Science to Policy Paper

Nutritional Risk Factors for King County Elders

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Table of contents

Introduction

The number of adults age 65 and older is rapidly increasing with the aging of baby boomers, and it is anticipated that the 35 million in 2000 will rise to 40 million by 2010 nationwide with a reflection of aging of baby boomers (1). King County is not an exception, with 240,000 elders aged 60 years and older in 2000 and 313, 000 elders are expected in 2010 (2;3) (**Appendix: Figures 1 and 2**). With aging, humans undergo biological and physiological changes over time. These changes body composition, hormonal profiles, nutrient absorption, and respiratory, cognitive, and neurological functions (4). For instance, a physiological change of increased body fatness is associated with chronic diseases such as heart diseases, cancer and type II diabetes. Loss of muscle mass with aging puts individuals at risk for decreased physical function and strength, frailty, and morbidity. In addition, elders are at increased risk for being nutritionally vulnerable or compromised (5), which put them also at risk for other chronic diseases such as hypertension, osteoporosis, and stroke (6). Therefore, special attention needs to be paid to support their healthy living.

In order to help elders maintain their dignity and independence in their homes and communities, the Federal Older Americans Acts III fund several senior services and among them is the Congregate Meal Program (1). The program provides hot meals in a group setting to people of age 60 years and older, disabled adults under age 60, and others defined by the program. In King County, there are 43 meal sites offering the program and a total of 9,553 adults participated in the program in 2006 (2) (**Appendix: Figure 4**). The purposes of this paper are to identify the elder populations in King County which are most likely to be at nutritional risk and to recommend the focus area to distribute the program funds effectively.

1. Basic Science

Nutritional risk factors for elders

Elders are at risk for malnutrition due to the medical, psychological, lifestyle and social factors (**Table 1)** (4;7).

Table 1. Risk factors for malnutrition among elders

Medical factors	decreased appetite, oral problems, loss of taste and smell, respiratory disorders, malabsorption, neurological disorders, endocrine disorders such as diabetes, physical disability, infections, drug interactions, and wasting induced by diseases
Psychological factors	Confusion, dementia, anxiety, and bereavement
Lifestyle and social factors	Isolation, reduced activity, poverty, inability to prepare food, and lack of knowledge about food and nutrition

Nutrients under- or overconsumed by elders

There are nutrients that might not be consumed in adequate levels and overconsumed among elders (**Table 2**) (8).

Table 2. Nutrients consumed under- or overconsumed among elders

Nutrients underconsumed	calcium, vitamins D, E, and K, B_{12}, potassium, and fiber
Nutrients overconsumed	Sodium

Appropriate intakes of calcium and vitamin D are critical for the maintenance of bone health among elders since they have a high risk for osteoporosis and physical disability. Vitamins E, K and potassium are also essential in the maintenance of bone health and normal blood pressure

and the prevention of metabolic syndrome, stroke, and heart disease (8). Encouraging fiber intake in elders not only provides a low energy-dense diet that is high in vitamins, minerals and phytochemicals, but also lends to beneficial to their positive health outcomes such as preventing constipation. Also, vitamin B_{12} may be necessary to compensate for the decreased absorption of the vitamin due to aging in order to prevent pernicious anemia.

A concern for overconsumption of sodium is not limited to elderly population (8). Nonetheless, it is of particular concern among elders since it can interfere with renal function and can increase the risk for hypertension, stroke, and heart diseases. Notably, this report on nutrients under- and overconsumed by elders and the potential health outcomes (8) was prepared by the Ross Initiatives for Aging at Tufts University, which may have experienced influence of political or industry pressure exerted on other federal agencies.

Social factors associated with nutritional risk

It is known that among adults the amount of foods eaten per meal occasion is correlated with the number of people present at the occasion (9) and that living and eating alone is associated with eating less (7). A few studies showed that the importance of the atmosphere and meal presentation at a meal on energy intake in the elderly population (10); family-style meal setting in nursing homes promoted their total energy intake more than the preplating meal services.

Characteristics of nutritionally at-risk elders

There are a number of factors that led to improper nutrition in elders (7):

- A limited income would restrict the ability to purchase healthy and nutritious foods and to have a proper cooking facility and refrigeration at home.
- Loneliness along with unhappiness and bereavement especially among the very old can decrease the appetite.
- Reduced activity, increased fatigue, and weakness can also affect the appetite.
- Living alone is associated with eating poorly balanced diet since lonely men may not have the proper cooking skills and lonely women may not be motivated to cook only for themselves as they used to cook for the family.
- Social isolation leads to mental and physical deterioration.
- Lack of social and family support also affects appetite.
- Chronic invalidism promotes loss of appetite and poor nutritional status.
- Food fads and fallacies can lead to the poor nutritional status.
- Poor dental health such as the use of denture is a critical factor in the poor eating habits.
- Mental impairment such as confusion and depression can also affect eating habits and nutritional status.

Among meal program participants in Wisconsin, a questionnaire was administered to assess the quality of life, nutritional risk, and social well-being (11). Those who were at nutritional risk indicated by food insecurity, less food enjoyment, depression, and functional impairment had a lower quality of life. This study adds to evidence on the effect of nutritional risk on quality of life among elders.

Limitations and uncertainties of current science

Evidence for nutrient requirements and health outcomes among elders are currently available from the Institute of Medicine (IOM) experts' panel (12). However, most of these studies used to establish nutrient requirements are derived from health-conscious and middle to upper class participants. Therefore, the requirements may not be generalizable to a low-income population, especially, the feasibility for adopting a recommended diet. Nonetheless, the evidence to establish nutrient requirements is more concrete than the evidence on social and environmental factors that affect elders' nutritional status, which is further limited by generally lower study participation from low-income groups than middle to upper class groups.

Summary of current science on nutrition in elders

There are several nutrients that are particularly important for health in older adults. Meeting their nutrient requirement by adopting a balanced diet is recommended. Social factors such as eating with others are important in promoting their dietary intake as they often have decreased appetite due to various underlying factors.

2. Characteristics of Elders in King County

Nutritional status of elders in the King County

According to BRFSS (surveyed year varied from 2003 to 2006 due to the data availability) among the adults older than 65 years in King County (2), health status of the adults older than 65 years in King County was similar to the national average (given in parenthesis) as follows:

- 20% (29 %) reported being in fair or poor health; this age group had the highest percentage among all age groups.
- 5% (4%) reported cutting size or skipping meals due to lack of money.
- 35% (30%) reported that physical or mental health interfered with their activities in the past month.
- 33% (31%) reported consumed fruits and vegetables five or more times per day.
- 77% (89%) reported being active in three or more life-enriching activities.

Demographic characteristics of elders in King County

The overall number of elders in King County is increasing with 240,000 elders aged 60 years and older and 24,540 aged 85 years and older in 2000. The respective number of elders expected in 2025 is 479,989 and 37,620 (**Appendix: Figures 1-2**) (2;3). By subregions, Seattle had the highest number of elders (n = 84,969), followed by the South (n = 69,996) and East Urban subregions (n = 52,753). On the other hand, the proportion of elders within a subregion was the highest in the Vashon Island (17.8%) which had the smallest number of elders (n = 1,797) (**Appendix: Figure 3 and Map1**).

Poverty increases one's vulnerability to malnutrition and food insecurity. Poverty rates, as indicated by the proportion of those living below the federal poverty level, among elders aged 65 years and older increased from 6.9% in 1990 to 7.1% in 2000 (2;3). By subregion, Seattle had the highest rate (9.9%), followed by the South Rural (7.7%) and South Urban subregions (6.1%) (**Appendix: Table 5 and Map 4**) (3). By ethnicity, African Americans had the highest rate (18.1%), followed by Asian/Pacific Islanders (16.1%), Hispanics/Latino (14.6%), and Native

Americans/Alaskans (12.4%) and Whites had the lowest rate (5.9%) (**Appendix: Table 4**). Moreover, low-income is associated with fewer resources for social support. In fact, adults aged 50 and older with less than $15,000 per year had the fewest people (61%) who reported to be able to get social and emotional support they needed in King County in 2005 (2). A survey on food insecurity among seniors living in the Seattle's low-income housing revealed that 55% of individuals were food insecure; this is about five times more prevalent than the national average in the general population (13). Their barriers to receive food assistance from federal programs included lack of knowledge and physical and mental health conditions.

Social isolation and language barrier could hinder elders in obtaining access to the resources. In terms of social isolation, rural elders aged 75 years and older who live alone and/or on a fixed incomes are known to be particularly isolated (2). More elders aged 75 and older who live alone in urban areas than in rural areas (**Appendix: Map 6**) (3). Elders living in rural areas are also vulnerable to social isolation due to not having phones and/or cars, both of which worsen social isolation. As to language barrier, the number of non-English speakers is growing in response to expansion of immigrant population in King County since 1980; 7% of the elders aged 65 years and older reported having limited ability to speak English in 2000 (3). The ethnic difference was noted; Asian elders had the highest rate (41%), followed by Pacific Islanders (32%) (**Appendix: Table 3**) (3). Those with limited English speaking abilities are nutritionally at risk since they might not be aware of the public services that are available to assist their needs. Furthermore, more than 48,000 immigrants were living below the federal poverty level in King County in 2000. In King County, the participation in ethnic meal programs is growing (personal

communication with Janet Kapp), which helps elders locate resources, build social networks, and lessen the stress induced by acculturation that are common in recent immigrants (14).

Summary of nutritional status of elders in King County

Overall nutritional status of elders in King County was similar to the national average. There are groups of elders who are nutritionally at risk and need nutritional assistance for the maintenance of their healthy lives. They are characterized as being very old, women, non-white ethnic groups, having language and cultural values differing from the mainstream culture, and living alone. In fact, they had the highest rates of poverty, the poorest perceptions of health status, and the highest levels of activity limitations (15), all of which put them at increased nutritional risk. The subregional difference in poverty rates among elders was also noted, with higher rates in Seattle, South Rural, and South Urban subregions than others. Furthermore, the poverty rates were higher in ethnic minority groups and in recent immigrants than the mainstream Americans and non-immigrants, respectively.

3. Application of Science and Existing Policies

Dietary guidelines: MyPyramid for older adults

Guidelines for elderly populations are well-illustrated in the modified *MyPyramid* for older adults developed by Tufts University (8). This *MyPyramid* is more visually attractive and easily understood without obtaining further information from the internet than the general *MyPyramid*. It is also appropriate to point out particular needs for drinking water and physical activity as a foundation of elders' health. It does mention that physical activity increases their quality of life, but does not stress the importance of the social well-being. If it could have been done differently,

it would be recommended to include more illustrations with group activities and smiley faces of older adults in the *MyPyramid* in order to emphasize socialization. Another limitation is that this *MyPyramid* for older adults may not be suitable die to barriers including internet access and training and financial recourses.

This study was funded by the Ross Initiative on Aging at the Tufts University. Despite their disclaimer, their opinions still could be reflected by those of the USDA's due to possible partnership with the USDA. Nevertheless, they probably had less pressure from agricultural and food industries than the USDA.

Congregate Meal Program Guidelines at national level

Meals offered in the Congregate Meal Program need to meet one-third of the Recommended Dietary Allowances (RDAs) or Adequate Intakes (AIs) (16), which are established by the IOM. Meal patterns that specify the number of servings needed to be consumed from each food group are developed to meet RDAs and AIs. They are thorough and adequate. Inclusion of food safety issues is also appropriate.

Special dietary needs were included in the program guidelines. These are met by providing meals that accommodate cultural ethnic preferences, religious requirements, and therapeutic consideration due to health conditions (e.g., low-sodium, diabetic, renal, texture-modified diet) In such cases, registered dietitians (RD) are consulted in assessing the need and in planning menus (16).

Through the Nutritional Services Incentive Program (NSIP), meals served under the Older Americans Acts III on the basis of meal counts served, are currently provided to supplement funding for food. Meal counts include means provided to adults under age 60 who were disabled and residing at home with and accompanying older adults and who were volunteers assisting service during meal hours (17). There is no study or report that specifically evaluated the impact of the NSIP on utilization of the meal program. Nevertheless, the secular trend implies the participation rate has been declining with this policy, which indirectly indicates this association of the participation rate and the current policy.

Program evaluation

A second nationwide pilot study was conducted among the title III of the Older Americans Acts service program participants during 2004 (18). The study found that Congregate Meal Programs effectively targeted nutritionally vulnerable populations:

- 62% of the respondents were 75 years or older
- 52% were living alone
- 56% received more than half of their daily food intake from the program meals
- 35% ate only one serving of fruit
- 31% ate only one serving of vegetable
- 32% ate only one serving of dairy products

The study also found that the Congregate meals improved the participants' nutritional intake and the participant greatly benefited from the program both socially and nutritionally:

- 54% reported eating two or more servings of fruit

- 24% reported eating three or more servings of vegetables
- 20% reported eating three or more servings of dairy products or alternatives
- 76% were better able to avoid sodium/fat
- 79% ate more balanced meals due to the program participation
- 72% able to continue living in their home due to the program participation
- 57% increased in their social opportunities due to the program participation
- 52% participated in physical fitness program, when available

In contrast, nutrient composition analysis of meals offered at the Congregate Meal Programs nationwide showed that all the meals met the required meal patterns, while none of the meals met the one-third of RDAs or AIs from all nutrients (19).

Congregate Meal Program Guidelines at local level

According to the Nutrition Program Standard in the Washington State, nutritional composition and food safety issues for program meals are thorough and appropriate (17). Currently, the standard does not count meals that are served to caregivers under age 60 and to individuals under age 60 who paid the full cost of the meal, which is consistent with national program guidelines.

For the program staffing components, the preference for hiring adults older than 60 years would be very helpful to build a relationship between staff and program participants and possibly to recruit new participants to the meal program (17). To my knowledge, there is no data available on age of the program staff.

To my knowledge, there is no existing policy on marketing or advertising of the program. The information is available at several places; however, the marketing largely relies on word of mouth. Therefore, elders who are nutritionally at risk and are socially isolated, have limited income, and do not have internet access may not be able to receive the information. Additionally, the survey conducted in Chicago (20) recommended developoing a brochure that describes the program, activities offered, and benefits. This can be disseminated to elders and their family and caregivers through the mail and in postings, which helps to increase general awareness of the program.

Program evaluation

According to a study in New York City on critical factors in the successful utilization of the senior center meal program (21), the quality of meals and menu variety were less important than social interactions among the program participants. Leadership and involvement of a center manager or sponsor in the program were identified as important factors in successfully utilizing the senior center meals and in building a community within and outside the program. Lastly, this study showed that it was possible to increase meal utilization even at seriously underutilized centers due to geographic locations. Their practical strategy model is outlined (**Appendix: Figure 6**) (21), which emphasized the importance of leadership and relationship with community to increase the program participation.

In contrast, the national survey found the following factors for a successful program: food choices, attractive presentation of food, knowledgeable and friendly staff, welcoming and

supportive environment, adequate transportation, a variety of services and activities, and widespread publicity (22). Hence, both food choices and social environment were important.

A survey on factors for non-participation in a Congregate Meal Program was conducted in King County in 2003 (23). By administering a survey to eaters and non-eaters and interviewing the manager of meal sites, several factors were identified: issues of menu (i.e., lack of flexibility for special dietary needs), food quality, timing of the meal, lack of perception of a need for the program meal, atmosphere, transportation, donation to the program, and physical and mental health.

There was discrepancy in factors associated with program utilization and participation across studies. One study found menu to be less important than leadership and positive social environment (21), whereas other studies found it important (10;20;22-24). This discrepancy might be due to different cultures and ethnic composition of the studied population and geography of the area. Altogether, the following are factors that are associated with program participation (**Table 3**) based on studies reviewed above:

Table 3. Factors associated with the program participation

Encouraging factors	Discouraging factors
Leadership and involvement of a center manager Food choices and quality* Positive social atmosphere and environment Adequate transportation	Timing of the meal Lack of perception of a need for the program meal (Obtaining meals elsewhere) Physical and mental health

Variety of services and activities Widespread publicity	Special dietary needs* Donation pressure Weather condition

* There was a discrepancy across studies (10;20-24).

Marketing strategies need to be strengthened. Currently, there is a general perception by stakeholders that elders who look for the Congregate Meal Program will be able to find it from a variety of sources including senior centers, newspapers and website. This perception may be overlooked. By relying on word of mouth for the increased awareness of the program, each informed individual needs to have social network to obtain such information, which would be hard for socially-isolated elders who stay home and hardly go out.

Incentives and barriers to the program participation

Incentives to the program participation include the receipt of a balanced meal, increased daily nutritional intake, increased functionality, social interaction with elders and program staff, opportunities for a variety of health-related services and activities, and building a social network (18;20-22). In contrast, **barriers** include lack of transportation to the meal site, stigma, the pressure to donate, timing of a meal, weather conditions, lack of flexibility in food choices (especially for those who are on special diets due to their medical conditions), food quality, lack of perception of a need for the meal, physical and mental health, and lack of knowledge (20-24).

4. New Policy Proposal

In the followings, I propose three new policies: 1) **Program Marketing** by increased advertising, scheduling for a group visit, and offering the financial incentives to the first time participants and the program through NSIP; 2) **Increase Food Choices**.

1) Program Marketing (Policy 1)

Given that the overall participation rate is declining (**Appendix: Figure 5**), especially in the senior centers targeted toward mainstream Americans (non-immigrants), a policy to promote participation is needed. My proposal is to address the following: post information where elders and non-elders can find (**policy 1a**); to schedule a day for targeting groups of elders to participate in the program (**policy 1b**); to offer meal cost incentives to new participants and the program food costs (**policy 1c**). Strategies for this policy are based on 4P's for marketing as follows:

1) *Promotion* – encouraging the participation into the Congregate Meal Program by elders for their maintenance of health and social well-being; increasing awareness of the program among elders and their family and caregivers
2) *Place* – a meal site for the program service; community centers, grocery stores, any others where elders and their family and caregivers can find for advertising.
3) *Product* – a balanced meal with other participants; social interactions among the program participants and staff; increased physical function
4) *Price* – financial incentives to new participants and the program food costs; time spent for transportation and meal

As to **policy 1a**, the program needs to be marketed to non-elders as well as elders (*promotion* and *product* elements) because the elders' family or caregivers could encourage the elders' participation and plan to come to the meal site together. The program can be advertised at where non-elders can find such as bulletin boards at community centers and grocery stores (*place* element). It can be further extended to radio and television announcement. The increased awareness of the program in general public can also help build a relationship with a community (a successful program utilization factor) and attract new program sponsors and volunteers.

Some elders might not be able to participate in the program since they do not know anyone participating or are not confident to get to the meal site by themselves. Hence, **policy 1b** attempts to help plan a group visit on a scheduled day ("Bring a friend day"). Examples of a group include alumni from schools and colleges, workplace, and groups from neighborhood. Groups are not necessarily based on elders' groups; it can be a group of family with elders so that they can accompany their elders to the meal.

It is critical that center managers or leaders create a warm and welcoming environment for new participants (22). A center that suggests positive social interaction and fosters friendship building is likely to encourage ongoing participation. As in a study in New York City (21), leaders or center managers who helped initiate friendships among participants had increased participation in the program. The staffing preference for elders is helpful for interacting and building friendships between the staff and new participants (23).

As for **policy 1c**, the meal cost of the program participant's caregiver under age 60 for the first visit should be counted toward meal counts that are supplementally funded through the federal NSIP (*price* element). Hence, local service providers receive extra meal cost funding through the NSIP. This necessitates the policy change at national level and can motivate program staff to recruit new participants. In addition, by redistributing the program funds, financial incentives should be given to non-disabled individuals under age 60 who accompanied non-disabled elders. This lessen the pressure to pay for the meal especially among financially-limited individuals (currently, per meal donation varies by meal site and is estimated to be about $5 on average (personal communication with Maria Langlais and Terry Light)) (22), given that this was a barrier to the participation (23). Alternatively, a coupon for a first meal can be included in the program brochure when distributing them through the mail. The policy 1a-c does not take advantage of findings from nutritional sciences; instead, it is more closely related to marketing.

Potential advocates and oppositions to policy 1

Some groups in senior centers, senior services, community-based coalitions and initiatives support policy 1a-c. New participants and their caregivers might advocate policy 1b since it helps both elders and their caregivers to participate in the program, especially among financially-limited families. In contrast, federal agency offering NSIP might oppose policy 1c since it offers incentives to non-disabled non-elders and is subject to conflict of interest. Elders by themselves might oppose to policy 1a-c since they tend to perceive that younger individuals need nutritious meals more than they do (personal communication with Janet Kapp) given their own experience of food insecurity during and after wars in the early 20th century when they were young.

Recommended actions for policy 1

To strengthen the need and effectiveness of policy 1, advocates need to conduct an awareness survey to elders and their family and caregivers. Potential questions include ideal locations for posting the program information, their willingness to participate with an elder as well as their awareness of the program. Opinions from experts on marketing, business and elderly behaviors are also helpful.

2) ***Increase Food Choices (Policy 2)***

Some elders require special diets due to their medical conditions such as diabetes and hypertension, which is a barrier to the program participation (22;23). Hence, I propose new policy on increasing food choices to accommodate such needs. There is an increasing need for special dietary accommodations, reflecting the increasing number of elders with diverse characteristics for social, cultural, and health backgrounds (3). Practical guidelines on special dietary accommodation are available (16). However, the feasibility is often limited by the following factors: 1) insufficient to lack of resources (e.g., RDs, funding, training of volunteering cooks, and menu development); 2) uncertainty of the special dietary needs and the participation by elders with such need; 3) high cost of less energy-dense foods which are often required in special diets; 4) the decision on the therapeutic dietary need (rather as personal desire) for an elder due to lack of feasibility of collecting therapeutic diet prescription from health care providers and maintaining these records for each participant (personal communication with Mary Podrabsky). Considering difficulties for implementing policy 2, a pilot study testing the feasibility needs to be conducted. Policy 2 reflects nutritional sciences on the different dietary needs among individuals with various medical conditions to accommodate their nutritional needs.

Potential advocates and oppositions to policy 2

Potential advocates Members on the National Aging Services Network, program participants with special dietary needs, their caregivers, and health care providers. For instance, 30% of people living below the poverty level were at risk for type II diabetes (13). If the Congregate Meal Programs could offer food choices that accommodate the dietary requirement among diabetic elders, it would help reduce their medical cost. This reduction in their medical cost could translate into an average saving of $2,332 per one-day hospital stay per client (13). Potential oppositions are likely to exist due to conflict of interest given that the Congregate Meal Program is community-based, while this policy is individual or client-based (personal communication with Mary Podrabsky).

Recommended actions for policy 2

To strengthen the effectiveness of the policy, advocates need to conduct a pilot study to assess need for special dietary accommodation among elders, the feasibility of this policy, and the effective of the policy through the participation rate (short-term outcome) and costs required for the program services and the elders' health care (long-term outcome). This allows overall evaluation of the effectiveness of this policy on health of the program participants. Since this policy can potentially have oppositions from various parties, it is crucial to collect data to show the feasibility and effectiveness of this policy. Consultations with experts from dietetics, medicine, health economics, and elderly behaviors would be helpful.

Summary of new policy proposals and recommendation on the program fund distribution

All of new policies are aimed to increase the program participation by elders, especially by those who are nutritionally at risk and who have known barriers to the participation. It is recommended to distribute the program funds to the two areas: **Program Marketing (policy 1)** and **Increase Food Choices (policy 2)**. The cost associated with the implementation of policy 2 would be greater than the cost for policy 1. According to a general declining trend of the program participation and of a relatively lower proportion of (young) elders with medical conditions than before, I recommend focusing first on policy 1a-b to maximize the cost-effectiveness. After implementing it, I recommend focusing on policy 1c since financial incentives to the program participants and service providers necessitates increased program funds and change in national guidelines (NSIP), which might be less feasible than policy 1a-b. After a successful pilot study on the effectiveness of policy 2, I also recommend distributing the program funds to increase food choices across King County.

Summary

Congregate Meal Program is an effective way to meet the nutritional and social needs of rapidly growing elderly population in King County; however, the program participation in King County has declined over the past few years. Hence, strategies for better utilization of the program need to be developed. Previous studies demonstrated that elders seek social interaction as well as nutritious meals through program participation. New policies on **Program Marketing** and **Increase Food Choices** are proposed to increase their participation and the utilization of the program so that elders can maintain their dignity, independence, and healthier lives. To increase elders' participation cost-effectively, new policy on the program marketing needs to be prioritized.

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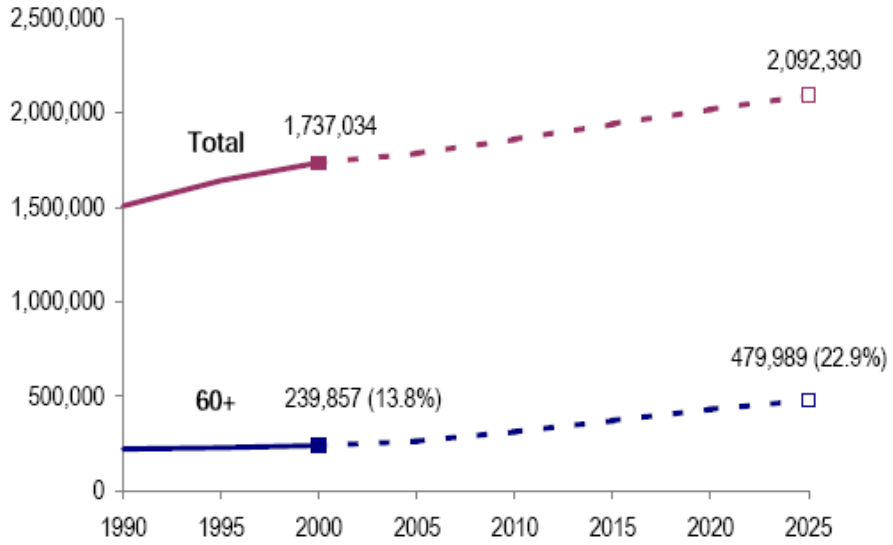
Appendix

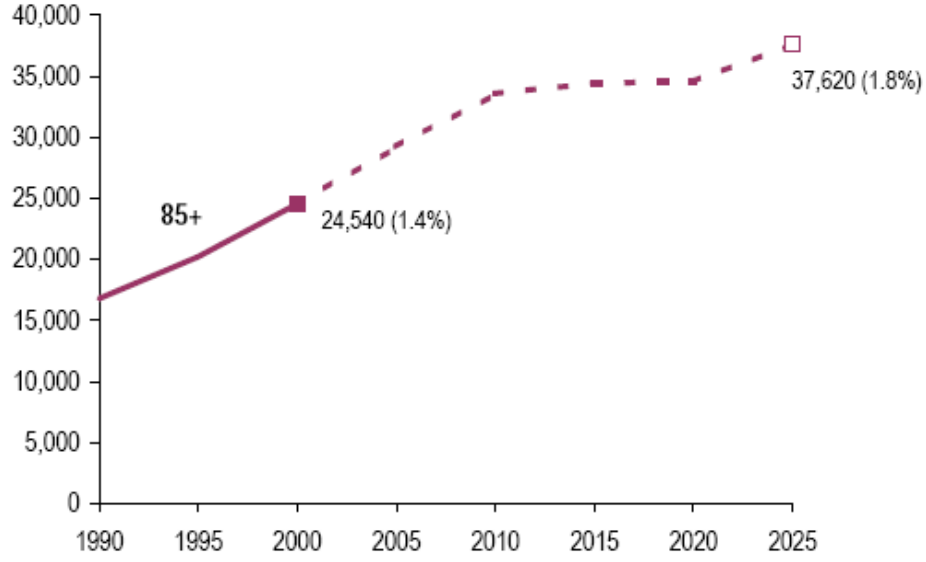
King County Is Growing Older

Figure 1. King County Total and 60+ Populations, 1990-2025



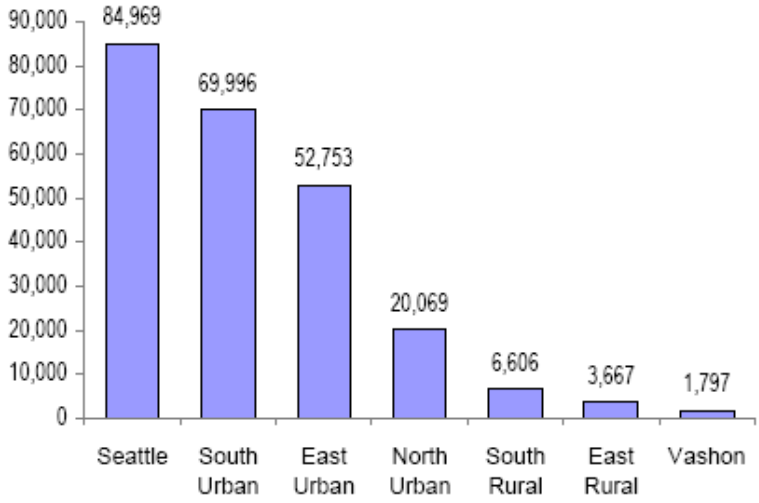
Sources: Census 2000; WA Office of Financial Management

Figure 2. King County 85+ Population, 1990-2025



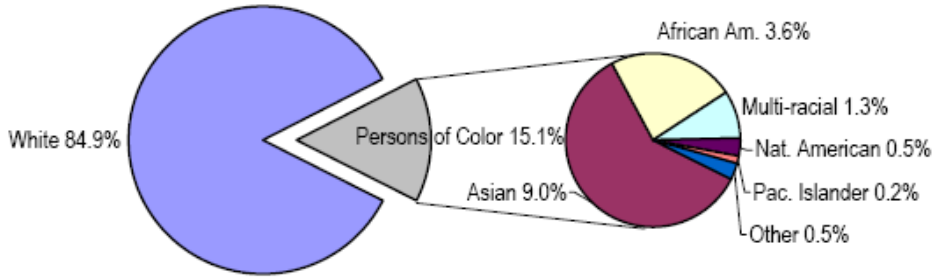
Sources: Census 2000; WA Office of Financial Management

Figure 3. 60+ Population by King County Subregion: Total 239,857



Source: Census 2000

Figure 4. King County Population 60+ by Race



Source: Census 2000

Table 3. Limited English Speaking 65+ by Race and Hispanic/Latino Ethnicity in King County

	Total 65+	Limited English†	% of Total
White	156,196	2,588	1.7%
Asian	15,460	6,288	40.7%
African American	6,163	122	2.0%
Multi-racial	2,147	361	16.8%
Native American	823	2	0.2%
Other	719	225	31.3%
Pacific Islander	264	84	31.8%
Total	*181,772*	*13,533*	*7%*
Hispanic/Latino*	2,350	469	20.0%

* overlaps with other categories

† Limited English = respondents who speak English "not well" or "not at all."

Source: Census 2000

Table 4. People with Incomes Below Poverty by Race and Hispanic/Latino Ethnicity in King County

	Total 65+	65+ Below Poverty	% of Total
African American	6,163	1,089	17.7%
Asian	15,460	2,462	15.9%
White	156,196	8,808	5.6%
Native American	823	89	10.8%
Other	719	109	15.2%
Multi-racial	2,147	370	17.2%
Pacific Islander	264	10	3.8%
Total	*181,772*	*12,937*	*7.1%*
Hispanic/Latino*	2,350	339	14.4%

* overlaps with other categories

Source: Census 2000

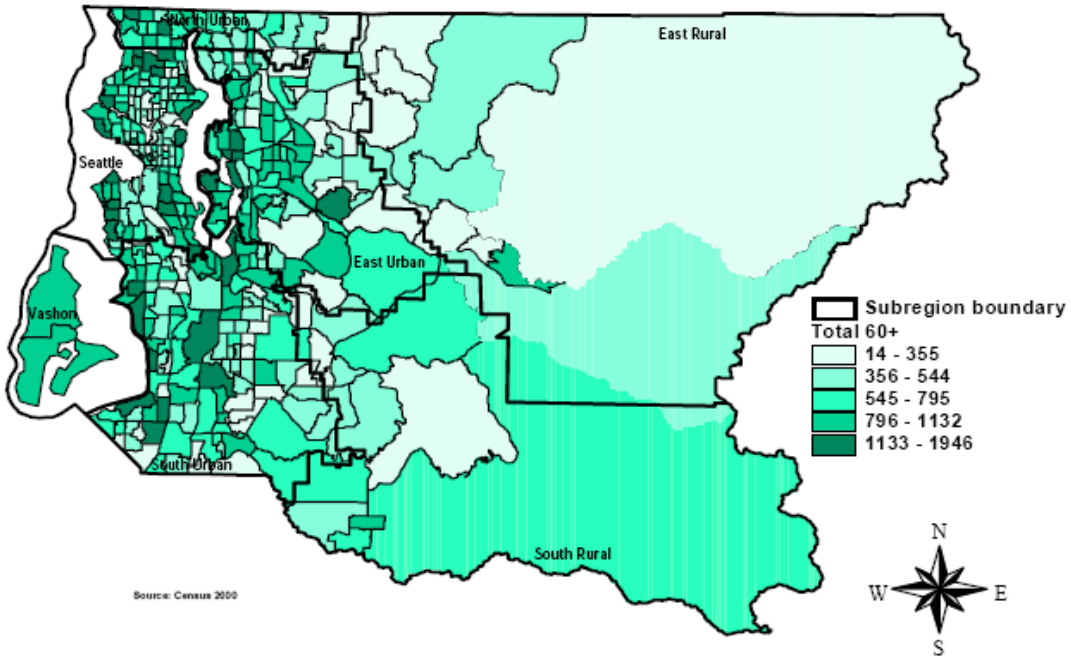
Table 5. 65+ with Income Below Poverty by King County Subregion

	Total 65+	65+ Below Poverty	% of Total
East Rural	2,565	120	4.7%
East Urban	38,952	1,835	4.7%
North Urban	15,319	752	4.9%
Seattle	67,804	6,709	9.9%
South Rural	4,679	359	7.7%
South Urban	51,126	3,132	6.1%
Vashon	1,327	30	2.3%
Total	*181,772*	*12,937*	*7.1%*

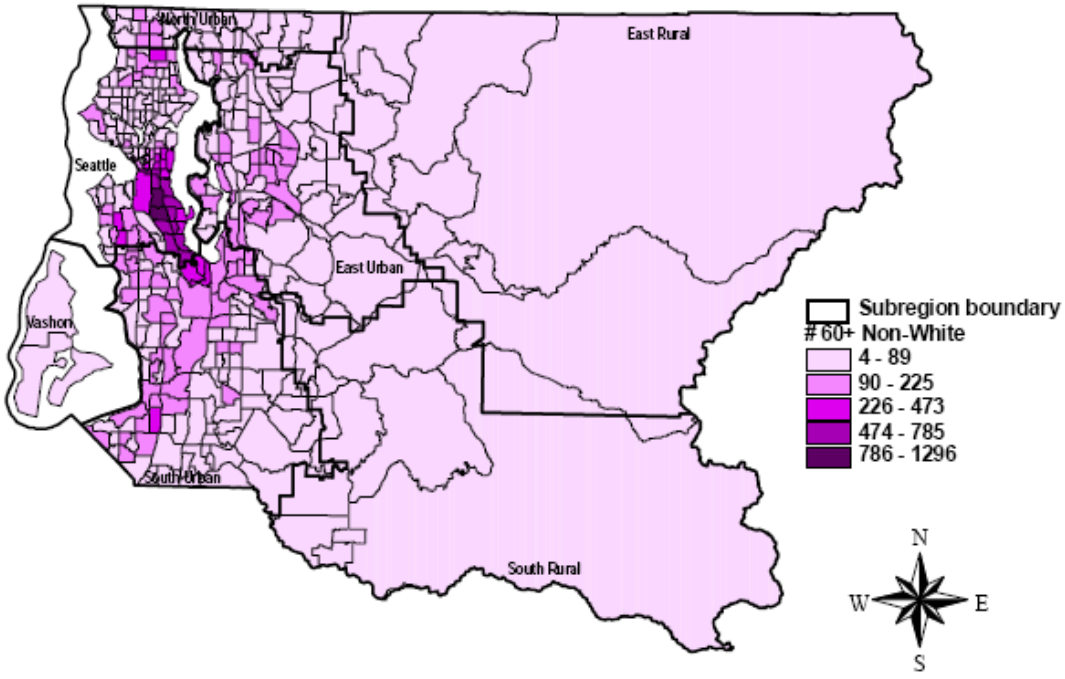
Source: Census 2000

Maps

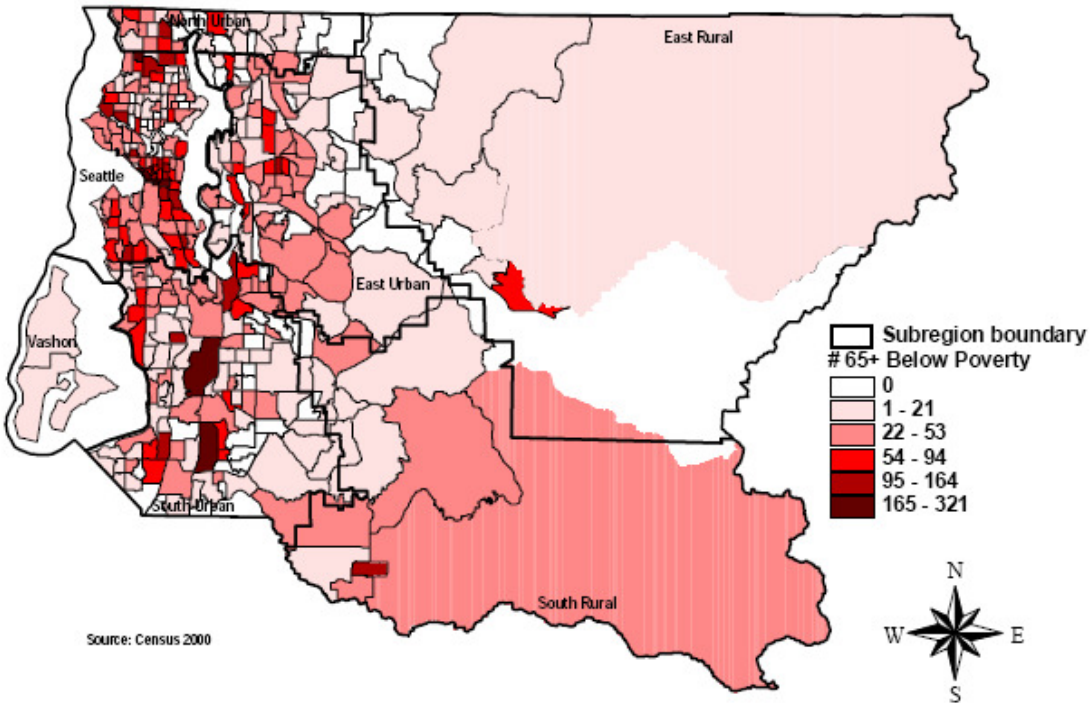
Map 1. Total 60+ Population, 2000



Map 3. 60+ Persons of Color



Map 4. 65+ Below Poverty



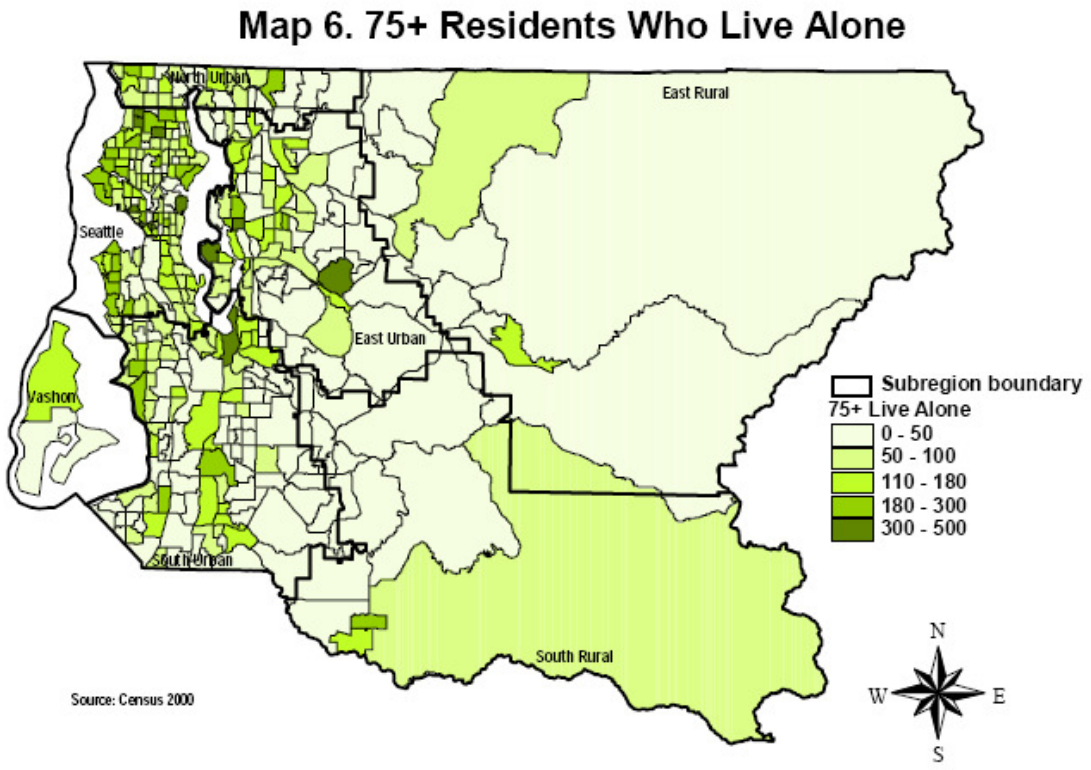

Map 6. 75+ Residents Who Live Alone
North Urban
East Rural
Seattle
East Urban
Vashon
South Urban
South Rural
Source: Census 2000
Subregion boundary
75+ Live Alone
0 - 50
50 - 100
110 - 180
180 - 300
300 - 500
N
W
E
S

Figure 5

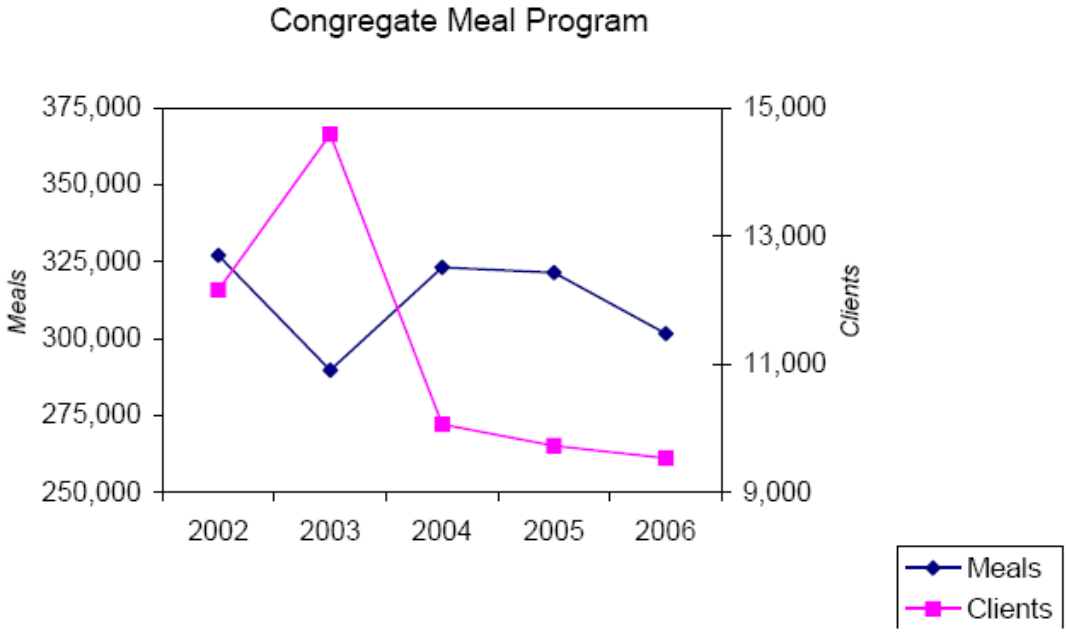
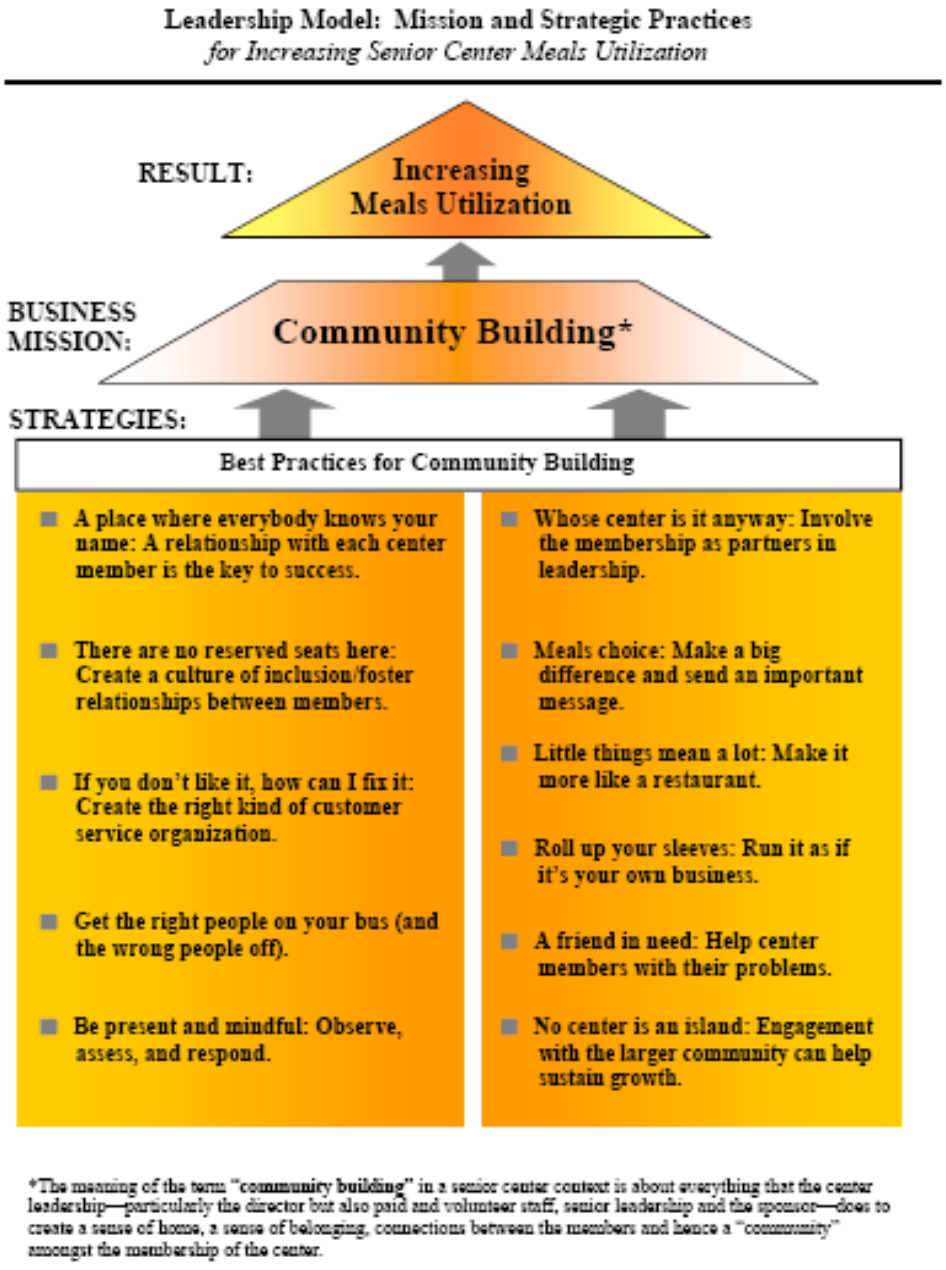

Congregate Meal Program
375,000
350,000
325,000
300,000
275,000
250,000
Meals
15,000
13,000
11,000
9,000
Clients
2002
2003
2004
2005
2006
Meals
Clients

Figure 6


Leadership Model: Mission and Strategic Practices
for Increasing Senior Center Meals Utilization
RESULT:
Increasing Meals Utilization
BUSINESS MISSION:
Community Building*
STRATEGIES:
Best Practices for Community Building
A place where everybody knows your name: A relationship with each center member is the key to success.
There are no reserved seats here: Create a culture of inclusion/foster relationships between members.
If you don't like it, how can I fix it: Create the right kind of customer service organization.
Get the right people on your bus (and the wrong people off).
Be present and mindful: Observe, assess, and respond.
Whose center is it anyway: Involve the membership as partners in leadership.
Meals choice: Make a big difference and send an important message.
Little things mean a lot: Make it more like a restaurant.
Roll up your sleeves: Run it as if it's your own business.
A friend in need: Help center members with their problems.
No center is an island: Engagement with the larger community can help sustain growth.
*The meaning of the term "community building" in a senior center context is about everything that the center leadership—particularly the director but also paid and volunteer staff, senior leadership and the sponsor—does to create a sense of home, a sense of belonging, connections between the members and hence a "community" amongst the membership of the center.