to the sensory reward obtained from partaking in a meal (flavour, appearance, variety) or lack thereof in the case of poor flavour and appearance. Reinforcing factors also include the amount of help available to the patient, the social context in which the meal is taken and the amount of perceived control related to the meal. The special orders sometimes obtained could also fall under this category. Finally, the patients' capabilities and feeding programs available to the patient during mealtimes relate to enabling factors outlined by Green. The model may become a conceptual framework that guides the development of interventions needed to improve the mealtime experience of elderly patients with swallowing problems. The model will be helpful in guiding policy-makers and administrators to orient programs geared to this segment of the patient population. For example, given the results obtained, a program focussing on the appearance of the food and offering the possibility of enhancing flavours while being offered in a supportive social environment might well serve patients requiring a puree consistency meal.

Moreover, modifying staff professional practices during mealtimes by showing them how they can affect a patient's mood and stimulate their appetite would also be helpful in improving the patients' experience.

Limits:

The study has certain limits. The sample, although providing rich information allowing us to gain important insight into the experience of older hospitalized patients requiring a puree diet, is small. Previous research with older adults had included sample sizes of 21 (Eaton, 2005), 15 (Perry, 2003), 14 (Koch, 1994), 6 (Lee et al, 2007), or 20 (Jonas-Simpson et al, 2006). A sample size of 6 was found sufficient to portray patients' perception of the mealtime experience for elderly patients on a puree diet, since no new information was provided after six patients' interviews and considering the limitations of interviews with the type of patients included in the study and the time frame of this thesis. To increase the ability to generalize the research findings, a larger sample size and the inclusion of several hospitals should be considered in further studies.

Finally, the inclusion of only nursing staff and PABs may explain why the difficult identification of food items was only reported by patients. Interviewing dieticians or nutritional technicians may have yielded more reports on this aspect of the mealtime experience of a patient requiring a puree diet.

Despite these limits, consistency in data collected from different sources and reasonable explanation for differences in data contribute to the overall credibility of the findings.

9. CONCLUSION

This study identifies an area of patient care that is in great need of programs applying HPH principles. The results of this study may be of interest to clinicians and management. An image of the mealtime reality of older patients' needing a puree diet was drawn, giving heightened understanding of day-to-day issues surrounding mealtimes. The results may also orient actions that can be taken to

improve elderly patients' mealtime experience, for example, the implementation of the formed puree project.

The study highlighted areas of improvement that could be made to the meal tray itself, as well as to nurses' practices and attitudes, which could be specifically targeted by feeding and dysphagia management programs in the context of the Health Promoting Hospitals movement. Results allowed us to formally document older hospitalized patients' perception of their mealtime experience and obtain staff's opinion of how it could be improved, which had not been done in previous research. Our findings may help provide better, more tailored services to hospitalized older adults requiring a puree diet. In addition, because of the paucity of studies being carried out with a hospitalized elderly population presenting with swallowing difficulties, this research may fuel further research aiming to improve quality of care or promote healthy behaviors with this vulnerable clientele.

The HPH concept helped better understand the topic at hand through its philosophy of health and health care. The importance of involving the population in health promotion programs, as outlined in phase 1 of the evolution of the movement (Pelikan, 2007), indicated the need to listen to hospitalized older patients' perspectives of their mealtimes. This involvement sprouted concrete program ideas, which could be developed to improve their experience, based on what patients directly stated rather than on hypothetical assumptions. The success of the subsequent implementation of these programs is therefore more likely assured. With a clear orientation thus documented, available resources are furthermore prone to be used efficiently and cost-effectively as outlined in the Vienna Recommendations (World Health Organization, 1997). The Vienna Recommendations also highlighted the importance of acknowledging differences in the needs of the population studied, of considering health holistically and of keeping the dignity of patients, equity and solidarity at the forefront of any health care provided. In addition, the Vienna Recommendations indicate that we should also focus on the people providing health care. In this case, the involvement of the staff lead to the realization that they felt ill equipped in dealing with the experiences of older adults requiring a puree diet.

As the MUHC is now part of a HPH network, a heightened focus on programs encompassing principles outlined in the Vienna Recommendations should be prioritized. Involvement of different patient populations in future projects is to be hoped for given the positive outcomes derived from this study. Moreover, the basic philosophical ideals promoted by the HPH concept, the Vienna Recommendations (WHO, 1997) and the 18 core strategies (Pelikan, 2007) are germane to the provision of quality health care at all levels. Their application on a global scale by the MUHC and its affiliated network is integral to the full realization of the title of Health Promoting Hospital.

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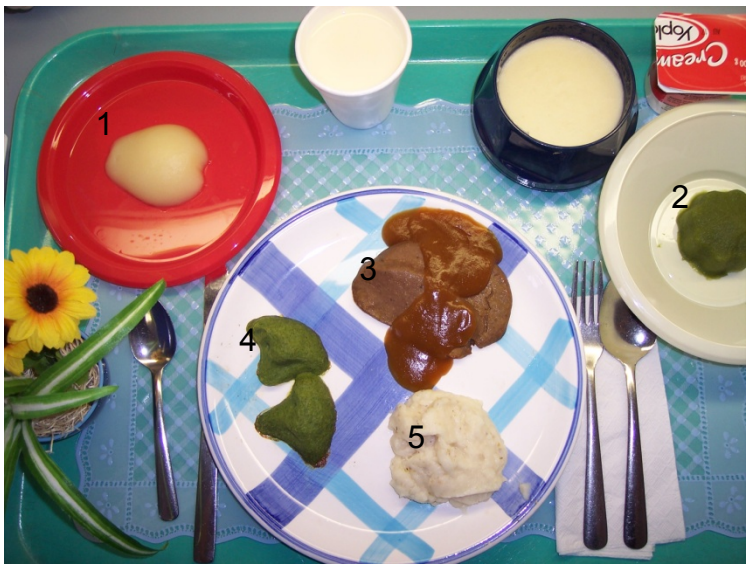
Appendix 1: Examples of Meal Trays

Regular puree tray received at the Royal-Victoria Hospital. Shown here are the three strips of puree given to patients.



Example of formed purees:
1: Formed pureed pear
2: Pureed salad
3: Formed pureed roast beef
4: Formed pureed broccoli
5: Mashed potatoes

Appendix 2: Informed consent

Patient Information and Informed Consent
Mealtime experiences of hospitalized older patients requiring a puree consistency diet

Principal Investigator:
Magdalena Blaise, CTRS, MSc candidate

Introduction:

Food and eating are important aspects of life, but the pleasurable part of these can be overlooked when many other decisions need to be made for a patient. In some cases, older adults need to have their diet changed to ensure their safety. Being on a puree diet can be very frustrating as the situation is not easy and requires a lot of readjustment from both patients and their families. More needs to be done to understand the impact this type of diet can have.

Purpose of the Study:

The objective of the study is to document hospitalized older patients' experience with their puree consistency meal.

Study Procedure:

We would like you to help us learn more about what it's like to be on a puree diet by having you participate in this study. By signing this form, you agree to take part in it. If you agree to take part in this research, you will be asked to sit through 1 interview and 1 observation conducted simultaneously by the researcher during a meal. Staff members will also be interviewed on the same day as you, to state how they feel about your meal time experience.

Potential Risks:

There are no risks involved in this study and minimal discomfort is expected. If, at any time, interviews need to be rescheduled or shortened, this will be done. Also, if any discomfort is witnessed during any part of the study, the intervention will be discontinued immediately.

Confidentiality:

All information gathered will be kept in a locked filing cabinet and kept anonymous to ensure confidentiality. All records obtained while you are in this study as well as related hospital and office documents will be kept confidential. These results may be consulted by the Geriatric Division of the MUHC to ensure completeness. Should this occur, your name will not appear on any document.

The results of this study may be presented at meetings or in publications. Your name will not appear on any publication or report produced from this study.

As per research practice procedures adopted by the MUHC, information related to the study may be checked for accuracy. In such circumstances,

confidentiality will be maintained at all times and your name will not appear on any document.

Right to withdraw from study:

Your participation in this study is voluntary and is essential to help us better approach the situation of being on a puree diet. Greater understanding of this situation will enable us to offer better care. You may stop participating in this study at any time without affecting your present or future care.

Contact information:

Should you wish to obtain further information on the study, you may contact the principal researcher, Magdalena Blaise at [redacted] by phone or by e-mail at [redacted]. If you have any questions concerning your rights as a research subject and wish to discuss them with someone not associated to the study, you may contact the Royal-Victoria Hospital Ombudsman at 514-934-1934, local 35655.

Liability:

In the event that you suffer any complications related to this research project, the Geriatric Division of the MUHC will assume the cost for the treatment of those complications that are not already covered by the provincial medical insurance. No other form of compensation will be awarded for injuries or complications related to this research. However, by signing this consent form, you do not waive any of your legal rights.

MUHC
RVH and MGH sites

Magdalena Blaise

Statement of consent and Signature Page

1. I have read this consent form and all my questions were answered to my satisfaction.

2. I freely and voluntarily agree to take part in the following study:
Mealtime experiences of hospitalized older patients requiring a puree consistency diet

3. By signing the consent form, I consent to sitting through 1 interview and 1 observation, conducted simultaneously as well as having the research investigator look at my medical records for the purpose of data collection.

4. I have been given a copy of the signed consent.

5. By signing and dating this document, I am aware that none of my legal rights are being waived.

Patient/Family/Staff:

Signature:_____ Date:_____

Printed name:_____

Study Team Member Section:
I affirm that I have explained the purpose and procedures of this survey to the patient/family/staff whose name and signature appear above and that he/she consents to participate in this study by his/her personally dated signature.

Signature:_____ Date:_____

Appendix 3: Observation grid

Aspect considered	Category	Items observed
Assistance: Help provided to the patient during the meal.	Provision of mealtime assistance	No assistance provided Assistance provided
	Type of assistance provided before start of meal	Dentures given -Yes - No - N/A Positioning assistance: - Yes - No - N/A
	Type of assistance provided during meal	Tray set up (opening containers) Monitoring Prompting Some feeding Total feeding
Reaction to meal	Attitude towards eating	Interested Disinterested Rejects food
	Oral intake	¾ or more ½ ¼ or less
Social Context	Mealtime context	Alone With staff With family or friends With other patients With staff and other patients

Appendix 4: Patient interview Grid

1. How do you feel today?

2. How important is it for you to have a good meal?

3. Tell me how you feel about your puree diet?

4. How do you feel about the meal you just had?

    - about the taste?
    - about the color?
    - about the texture?
    - about the smell?
    - about the presentation?
    - about other elements?

5. How is your appetite usually?

6. How do you feel about the help you receive during meals?

    - From family/friends and/or
    - From staff

7. How do you feel about eating with other people?

8. What would you suggest to improve your mealtime experience in the hospital?

Appendix 5: Staff interview grid

Please note that the following questions are all related to patient X.

1. How would you describe the patient's morale today?

2. How did the patient react to his/her new puree diet?

3. How did the patient receive his tray?
    a. What was his/her attitude?
    b. What emotions did the patient show?
    c. Did the patient do anything unusual? What was it?

4. Can you describe this patient's usual appetite?

5. How well did the patient eat at lunch?

6. How much help did you give him/her? What more could have been done?

7. How is the patient's eating experience affected by the presence of family/friends during meals?

8. How is the patient's eating experience affected by the presence of other patients during meals?

9. What suggestions would you make to improve the mealtime experience of this patient?