

INCREASING ACCESS TO SKILLED NURSING FACILITIES FOR OBESE AND  
MORBIDLY OBESE POPULATIONS: AN EDUCATIONAL PROGRAM  
DEVELOPMENT PROJECT

by

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## **Abstract**

Public Health is defined as “the science of protecting and improving the health of people and their communities” (Centers for Disease Control and Prevention, 2019). The Centers for Disease Control and Prevention has listed obesity as one of the top ten public health concerns facing communities today. According to The Centers for Disease Control and Prevention (CDC), more than one-third of adults are considered obese or morbidly obese. Out of that one-third, approximately 41% are adults aged 60 or older who will require at least one nursing home level of care stay in their lifetime. The purpose of this project was to develop a quality improvement educational program aimed at improving knowledge regarding rehabilitative management and care of bariatric clients targeted to social service staff employed in skilled nursing facilities. The goal was to increase awareness of need, knowledge of strategies, safety, and cost savings for the facility. This project focused on social service professionals who are members of the Rhode Island Leading Age Social Work Group. The educational intervention was comprised of a presurvey, an educational seminar, a postsurvey, and an evaluation of the program during regularly scheduled monthly meeting. Six social work professionals who work in long term care facilities participated in the program. Key words are as follows: bariatric, obese, morbidly obese, long term care, skilled nursing facilities, and comorbidities.

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## Increasing Access To Skilled Nursing Facilities For Obese And Morbidly Obese Populations: An Educational Program Development Project

### **Background/Statement of the Problem**

Obesity and morbid obesity are serious health concerns in the United States, with increasing prevalence. According to the Centers for Disease Control and Prevention (CDC, 2017), more than one-third of adults are considered obese or morbidly obese. Obese and morbidly obese adults may also be referred to as bariatric individuals or a bariatric population. Out of that one-third, approximately 41% are adults aged 60 or older. According Newman (2009), genetic factors, hormone imbalances, sociological factors, environmental factors, and chronic illness are contributing factors to obesity in the older population. In this older adult population, the increase in chronic illness associated with aging can limit physical activity which can make it nearly impossible for an individual in this situation to lose excess weight. Being obese can lead to multiple medical problems or exacerbate preexisting health conditions. It is estimated that most adults living with obesity, especially the older adult population, will require at least one inpatient stay at a skilled nursing facility at some point during their lifespan (Stephenson-Laws, 2018). Currently, the CDC states that approximately 1.5 million people in the United States reside in skilled nursing facilities (CDC, 2017).

With at least one-quarter of skilled nursing facility admissions being individuals who are moderately to severely obese (Stephenson-Laws, 2018), a need for an increase in health literacy for this population exists. In a cohort study conducted in Norway, investigators found that participants with higher body mass indexes had lower health literacy scores (Cheng et al., 2018). In this study, 7,762 subjects were identified and followed from February of 2015 to January of 2016. During this time, the subjects were

given complete clinical evaluations which included a series of laboratory tests. The subjects were also given a short questionnaire to assess their health literacy. This study found that individuals with lower health literacy scores had an increase in cardiovascular disease, fatty liver disease, obesity, and multiple sclerosis in women (Cheng et al., 2018). Increasing the health literacy of this population related to body mass index, nutrition, physical activity, and chronic conditions is needed to make a positive impact on health outcomes.

Nursing facilities must be prepared and educated on the increased risk individuals living with obesity face while caring for them. This population is at a higher risk for stroke, cardiovascular accidents, and need for mobility devices (Newman, 2009). Those living with obesity are noted to have more co-morbidities than those who are not, including diabetes, gallbladder disease, cardiovascular disease, impaired mobility, and sleep apnea (Newman, 2009). Facilities need to be able to care for an individual's co-morbidities rather than just addressing the admitting diagnosis. In a cross-sectional study of nursing homes in the United States, Lapane and Resnik (2005), found a trend of increasing obesity and morbid obesity. This study found that in 1992, approximately 15% of patients admitted to a skilled nursing facility were obese or morbidly obese. This number rose to 25% in 2002. Lapane and Resnik (2005) further state that to safely care for those living with obesity, nursing facilities need to increase staff, add equipment, and be aware of appropriate clinical approaches to care for this population group.

At this time, federal regulations require that emergency rooms and hospitals have the proper equipment and staff to care for patients with obesity (Zhang, Li, Rodriguez-Mongui, Barenberg, Temkin-Greener, & Gurwitz, 2016). These regulations do not apply

to skilled nursing facilities, and each facility has the right to refuse to admit a patient for any reason. Federal regulations for skilled facilities do not require each facility to have bariatric equipment, structural modifications, bariatric supplies, or staffing and care guidelines to care for this population (Zhang et al., 2016).

Obesity is an increasing public health issue especially with regard to providing access to nursing facilities. Currently, a gap for this population exists that requires more research and new innovative programs to provide equity in access to care for them. Therefore, the purpose of this project was to develop a quality improvement educational program aimed at improving knowledge regarding rehabilitative management and care of residents with obesity targeted to social service staff employed in skilled nursing facilities.

## Literature Review

### Overview of Obesity

Obesity is defined by the Center for Disease Control and Prevention (CDC) as a weight that is higher than what is deemed healthy for a given height in any individual (CDC, 2016). Obesity occurs when more calories are consumed than are burned (Newman, 2009). In order to determine if a person is diagnosed with obesity, a screening tool, called the Body Mass Index (BMI) is used. Body Mass Index is a person's weight in kilograms that is divided by the person's square of height in meters (CDC, 2017). If a person's BMI is 30.0 or higher, they are considered to be obese, however obesity can be further subdivided into three classes. Class 1 is a BMI of 30 to 35, Class 2 is a BMI of 35 to 40, and Class 3 is a BMI of 40 or greater (CDC, 2017). Class 3 is often referred to as "extreme obesity" or "severely morbidly obese" (CDC, 2017).

The number of Americans categorized as obese has gradually increased since the 1970s, with the most recent statistics showing that approximately 68% of Americans are diagnosed as overweight or obese. Of this number, nearly 34% are categorized as morbidly obese (Mitchell, Catenacci, Wyatt, & Hill 2011). While research has shown that men and women of all ages, ethnic groups, socioeconomic levels, and education are being impacted by this epidemic, African American and Mexican American women have the highest incidence of being diagnosed as obese and morbidly obese (Mitchell, et al., 2011).

Many health risks are associated with obesity. Some of the costliest health risks include diabetes, coronary artery disease, sleep apnea, multiple forms of cancer, cognitive dysfunction, and hypertension (Mitchell, et al., 2011). The World Health Organization

(WHO) defines health risks related to obesity as either nonfatal health problems related to obesity or life-threatening illness related to obesity. Nonfatal health risks include skin disorders, respiratory issues including sleep apnea as well as chronic musculoskeletal issues (Newman, 2009). Alternately, life-threatening medical illness include cancer, cardiovascular disease, diabetes, and gallbladder disease (Newman, 2009).

### **Obesity and Physical Comorbidities**

Obesity is a serious health concern, especially in the older population. Obesity can exacerbate preexisting conditions and increase the risk of certain comorbidities in patients. Comorbidities can include, but are not limited to, respiratory complications, arthritis and/or osteoarthritis, skin conditions, cardiovascular disease, diabetes, cancer, and gallbladder disease (Newman, 2009). Each of these comorbidities are important to understand in terms of the obese and morbidly obese populations' access to care because of the increased morbidity and mortality burden for the population.

**Respiratory complications.** The respiratory system can be negatively impacted by obesity, leading to life-threatening issues. Obesity causes the lungs to decrease in size and result in difficulty in breathing normally (Newman, 2009). Littleton (2011) found that individuals who are diagnosed as obese and morbidly obese have a faster respiratory rate than those who are not. Investigators found that the average breaths per minute of the obese patient are 15 to 21 versus 10 to 12 breaths per minute of a non-obese patient (Littleton, 2011). A person who is diagnosed as obese has a gas exchange process which may also be further inducing mechanical impairments in the lung function (Newman, 2009). Steier, Lunt, Hart, Polkey and Moxham (2014) conducted an observational study of lung volumes and elasticity in nine subjects who were categorized as obese and



compared them to nine subjects who were not obese to evaluate what type of impact exposure to obesity has on lung volumes. The participants in both groups were matched for gender, age, and height. Three of the obese participants were former smokers and two of the non-obese participants were former smokers. This study monitored the participants in supine and seated positions and observed their spontaneous breathing patterns along with using balloon catheters to measure gastric pressure and esophageal pressure (Steier et al., 2014). The results showed that the participants who were diagnosed as obese had to expend greater effort to breathe. These participants were also noted to have an increase in gastric and esophageal pressure (in both supine and seated positions) which causes a reduction in the functional residual capacity and expiratory residual volume, making it more difficult to breathe (Steier et al., 2014).

Additionally, obesity may also result in sleep apnea which may then contribute to cognitive disorders related to hypoxia experienced during sleep (Newman, 2009). Shen, Kung, Chang, Hong, and Wang (2017) conducted a prospective study aimed at examining how obesity can affect neurocognitive function in those diagnosed with both obesity and sleep apnea. Initially eighty-three participants were enrolled in this study in the sleep center at the Hualien Tza-Chi General Hospital throughout 2016 and 2017. These participants were then matched by education, age, and BMI. Patients with chronic lung diseases, neuromuscular disorders, neurological, and/or psychological disorders were excluded from this study which reduced the total number of participants to forty. These participants were given a sleepiness questionnaire, a polysomnographic study, and tests related to memory function, cognition, and attention. The results of this study showed that the participants who were diagnosed with obesity and sleep apnea had

delayed reaction times related to the psychomotor vigilance tasks and a decrease in working memory (Shen et al., 2017). The researchers of this study concluded that the small sample size was a limitation and recommended that more research to be completed going forward to really understand the impact obesity has on sleep apnea.

**Joint complications.** According to the CDC, the leading cause of disability in older adults is arthritis (CDC, 2017). The higher the BMI, the more at risk an individual is of developing arthritis or osteoarthritis, especially in the knee and hip joints (Newman, 2009). Obesity and morbid obesity increase the weight and workload on these joints, which makes everyday mobility and tasks painful. Consequently, this may lead to a deficiency in self-care, further increasing the likelihood of admission to a skilled nursing facility.

In addition to joint complications, the bariatric population is at a greater risk for falls. In a study published by the Journal of the American Geriatrics Society, researchers found that older adults that are obese or morbidly obese, not only have a greater risk of falling but those that did experience falls had a greater risk of not being able to complete activities of daily living independently post fall (Himes & Reynolds, 2011). In a second study conducted on falls and obesity, the authors found that both middle-aged and older adults had a higher incidence of falls (C. Fjeldsta, Fjeldstad, & Acree, 2008). This study found that individuals who were obese had a 27% higher prevalence of falls than individuals that were not classified as obese (C. Fjeldsta et al., 2008). This study also found that the obese population had a higher rate of ambulatory stumbling than individuals with a normal BMI (C. Fjeldsta et al., 2008).

**Skin complications.** Individuals who are diagnosed as obese suffer from chronic skin conditions that can make self-care challenging. Skin breakdown, wounds, redness, itching and rashes including fungal infections are very common in the obese population (Newman, 2009). Brown, Wimpenny, and Maughan (2004) conducted a study aimed at determining the level and types of skin complications that individuals who were diagnosed with obesity were experiencing. The researchers attempted to determine if the individual sought medical advice or assistance for their skin issue. The method of this study was a self-report survey which was sent to a convenience sample of 100 patients who attended a nutrition clinic in Scotland. Seventy five percent of the surveys were returned. Of these returned surveys, all seventy-five individuals reporting stated that they had a skin complication related to their obesity. The two main underlying etiologies of skin issues identified were friction and perspiration (Brown et al., 2004). Fifty-nine percent of the 75 respondents reported seeking medical attention for this skin issues (Brown et al., 2004). This study recognized that further research needs to be done to determine the degree and specificity of skin issues that obese patients experience. This study also recommended that all patients with obesity need a thorough skin assessment each time they are assessed by a medical professional (Brown et al., 2004).

**Gastroenterology complications.** Gallbladder disease is common in the obese and morbidly obese population. Obesity can contribute to the formation of gallstones resulting in the need for surgery (Newman, 2009). A study conducted in 2013 showed a 7% increase in risk of gallbladder disease for every one-point increase in BMI (Hosterman, 2017). Obesity can make it difficult for the gallbladder to empty bile,

leaving the bile stagnant and concentrated, thus forming stones (Hosterman, 2017) which increase the risk and need for surgery.

**Diabetes/cardiovascular complications.** A costly and life altering healthcare condition related to obesity is diabetes mellitus. Diabetes mellitus specifically Type 2, has been found to be strongly correlated to underlying obesity and insulin resistance (Al-Goblan, Al-Alfi, & Khan, 2014). Once individuals are diagnosed with diabetes, their risk factors for other complications and medical issues increase. One such co-morbidity related to diabetes is cardiovascular disease. According to the Centers for Disease Control and Prevention (CDC, 2017), cardiovascular disease is the leading cause of death in the United States and being diagnosed as obese or morbidly obesity greatly increases the risk of a patient having cardiovascular disease. Obesity is described by Newman (2009) as an underlying cause of cardiovascular conditions such as hypertension, high cholesterol, increase in triglycerides, and congestive heart failure (Newman, 2009).

**Cancer sequelae.** Obesity has likewise been linked to a higher risk of developing cancer in the body. Wolin, Carson and Colditz (2010) point out that approximately 20% of all cancers are linked to obesity. Breast, colon, kidney, and esophageal cancers have all been linked to obesity as well as to a lack of physical activity (Newman, 2009). The National Institute of Health (NIH) (2006) found that men who are considered obese or morbidly obese have a higher risk of developing colon, rectum, or prostate cancer. The NIH has also reported that women who are considered obese or morbidly obese have a higher chance of developing gallbladder, cervical, uterine, ovarian, and breast cancers (NIH, 2006). Calle, Rodriguez, Walker-Thurmond, and Thun (2003) found in a prospective study of 900,000 adults in the United States that patients with higher BMIs

were more likely to die from cancer. The researchers followed this cohort for a total of 16 years, beginning in 1982. At the start of the study, each participant was free of any type of cancer. At the end of the study, the findings were that men who were obese were 52% more likely to be diagnosed and die from cancer, while women who were obese were 62% more likely to be diagnosed and die from cancer (Calle et al., 2003).

### **Obesity and Mental Illness**

In order to effectively care for the obese and morbidly obese population, all health care needs including physical and mental needs must be addressed. Grabowski, Aschbrenner, Rome, and Bartels (2010) state that approximately 65% to 91% of all nursing home residents suffer from some mental illness. Historically, dementia was the most prevalent mental illness observed in the skilled nursing facility population. Currently, these facilities provide services for individuals with a multitude of other mental health disorders such as depression, anxiety, and schizophrenia (Grabowski et.al, 2010). Skilled nursing facilities are often not equipped to handle this population due to inadequate mental health resources, lack of staff educational resources for behavioral disorders, and lack of specialized staff for this population (Grabowski et.al, 2010). Improper mental health care can have detrimental long-term effects on patients (Grabowski et al., 2010).

The link between obesity and psychiatric disorders has been demonstrated. Simon et al. (2006) conducted a cross-sectional epidemiologic survey to study the correlation between obesity and certain psychiatric disorders such as mood disorders, anxiety disorders, binge eating disorders, posttraumatic stress disorders, and substance abuse disorder. Data on height, weight, and psychiatric disorders were collected on 9,125

participants with a 71% response rate. The findings demonstrated that obesity is 25% more likely in patients with mood and anxiety disorders (Simon et al., 2006).

Simon et al. (2006) explored mental illness as a contributing factor to obesity. They noted that symptoms of depression and mood disorders can contribute to obesity. For example, increased appetite and limited physical activity are common symptoms of many depressive and mood disorders. In addition, many mental illness therapies compound the obesity issue since they have side effects consistent with weight gain, increased appetite and lethargy. This is an added risk for the patient and makes treatment choices a challenge for healthcare provider.

Patients who may not suffer from mental illness, but do suffer from obesity, are additionally at increased risk of developing a mental health illness. Simon et al., (2006) note that obesity and the stigma that is attached to this illness often leads to depression and anxiety in those who were not previously diagnosed with mental illness (Simon et al., 2006).

Similar to gender trends, age, ethnicity, and education may also have an impact on obesity and mental illness. Simon et al. (2006) found a strong (but not significant) association between obesity and mental illness in younger patients. The authors also found a significant association between obesity and mood disorders in non-Hispanic whites ( $p = .06$ ) as compared with all other ethnic groups. Interestingly, these investigators also discovered that those with higher education are significantly ( $p = .007$ ) more likely to be obese and suffer from a mental illness (Simon et al., 2006).

### **Caring for the Obese Patient: Facility Needs**

Caring for the obese and morbidly obese patient in a skilled nursing facility requires additional staff, specially trained staff, and additional or modified equipment. Most equipment used in caring for patients have weight limits of 250-300 pounds (Lapane & Resnik, 2006). If residents are over this limit, they would then require special bariatric equipment or equipment designed for use with those who are obese and/or morbidly obese to ensure safety. Not only can the equipment needs differ for this population, but basic supplies that facilities need to care for residents can also differ. According to Lapane and Resnik (2006), “special supplies” need to be provided to ensure adequate care for this population. Such supplies include longer gowns, extra-large blood pressure cuffs, heavy duty bed scales, large therapeutic mattresses, and bariatric beds (Lapane & Resnik, 2006). Most facilities do not have these supplies or equipment and often have to order them which is costly and time consuming (Lapane & Resnik, 2006). Individuals living with obesity face challenges with impaired balance, increased specialized care needs such as care of their feet and backs, activity intolerance, chronic pain, and increased incidence of stress incontinence (Lapane & Resnik, 2006). Because of these specialized needs, caring for this population often requires extra numbers of staff, particularly with ambulation or transfers in and out of a chair or bed. This can become burdensome, or even costly, when trying to care for multiple residents at a time.

Continence care is a serious facility consideration when providing care for residents who are obese and morbidly obese. Bradway, Miller, Heivly, and Fleshner (2010) conducted a mixed method, exploratory, descriptive design study that focused on continence care for the obese and morbidly obese patient in a skilled facility. These

authors found a lack of research in continence care and reported that at the time of their study in 2010 that this was the first study to look at continence care for the obese patient (Bradway et al., 2010). Continence care is extremely important for the obese patient as they are more likely to have issues with skin breakdown (Cai, Rahman, & Intrator, 2013). Bradway et al. (2010) found that residents in skilled facilities who weigh 250 pounds or more were twice as likely to have a Foley catheter in place. While having a catheter can be beneficial, it also has associated risks such as an increased risk of infection.

The study by Bradway et al. (2010) focused on five participants who were considered obese and were long term residents of skilled nursing facilities. The mean age of the five participants was 65 years of age and the mean weight was 323 pounds with a mean BMI of 53 (Bradway et al., 2010). Three residents studied were incontinent of both bladder and bowel, while two residents were continent (Bradway et al., 2010). Although two of the participants were continent, it was found that all five residents needed specialized equipment for routine bowel and bladder care such as: oversized incontinence products; Hoyer lifts; and bariatric bathroom equipment including commodes, shower chairs, and toilet risers (Bradway et al., 2010). Bradway et al. (2010) found that both incontinence and obesity are stigmatized conditions leaving the patient vulnerable and isolated in the facility. In addition to specialized equipment, Bradway et al. (2010) found that it took an average of two care givers approximately 1.5 hours to perform continence related care on each of their bariatric residents. Care of the bariatric patient took longer due to the patient being unable to assist in their own care, having to use bariatric equipment, and being unable to transfer without assistance (Bradway et. al., 2010). Bradway et al. also recommended that further research is needed on the challenges that



individuals living with obesity face in nursing facilities and the best way for their caregivers to address their needs.

In order to provide care for the obese and morbidly obese population, nurses need to be proficient in bariatric care, as well as the comorbidities that are associated with it. According to Pervez and Ramonaledi (2017), despite many initiatives by the National Institute for Health and Care Excellence in 2006, a lack of education for nurses on how to properly care for this population persists. One hopeful initiative was developed by Genesis HealthCare, which is one of the largest nursing home chains. They introduced a bariatric care program in their facilities. Shortly after this program started, however, it was closed due to the financial strains (Varney, 2015). Not only is this one example of the gap in access to care that this population faces, but it also highlights the disparity that nurses face in receiving the knowledge and support that they need to care for this population.

### **Caring for the Obese Patient: Nursing Attitudes**

It is the nurse's role to care for the obese and morbidly obese population as well as to assist with managing their obesity and comorbidities. However, some literature suggests that nurses hold negative views on this population which affects care. Literature has shown that caring for individuals who have been diagnosed with obesity can be emotionally and physically challenging (Pervez & Ramonaledi, 2017). A correlational survey design study that was conducted in England by Brown, Stride, Psarou, Brewinsand, & Thomas (2007) investigated the beliefs, practices, and attitudes of nurses caring for obese patients. This study invited 564 nurses working in primary care settings to participate using a survey, and 72.3% responded. The results showed that 68.9% of the

nurses who responded felt that obesity is caused by poor food choices, lack of activity, and perceived obese patients as “greedy, indulging and lazy” (Brown et al., 2007). The same study found that 54.7% of nurses felt that obese patients had “no willpower, motivation or strong personality to change their lifestyle” (Brown et al., 2007).

### **Barriers to Transition into Skilled Nursing Care**

Caring for the obese and morbidly obese population places significant strain on the staff and administration of nursing facilities, especially if facilities are not adequately prepared. The rising rates of obesity result in an increased rate of obesity related hospitalizations, thus leading to an increase rate in nursing home admissions of obese residents. No national census of available beds in nursing facilities for the bariatric population exists. The literature has shown that the majority of nursing facilities will only accept a small number of patients who weigh 350 pounds or more (Varney, 2015). This reflects an emerging and increasing gap of access to care for those who are obese. One example of this is shown in an interview with The New York Times in which Sandra Terra, an administrator at the University of Mississippi Medical Center (UMMC), reported that 90% of nursing facilities to which UMMC discharge patients will not accept obese patients (Varney, 2015). Long term care nursing facilities can choose who they are willing to admit to their facility for care, and unlike hospitals and emergency rooms, they are not mandated by federal regulations to accept every patient who is referred for admission (Varney, 2015).

The bariatric population faces many barriers to accessing care, and unlike other patients with disabilities, the Americans with Disabilities Act does not recognize obesity as protecting this population. Lapane and Resnik (2006) state that this allows nursing

facilities to refuse admissions to this population. They argue that in order for this gap in care to be resolved, policies need to be changed at a high level. Reimbursement rates need to increase, staffing ratios need to increase, and training of staff about this population needs to be implemented. In addition, they conclude that nursing facilities need the funding to modify their buildings to accommodate larger patients (Lapane & Resnik, 2006).

Felix, Bradway, Ali, and Li (2006) conducted a cross sectional study aimed at directors of federally certified skilled nursing facilities to determine the barriers to admitting obese and morbidly obese patients. The hypothesis of this study was that the less resources a facility had in place for obese patients, the less likely they were to accept an admission. The study focused on 944 skilled nursing facilities in Arkansas and Pennsylvania. Three hundred and sixty surveys were returned, making the response rate 38%. The results showed that almost two-thirds of the administrators who responded to the survey reported that the patient's size acted as a barrier for admission to their facility (Felix et al., 2016). Six percent of the administrators responding reported that obese and morbidly obese patients were frequently denied admission to their facility (Felix et al., 2016). Common barriers for admission found in this study were lack of bariatric equipment in the facility and staffing ratios (Felix, et al., 2016).

Because of the barriers to admission into skilled nursing facilities, those who are diagnosed as obese and their families may have to face admission to a nursing home of poor quality. In a retrospective study done of nursing homes in the state of New York, Zhang et al. (2016) correlated the number of deficiencies in nursing homes with the number of obese and morbidly obese residents in those nursing homes. The researchers

studied residents who were 65 years or older, recently admitted to a nursing facility in New York state, and were considered obese or morbidly obese from a sample of 164,256 patients who had a prior admission to one of 636 nursing homes in the last year. Results from this study demonstrate that facilities admitting obese residents had lower Activity of Daily Living (ADL) scores (15.7%) which are used to determine how a patient is being cared for in regard to bathing, grooming, eating, dressing, transfers and ambulation, memory care, and mental stimulation (Zhang et al., 2016). Zhang et al. also found that most facilities admitting those who were diagnosed as obese were not for profit and had a high rate of Medicaid beds (Zhang et al., 2016). The researchers concluded that nursing facilities with a large population of obese patients were more likely to have deficiencies, both health care related, and facility related (Zhang et al., 2016). Zhang et al. assert that these findings indicate that an already vulnerable population may be put at an even higher risk for poor health outcomes because of lack of access to high quality facilities, contributing further to health disparities for this population.

Bradway, Felix, Whitfield, and Li (2017) examined the barriers in transitioning obese patients from the hospital setting to a nursing home setting. This study was a cross-sectional, descriptive study that targeted hospitals in Pennsylvania and Arkansas to analyze their discharge barriers for obese patients. Ninety-seven hospital discharge planners and case managers responded to the survey. The results showed that 40.2% of the participants reported having to discharge an obese or morbidly obese patient to a nursing facility at least once per week (Bradway et al., 2017). At least 33% of the participants reported being unable to discharge a patient with “severe obesity” to a nursing facility (Bradway et al., 2017).

### **Cost of Care of the Bariatric Patient**

As discussed, obese patients may require specialized bariatric equipment (beds, mattresses, lifts, commodes, wheelchairs, shower chairs, and toilet risers), different supplies, and structural changes to the facility to accommodate larger equipment. For example, standard entryways are not wide enough to accommodate a bariatric wheelchair which would prohibit an individual from accessing needed services or activities (Bradway, DiResta, Fleshner, & Polomano, 2008). An individual who is obese or morbidly obese may accrue \$1,429 more in monthly medical costs than a patient who has a normal BMI (Stephenson–Laws, 2018). It is estimated that caring for an individual who is obese or morbidly obese in a skilled facility can cost an additional \$50,000 per year (Stephenson–Laws, 2018) of unreimbursed care.

Approximately 60% of all long-term care nursing facility residents are on Medicaid in the United States, (Signore, 2016), and Medicaid does not reimburse for specialized supplies, equipment, or structural changes to the facility. A bariatric bed can cost approximately \$5,000, and a bariatric mechanical lift may cost approximately \$10,000. Unfortunately, neither of these items would be reimbursed by insurance, and the facility must pay out of pocket (Signore, 2016) with no financial incentive. In regard to structural changes, costs can be astronomical (Stephenson–Laws, 2018). Due to the considerable costs of caring for this population, nursing facilities are continuing to refuse to admit, which leaves an unsafe and harmful gap in care in access to care for a high-risk population.

In summary, obese and morbidly obese individuals face many barriers, including finding long-term nursing facility options to meet their needs. This is an identified gap in

care for which a lack of research and understanding exists. The purpose of this project was to develop a quality improvement educational program aimed at improving knowledge regarding rehabilitative management and care of the obese and morbidly obese population targeted to social service staff employed in skilled nursing facilities. The goal was to increase awareness of need, knowledge of strategies, safety, and cost savings for the facility with the long-term goal of increasing access to care for this vulnerable population.

## **Theoretical Framework**

The W.K. Kellogg Foundation is one of the largest private foundations in the United States. This foundation was founded in 1930 and since then has been working with vulnerable communities and population, both in the United States and internationally, to improve the lives of at-risk populations (W.K. Kellogg Foundation, 2004). The Logic Model is used by the foundation as a development guide for their educational and quality improvement programs. The Logic Model is composed of planning, implementation and evaluation phases. In following the Logic Model, the framework of the program should outline the program and how it will work, identify what resources will be needed for the project and discuss what the goals of the program will be.

The first phase of the Logic Model is the planning phase. According to the W.K. Kellogg Foundation (2004), this phase is also known as the “input” phase of the project. In this phase it is important to identify current resources, what resources are needed, and any barriers that may affect the project. The second phase of this model is the implementation phase. In this phase the focus is on identifying and collecting the necessary data to monitor and improve the program that is being implemented. Throughout this phase the priority is to achieve and document results. Adjustments to the program may also be identified throughout this phase and may be implemented. The third phase of the Logic Model is evaluation of the program that has been developed and implanted. In this phase, the model will discuss program information as well as the goals of the program and how they are progressing towards completion. Advocacy for a particular program approach may also be done in this phase.

The Logic Model was used as the framework to create this quality improvement, educational program. A depiction of the model is seen in Figure 1 below.

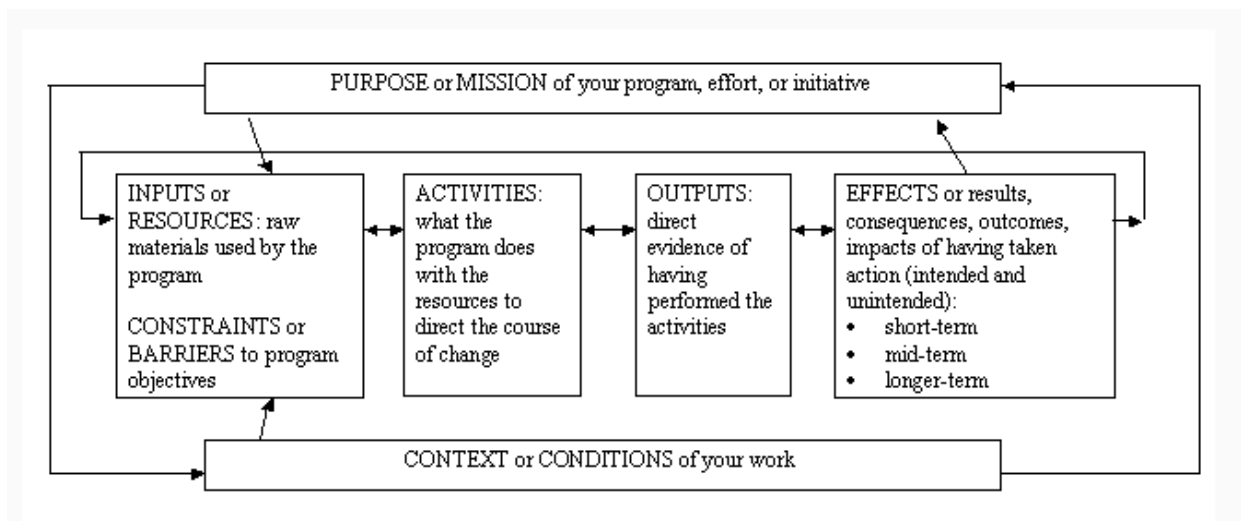


Figure 1. Program Logic Model Framework (University of Kansas, 2018).

The input, activities, output, outcomes, and impact or effects for this project are presented below.

### Input

This quality improvement project involved educating professionally licensed social workers who work in skilled nursing facilities. The project was deemed exempt by the Investigational Review Board (IRB) at Rhode Island College. This project also required administrative support from the organizer of the Rhode Island Leading Age Social Work Group and the willingness of the attendees to participate.

### Activities

Participants were recruited at a monthly meeting that was held at Scandinavian Home in Cranston, Rhode Island for social service staff from various facilities in Rhode Island belonging to the Leading Age Social Work Group. Social workers attending the meeting who agreed to participate answered a seven-question pre-test and attended an



educational session 40 minutes in duration. The educational session included a PowerPoint presentation focused on facility protocols, equipment, medical care, and barriers to care for obese and morbidly obese individuals living in long term care facilities. A five questions multiple choice posttest was then administered followed by a brief program evaluation.

Following the posttest, a four-question multiple choice and two open ended question evaluation was distributed with the request for completion on site. The evaluation gathered data to determine if the level of knowledge regarding bariatric comorbidities, bariatric equipment, staffing concerns when caring for the bariatric patient, and behavioral health needs of the bariatric patient had increased, stayed the same, or was undetermined. The evaluation was also used to determine if the presentation and handouts were perceived to be helpful and/or useful to the social work professional's job duties and roles.

### **Output**

The output of this project was an increase in knowledge by social work professionals who work in long term care facilities which will be demonstrated by the posttest following the educational session.

### **Outcomes**

The desired outcomes of this project are that each social service staff member participating will be able to identify needs, barriers, and ways to improve care for the obese and morbidly obese population requiring access to long-term care services.

### **Impact**

The desired impact of this project is that through knowledge and health literacy, nursing facilities will be more willing to provide access to this population. A short-term impact of this project is that each participant will be able to identify if their facility can adequately care for the bariatric population and if not, identify the needs of the facility. A mid-term impact would be working with the administrators of the facility to implement policy change to care for this population. One long term impact would be to assist the facility in finding additional funding, resources and education for staff to adequately care for this population.

## **Method**

### **Purpose**

The purpose of this project was to develop a quality improvement educational program aimed at improving knowledge regarding rehabilitative management and care of bariatric clients for social service staff employed in skilled nursing facilities. The goal was to increase awareness of need, knowledge of strategies, safety, and cost savings for the facility. Since this project does not use human subjects, the Institutional Review Board (IRB) at Rhode Island College approved this project. In addition to IRB approval, a letter of support was obtained from the facilitator of the Rhode Island Leading Age Social Work Group. Please see Appendix D to view this letter.

### **Site and Sample**

The project took place at a conference room at Scandinavian Home, a long-term care facility in Cranston, RI. The sample for this project was a convenience sample of social service staff employed in skilled nursing facilities across the state of Rhode Island who were members of the Rhode Island Leading Age Social Work Group, a subgroup of Leading Age RI. Leading Age RI is a nonprofit organization which is comprised of nonprofit providers of aging services including nursing homes, assisted living residences, senior housing providers, and adult day health services. The group meets monthly to provide information, networking, and support to providers of aging services. Of the seven group members who attended the meeting, six social work professionals who attended the regularly scheduled November 2019 meeting participated in the program

### **Design**

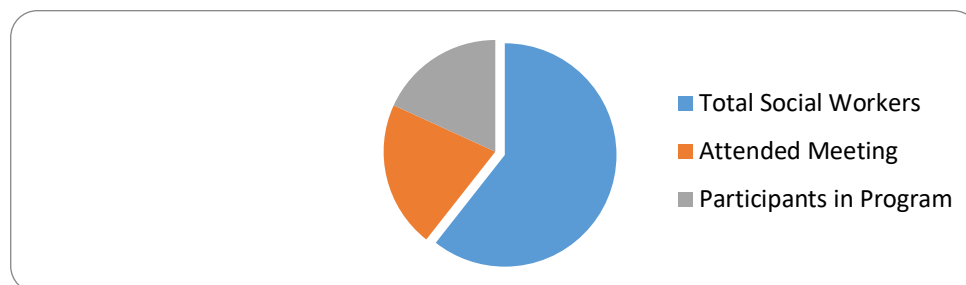
The design of this project was a quality improvement project, using a pretest/posttest to evaluate for increased evidence of knowledge following the educational seminar intervention.

### **Measurement**

The evaluation of the knowledge base of social service staff in skilled nursing facilities related to caring for the obese and morbidly obese population was assessed using a survey developed specifically for this project. This pretest consisted of seven multiple choice questions related to providing care for an individual who is obese and living in a skilled nursing facility. The posttest consisted of five multiple choice questions related to content presented in the educational seminar. The program evaluation consisted of four multiple choice questions and two open ended questions related to the further educational needs regarding this topic as well as questions and concerns. The pretest can be found in Appendix A, the posttest can be found in Appendix B, and the Program Evaluation in Appendix C.

## Results

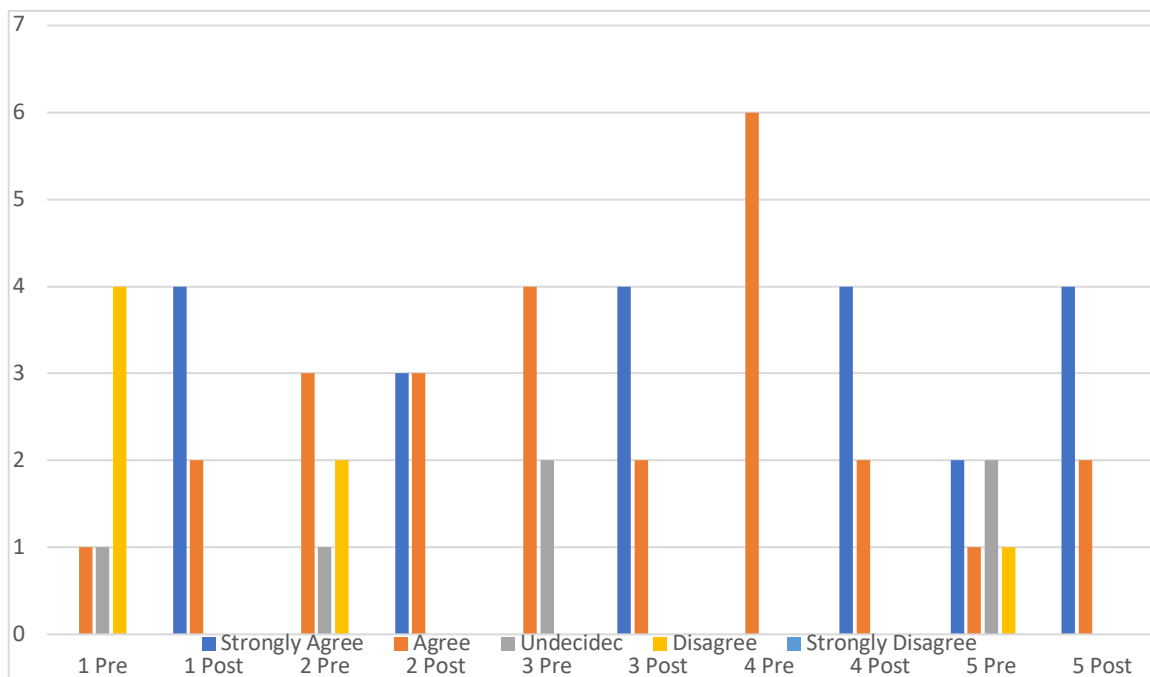
The Leading Age Social Work Group consists of twenty social work professionals in various skilled facilities in Rhode Island. Seven (35%) social work staff attended the November meeting with six (30%) participating in the pretest, posttest and evaluation of this program. This is outlined in the chart below, Figure 2.



*Figure 2.* Participation Pie Chart.

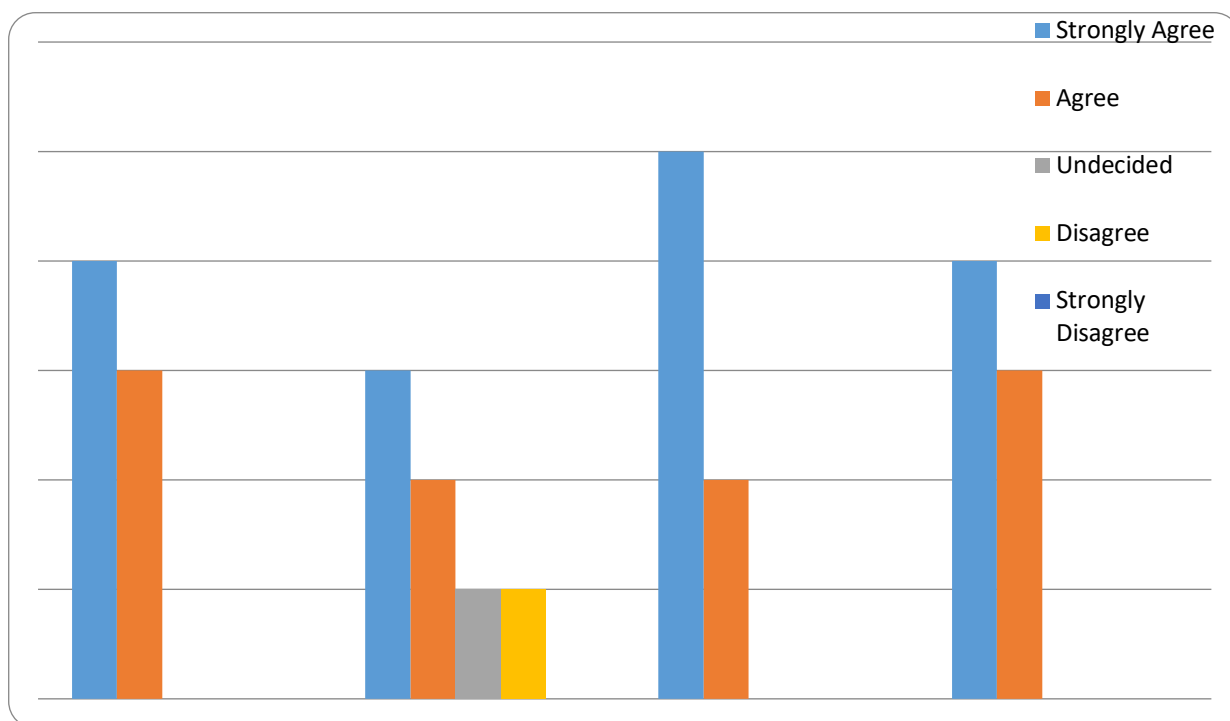
The pre and posttest data was reviewed to compare the social service staff's knowledge of their facilities' ability to care for the obese and morbidly obese patient before and after the educational session. The pretest (Appendix A) consisted of seven multiple choice questions while the posttest (Appendix B) consisted of five multiple choice questions. The multiple choice posttest question results demonstrated improvement in the participants' knowledge of the care and needs that the obese and morbidly obese patients require in a skilled nursing facility. Significant findings in the pre-test included that 66% of social service staff were unable to define the difference between being categorized as obese versus morbidly obese, 33% were unable to identify three barriers to caring for a resident who is obese or morbidly obese, and 33% of the participants were also undecided regarding identifying three comorbidities of an individual who is obese. Figure 3 is represented as a bar graph and indicates the responses of each participant on the pre-test and post-test. The post-test answers

showcased that there was an improvement in the knowledge base of the participants in regard to defining obesity, morbid obesity and knowledge surrounding comorbidities.



*Figure 3. Participation Results Pre and Post Tests.*

The evaluation that was handed out after this program was completed by all seven attendees. One participant disagreed that this was a relevant topic to patients in their facility, while another participant was “undecided.” Although all seven attendees filled out the program evaluation, 0% of participants filled out the two qualitative questions at the end of the evaluation. Those questions were “Please list any other educational programs that would be valuable to you to learn about this population” and “Please submit any questions, comments or concerns below.” The data from the four multiple choice questions are listed below in Figure 4.



*Figure 4.* Program Evaluation.

### **Limitations**

One limitation of this quality improvement project was the small number of participants. Six social service staff members fully participated, while one participant attended the meeting and only completed the evaluation. A second limitation is the variability of each individual skilled nursing facility and their ability to care for the obese and morbidly obese patient. Certain facilities are better staffed and more equipped to care for this population than others. A third limitation was that the participants were all individuals who joined the Rhode Island Leading Age Social Work Group and attend the monthly meetings. Not all social service staff members throughout facilities in Rhode Island chose to participate in this work group which may make those who participated different from other social service staff at skilled nursing facilities.

### **Summary and Conclusion**

In summary, a quality improvement program was planned, implemented, and evaluated to impact the knowledge of social service professionals regarding the care and needs of the bariatric population. Six social workers participated in the entire program, while a seventh social worker attended and only completed the evaluation. Significant findings in the pretest included that 66% of social service staff were unable to define the difference between being categorized as obese versus morbidly obese, 33% were unable to identify three barriers to caring for a resident who is obese or morbidly obese, and 33% of the participants were also undecided regarding identifying three co morbidities of an individual who is obese. These results demonstrate the lack of knowledge regarding this issue and the need for more educational programs in order to adequately care for those who are obese and morbidly obese. The results from the post-test demonstrated that there was an improvement in the knowledge base surrounding the topic of caring for the obese and morbidly obese populations after the educational session.

In conclusion, this research and quality improvement program demonstrates the growing number of the population of obese and morbidly obese individuals who require care in long-term care facilities. It also emphasizes the lack of education and resources dedicated to this population. This project demonstrates the need for and increased awareness by social service staff in facilities to recognize the needs of this population and advocate on their behalf for the resources needed to improve their access to care and quality of life.



### **Recommendations and Implications for Advanced Nursing Practice**

Public health nursing is defined by the American Public Health Association (APHA) as “the practice of promoting and protecting the health of populations using knowledge from nursing, social and public health sciences (Storfjell, Winslow, & Saunders, 2018). In 2013, the APHA, recommended five elements of practice for the public health nurse. These include focusing on the needs of an entire population, systematic assessment of population health, focus on the determinants of health, primary prevention, and the application of interventions (Storfjell, Winslow, & Saunders, 2018). Based on the definition above, advocacy for the bariatric population should be a focus for the population health nurse and healthcare professionals. The literature review has shown that the current trend for the obese/morbidly obese population is that this population is of low socioeconomic status or are living in poverty with limited access to health care providers and healthy food options. This is a health equity issue. This population also faces ethical issues with regard to access to healthcare, especially access to high quality skilled nursing facilities. Individuals who are diagnosed as obese and morbidly obese need more specialized care and preventative measures in place to promote healthy lifestyles and improve health outcomes. With the emerging role of the population health nurse, the goal is that the population will start receiving the care that is needed and, with a focus on prevention in communities, individuals will be able to overcome obesity.

In order for the health outcomes of the bariatric population to improve, changes need to be implemented into practice for both nurses and social workers who care for this high-risk population. Promoting understanding and decreasing the stigmatization of the bariatric individuals are key factors to providing optimal care. As previously discussed,

one study conducted showed that nurses often have negative views of the bariatric individual. Continuing education, increased resources, and administrative support are essential for practicing nurses and for social workers working with this population.

Although continuing education is essential for practicing professional, it is also important to begin the initial education for this population in both undergraduate and graduate curriculums. Programs should focus on barriers to care, comorbidities, specialized equipment and care, and other issues that this population may face when seeking care. Initiating this education in undergraduate programs for health care professionals will assist in reducing the stigmatization that has been demonstrated to occur toward this population.

The literature review previously discussed emphasizes the need for more research for this population. Lack of access to healthcare, comorbidities, and health disparities for the bariatric population are areas that would most benefit from additional research. Research on how policy changes could improve the health outcomes of the bariatric individual is also needed. In addition, research on how education for healthcare professionals could improve the health impacts of this population would also be beneficial.

Advocacy is one way that nurses and healthcare professionals can bring about change and impact the health of this population. Advocating for an increase in funding for skilled nursing facilities who provide services for individuals who have been diagnosed with obesity/morbid obesity, requiring skilled nursing facilities that receive federal or state funding to admit a percent of bariatric individuals, and advocating for

legislation that would classify obesity as a disability would all impact this population in a positive way and improve health outcomes.

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## Appendix A

## Caring for the Obese and Morbidly Obese Patient

## PreTest

Please answer each question below to the best of your knowledge. Please circle one response. All answers are confidential.

1. I am able to define obese versus morbidly obese?

Strongly Agree   Agree   Undecided   Disagree   Strongly Disagree

2. I am able to identify three barriers to caring for an obese or morbidly obese patient?

Strongly Agree   Agree   Undecided   Disagree   Strongly Disagree

3. I am able to identify 3 comorbidities of a patient that is obese?

Strongly Agree   Agree   Undecided   Disagree   Strongly Disagree

4. I can identify three facility barriers to caring for obese or morbidly obese patients?

Strongly Agree   Agree   Undecided   Disagree   Strongly Disagree

5. I can identify two mental health issues that are associated with obesity?

Strongly Agree   Agree   Undecided   Disagree   Strongly Disagree

6. I work in a facility that has their own bariatric equipment?

Strongly Agree   Agree   Undecided   Disagree   Strongly Disagree

7. The facility in which I work has denied an admission to a patient due to their weight.

Strongly Agree   Agree   Undecided   Disagree   Strongly Disagree

Appendix B  
Caring for the Obese and Morbidly Obese Patient  
Post-Test

Please answer each question below to the best of your knowledge. Please circle one response. All answers are confidential.

1. I am able to define obese versus morbidly obese?  
Strongly Agree   Agree   Undecided   Disagree   Strongly Disagree
2. I am able to identify three barriers to caring for an obese or morbidly obese patient?  
Strongly Agree   Agree   Undecided   Disagree   Strongly Disagree
3. I am able to identify 3 comorbidities of a patient that is obese?  
Strongly Agree   Agree   Undecided   Disagree   Strongly Disagree
4. I can identify three facility barriers to caring for obese or morbidly obese patients?  
Strongly Agree   Agree   Undecided   Disagree   Strongly Disagree
5. I can identify two mental health issues that are associated with obesity?  
Strongly Agree   Agree   Undecided   Disagree   Strongly Disagree

## Appendix C

## Caring for the Obese and Morbidly Obese Patient

## Program Evaluation

Please answer each question below to the best of your knowledge. Please circle one response. All answers are confidential.

1. I found this educational program applicable to my day to day job duties?

Strongly Agree   Agree   Undecided   Disagree   Strongly Disagree

2. I found this topic to be relevant to the patients in my facility?

Strongly Agree   Agree   Undecided   Disagree   Strongly Disagree

3. I found this program enlightened me to barriers that the obese and morbidly obese population faces?

Strongly Agree   Agree   Undecided   Disagree   Strongly Disagree

4. I found this program to be helpful in providing strategies for caring for this population?

Strongly Agree   Agree   Undecided   Disagree   Strongly Disagree

5. Please list any other educational programs that would be valuable to you to learn about this population

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6. Please submit any questions, comments or concerns below:

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