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## First Aid and Emergency Preparedness: Improving Health Outcomes Among Aging Adults

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FIRST AID AND EMERGENCY PREPAREDNESS: IMPROVING HEALTH OUTCOMES  
AMONG AGING ADULTS

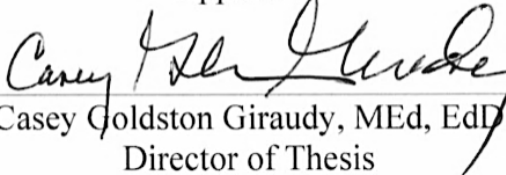
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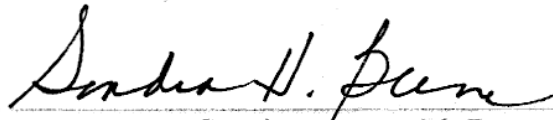
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## THESIS SUMMARY

As more aging adults inevitably depend on the health sector, health professionals must prioritize health education in this population, to prevent severe and poor health outcomes. This work seeks to detail my development, facilitation and instruction of two almost identical seminars titled “First Aid and Emergency Preparedness” at the Lourie Center, a local facility in South Carolina for senior citizens. This course was designed to promote healthier behaviors in the local baby boomer population in an effort to combat the impending “Silver Tsunami” which will apply pressure on the healthcare system.

Course development began with a preliminary needs assessment of the Lourie Center staff and involved review of existing literature to identify prevalent health issues in the older population. Following the literature review, four units were determined to organize course material including Fall Prevention, Pharmacology, Burn Care, and Identifying Medical Emergencies. Once the course content was developed, methods of education delivery were researched to create an effective hourlong workshop, which included guest speakers, demonstrations, and supplemental resources.

The seminars were then evaluated for success based on attendee performance and experience. Assessments were provided to the participants before and after the course to test knowledge gained, and students provided additional feedback about their classroom experience. While the attendees proved their information retention, their suggestions were even more valuable and can be used to improve future public health education initiatives targeting aging adults. Through comprehensive curricula and thoughtful delivery, education can be used as a tool to improve health outcomes among boomers.

## ABSTRACT

As the United States population demographic shifts and the baby boomer population enters seniority, the health sector must adjust and prepare to provide efficient and adequate healthcare to the people. The Silver Tsunami, a metaphor for the expected wave of aging adults, will inevitably strain healthcare professionals and can be partly relieved by promoting risk-minimizing behavior in baby boomers before severe conditions develop. Through this effort, a health education course, titled *First Aid and Emergency Preparedness*, was developed and taught twice at a local senior center to target senior citizens and promote proactivity and healthy behaviors. Course development founded largely on existing literature specific to the target population, led to the creation of a curriculum consisting of four units: (1) Fall Prevention, (2) Pharmacology, (3) Burn Care, and (4) Identifying Medical Emergencies. The workshops were delivered with supplementary handouts, resources and demonstrations to promote proactivity and information retention. The seminars were then evaluated based on knowledge gained, self-reported perceptions of preparedness, and participant feedback. Findings included potential improvements in relevant course content and educational delivery that promotes optimal student engagement. The insights discovered through this health initiative were valuable in their contribution to literature regarding health initiatives that target older adults and can help to relieve the threat of the Silver Tsunami against healthcare.

## CHAPTER 1: INTRODUCTION

In 2010, the United States Department of Health and Human Services published four overarching goals in its *Healthy People 2020* agenda to build a healthier nation. These goals include promoting “quality of life, healthy development, and healthy behaviors across all life stages”, achieving “good health for all”, attaining “high-quality, longer lives free of preventable disease, disability, injury, and premature death” (CDC, 2010). The mission of the health sector is to serve all people inclusively, thus it must subsequently be attentive to the changing population demographics of the public. It is imperative for the United States healthcare system to remain dedicated and tailored to the populations that it serves. The United States experienced a spike in its population following World War II resulting in the “Baby Boomer Generation”, which has now begun to enter seniority. According to the United States Census Bureau, there are currently 73 million baby boomers and by the year 2030 they will all be age 65 or older, making up over 20 percent of the national population (2019). As the aging population grows, their reliance on the medical field will inevitably increase, indicating the need for a strong geriatric healthcare system.

While the older population may have complex healthcare needs, they are poorly understood, and the national healthcare system is not prepared to face their “Silver Tsunami” (Bluethmann et al., 2016). There are several influences in geriatric healthcare including social support, Medicare, and Medicaid. However, two essential players of geriatric healthcare are the professional and the patient. To improve the preparedness and status of geriatric medicine for the approaching Silver Tsunami, both players must be dedicated to improving the health outcomes among this population.

From the health professional's perspective, attitudes and perceptions of the elderly must be corrected and reflect unbiased practices. Negative cultural ideologies with respect to aging can lead to elder mistreatment, which is associated with "anxiety and depression, morbidity and premature mortality and cardiovascular-related mortality, premature institutionalization, frequent hospital visits and readmission" and "greater needs for hospice service and trained nurses and health professionals" (Lin, 2018). Moreover, perceptions against aging adults can deter healthcare professionals from pursuing careers in geriatrics, a reason why the American Geriatrics Society (AGS) Task Force on the Future of Geriatric Medicine has identified a goal to "increase the number of healthcare professionals who employ the principles of geriatric medicine in caring for older persons" (Besdine et al., 2005). Correcting the implicit and explicit biases against senior citizens can contribute to the health equity of geriatric patients and help prevent the strain of the Silver Tsunami on the health sector by improving the overall health outcomes of this population.

The other side of the equation involves the patients themselves and their proactivity to maintain a healthy outlook. Through preventive measures, aging individuals can promote healthier lifestyles and prioritize their physical, mental, and emotional wellbeing, softening their burden on the healthcare system. While this responsibility lies on the elder population's shoulders, the health sector can inspire and instill the importance of proactive and healthy behaviors. Contemporary approaches to healthcare delivery have empowered senior citizens to establish their own goals of care and health (Hillman et al., 2018). Preventive initiatives geared to the older population are



investments that can motivate and encourage independence in geriatric patients, leading to healthier decision-making and better health outcomes.

In an effort to promote healthier and risk-minimizing behaviors among the local community members of the aging population, I first confronted my implicit biases and hesitancy to work with older adults, and then designed an hourlong seminar at the Lourie Center in Columbia, SC. The Lourie Center is a nonprofit facility, for paying members aged fifty and above, promoting the happiness and health of its members by hosting social events, academic programs, athletic classes, and art clubs. The designed seminar was repeated to accommodate the interest of Lourie Center members, for a total of two class sessions. The development of this course was evidence-based, relied on existing literature, and accommodated the facility's guidelines. The curriculum design was informed by my coursework in Health Promotion, Education, and Behavior and my certifications in Basic Life Support and First Aid. Because the workshop was prevention-focused, the class detailed *First Aid and Emergency Preparedness*, to educate Lourie Center members about relevant healthy behaviors and medical emergencies. The success of the course was measured by assessments that evaluated students' knowledge gained and class feedback regarding individual motivation to prioritize healthy behaviors.

## CHAPTER 2: CURRICULUM DESIGN

During the development of the curriculum for my seminar titled *First Aid and Emergency Preparedness* at the Lourie Center, I first met with the facility to discuss logistics including room availability and lesson length. The Lourie Center recommended holding hourlong sessions because the members normally attend other classes and may not be available for longer than 1 hour. The center also noted the facility can accommodate 25 students in the classroom. Using these recommendations, I scheduled two separate workshops that can accommodate a maximum of 25 students each. While the two seminars allowed for a larger sample size, their curricula were kept nearly identical.

While developing my lesson plan, my methodological approach involved conducting a literature review of peer-reviewed academic journal articles to create an evidence-based, relevant, and impactful course. The literature review was divided into two categories: content and delivery. The former literature review was used to determine the subject matter discussed and components within first aid and emergency preparedness that needed to be addressed. I reviewed existing literature about the needs of aging adults by identifying their health risks and the conditions that affect this target population most prevalently. After narrowing down the most pressing health concerns facing senior citizens, I then researched preventive behaviors that can deter these poor health outcomes. The content of the course concentrated on the findings from my literature review and formed the core of my curriculum.

Following determination of course content, I explored delivery methods of the seminar units. I sifted through the existing literature again, but examined the best practices used by health professionals to educate individuals about first aid. Moreover, I researched the successful and unsuccessful educational health interventions that targeted aging adults. This portion of the literature review helped me organize the content and create a framework to deliver the course material to the students. The second portion of my literature review also served to identify effective supplemental resources to enhance the experiences of the attendees and knowledge retention. More specifically, I reviewed the research from the preliminary literature review regarding preventive behaviors and found supplementary tools for students to take home with them to apply knowledge gained from the units of the seminar. Thus, review of existing literature was instrumental for the curriculum design of this course, particularly for identifying content and enhancing the classroom experience.

## **NEED IDENTIFICATION**

An informal needs assessment conducted for the development of my lesson plan began with a search in the existing literature for the most pressing health concerns affecting senior citizens, followed by ways to prevent or deter these health issues. *Healthy People 2020*'s section on aging adults lists falls as a leading cause of injury among older adults, stating that they are "treated in emergency departments every 13 seconds and claim a life every 20 minutes" (Healthy People 2020, 2017). The prevalence and wide scope of falls in the older population is evident as one-third of all people above 65 and one-half of all people above 85 sustain at least one fall annually (Hogan et al.,

2004). Elderly patients are 10 times more likely to be hospitalized and 8 times more likely to die due to a fall when compared with young adults (Hogan et al., 2004). Several factors cause this susceptibility to falls, including lowered bone strength and bone density. Research demonstrates that the “uprighting reflex” or righting reflex, which allows one to correct their position and remain upright, is weakened or lost in elders. The impairment of the uprighting reflex may be attributed to arthritic stiffness, diabetic nerve damage, or weakening due to stroke or disease (Hogan et al., 2004). Not only is the older population more likely to suffer from falls, but their injuries are usually more devastating with studies showing fall impact “worsens appreciably with advancing age” (Graffeo et al., 2016). Because falls can be a sentinel event for aging adults and can lead to psychological and physical distress, it is important for public health advocates, including myself, to address and prevent falls when designing interventions geared towards senior citizens.

The existing research about the older population discusses the correlation between increase of age and reliance on medications. As the population ages, the proportion of morbidity and multimorbidity increases (Masnoon, 2019). Multimorbidity goes hand-in-hand with polypharmacy, as patients with more than one condition may need more than one prescription medication. Polypharmacy is more common in the aging population and increase the risk of adverse health outcomes including “unplanned hospitalisation, falls and mortality” (Masnoon, 2019). This is partly due to age-related changes in the body’s pharmacokinetics and pharmacodynamics (Masnoon, 2019), as drug sensitivity changes and renal and hepatic clearance reduces with age (Mangoni & Jackson, 2004). Thus, polypharmacy can lead to falls and reduced quality of life, particularly in frail individuals

(Dearing et al., 2020). These age-related obstacles in prescription medication need to be addressed when developing health initiatives targeting the older population.

The literature review continued as I searched for relevant and imminent emergencies faced by the elder population. The research asserts that while fires and burns are the third leading cause of unintentional fatal home injury, they are the “second leading cause of injury in adults over the age of 70” (Gregg et al., 2018). Geriatric burns are of specific concern in the United States as 20% of burns occur in the aging population nationally, whereas the older population in developing countries in Asia and the Middle East comprise only 5% of burn cases (Abu-Sittah et al., 2016). The aging population is more susceptible to burns due to limited mobility and slower reaction time in the event of an emergency, with research demonstrating 23.7% of the elderly collapse when caught in a fire (Abu-Sittah et al., 2016). While limited mobility and collapses can aggravate injuries in geriatric patients, burn severity and related complications can also arise due to preexisting conditions. Morbidity and medical obstacles including “impaired vision, decreased coordination, and the side effects of medication” can exacerbate burn damage and cause further complications (Abu-Sittah et al., 2016). The physiological changes associated with aging results in the accumulation of cellular damage in the elderly due to “the action of hormones, mitochondrial DNA, genetic material, free radicals, oxidative-inflammation and immuno-senescence”, which disrupt repair mechanisms (Abu-Sittah et al., 2016). The normal aging process coupled with medical co-morbidities can cause severe complications, increasing the likelihood of thermal injury, multi-organ failure (Gregg et al., 2018), congestive heart failure, pulmonary edema and pneumonia (Abu-Sittah et al., 2016). Burn severity and accentuation in the older population contribute to

the disheartening statistic stating individuals over 65 years old have double the mortality rate followed by a burn injury, when compared to those under 65 years old (Abu-Sittah et al., 2016). Thus, the evidence points to the importance of addressing burns in the elderly due to its disproportional effects and particular severity in this population, especially because “90% of burn injuries are preventable” (Hettiaratchy & Dziewulski, 2004).

In continuing my literature review, I noticed that the CDC also listed chronic illnesses as a major health concern of the older population in *Healthy People 2020*. Per *Healthy People 2020*, chronic conditions in the elderly population include stroke, heart disease, and diabetes. Stroke particularly affects the older population as over 75% of strokes occur in adults over 65 years old (Hogan et al., 2004). Stroke, defined as a sudden reduction in blood flow to the brain (Hogan et. al, 2004), can be attributed to weakened arteries in the brain due to high blood pressure. As hypertension risk increases with age, the data demonstrate 66% of the elderly population suffer from high blood pressure, and only 30% of these are undergoing adequate treatment of their hypertension (Nguyen et al., 2012). Blood pressure management can prevent stroke with evidence asserting that hypertension treatment can reduce the risk of stroke by more than one third (Rashid et al., 2003). Strokes are medical emergencies that can cause severe and irreversible brain damage, leading to much physical and mental distress of individuals. Due to the gravity of stroke events and their prevalence in aging adults, health professionals must educate this population about stroke emergencies in an effort to promote prevention and risk-minimizing behavior.

Chronic hypertension not only increases risk of stroke, but also myocardial ischemia or infarction due to the stiffening of arteries (Nguyen et al., 2012). Coronary heart disease prevalence is higher among the aging population and the leading cause of death in the United States (Odden et al., 2011). Heart disease incidence is projected to increase by 26%, along with a 47% increase in prevalence, and a 56% increase in mortality between 2010 and 2040 due to the aging of the baby boomers (Odden et al., 2011). The drastic increase in heart disease and heart emergencies highlights the need for health education regarding myocardial events when targeting senior citizens.

Among chronic conditions affecting aging adults, diabetes is also notable in its prevalence, with more than 25% of the United States population over the age of 65 years has diabetes (Kirkman et al., 2012). Close to half of the 24 million patients with diabetes in the United States are older than 60 years (Huang et al., 2013). Adults 75 years and older have double rate of hospitalizations and emergency room visits due to diabetic emergencies when compared with the general diabetic population (Kirkman et al., 2012). Co-morbidity and diabetes-associated health conditions, including lower-extremity amputation, myocardial infarction, retinopathy, and kidney disease, are more common in those aged 75 and above (Kirkman et al., 2014). Although many diabetic individuals are living longer than in previous years (Huang et al., 2013), the complications associated with diabetes and disproportional impact on the older population still persist. As aging adults experience higher rates of diabetic emergencies, health professionals must incorporate diabetes when considering the health outcomes of the baby boomers.

As the number of individuals aged 65 and older has been expected to increase from 37 million to over 70 million between 2005 and 2030, the national healthcare system will experience an “epidemic of chronic disease” (Dexter et al., 2013). Research demonstrates that eight out of ten senior citizens suffer from one or more chronic disease (Dexter et al., 2013) such as hypertension, heart disease, and diabetes, stressing the importance of confronting chronic illness and preventing related emergencies (stroke, heart attack, diabetic emergencies etc.) in this population through public health interventions.

## **LEARNING TRAJECTORIES**

After identifying needs of the aging population and determining relevant health conditions and sentinel events, the next step of my workshop development involved categorizing content to fit a concise lesson plan and then emphasizing prevention. Based on the aforementioned literature review I divided the course content into four general learning trajectories: (1) Fall Prevention, (2) Pharmacology, (3) Burn Care, and (4) Identifying Medical Emergencies (see Appendix A). The first three units were designed to educate the students about the issues themselves, their prevalence, symptoms and health repercussions, followed by discussing prevention methods and recovery strategies to improve these health outcomes. The fourth unit regarding medical emergencies focused primarily on the identification of symptoms and preparedness as a vigilant bystander helping others during sentinel events. After establishing these learning trajectories, I reverted back to the existing literature to examine prevention strategies and promote risk-minimizing behaviors for each unit.



### ***Fall Prevention***

Because falls are a “marker of frailty, immobility, and acute and chronic health impairment” in the aging population, and most commonly occur where people spend the most time, fall prevention requires fall-proofing the house (Institute of Medicine, 1992). Modifiable environmental factors include uneven sidewalks and stairways, dim lighting, and lack of grab bars or nonslip surfaces in bathrooms (Institute of Medicine, 1992). The National Institute on Aging (NIA) states that 60% of falls happen at home and provides tips to avoid falls by ensuring safety in the household (2017). NIA’s tips varied by room, noting recommendations in common areas such as stairways, hallways, and living rooms, and bathrooms and bedrooms. In common areas, it is recommended to install sturdy handrails, sufficient lighting, no-slip grips for rugs, and tie electric wires with twist-ties out of walking space (NIA, 2017). In bathrooms, the NIA recommends installing grab bars in toilet and tub or shower proximity, along with night lights (2017). In the bedroom, a flashlight and phone should be kept close to the bed in case of a power outage or emergency (NIA, 2017). These suggestions were all included in the Fall Prevention unit on a PowerPoint slide titled “Fall-Proofing Your House”.

A Behavioral Risk Factor Surveillance System (BRFSS) survey conducted in 2006 found that “approximately 5.8 million persons aged  $\geq 65$  years reported falling at least once during the preceding three months, and 1.8 million (31.3%) of those who fell sustained an injury that resulted in a doctor visit or restricted activity for at least one day” (Stevens et al., 2008). Due to the high prevalence of falling and sustained injury, the American Association of Retired Persons (AARP) wrote an article about falling safely

stating “The world is full of banana peels” and emphasizing the inevitability of falling down (Zimmerman, 2017). The article lists the four steps for a safe crash landing including (1) staying bent, (2) protecting your head, (3) landing on muscles and not bones, and (4) rolling into the fall (Zimmerman, 2017). These steps to falling safely were also included in the Fall Prevention unit in a section titled “How to Fall Properly”.

Once a fall happens, an individual must then recover balance and get up, if possible. Vancouver Coastal Health, a regional health authority in Canada, published a guide to fall prevention, which included a page devoted to “Getting Up After a Fall” (2012). The page included a graphic demonstrating the steps to getting up safely after falling, which included looking around for a sturdy piece of furniture, rolling and crawling, placing a strong foot on the floor, using both arms and legs, and resting (Vancouver Coastal Health, 2012). This infographic was posted on a PowerPoint slide during the Fall Prevention unit of my workshop.

The final sections of the Fall Prevention learning trajectory focused on risk-minimizing physical activity and offered calls to action. Exercising and staying active is a “key public health strategy for healthy aging and maintaining independence” in the aging community (Callahan et al., 2016). Clinical trials and research over the past 20 years assert that physical activity such as tai chi, which is a mind-body exercise focused on slower and mindful movement and meditation, improve short and long-term benefits to those suffering from morbidities like rheumatoid arthritis (Callahan et al., 2016). Tai chi’s positive influence on those with rheumatoid arthritis is remarkable, especially because research states “the odds of falling more than double with the addition of each

comorbid condition” (Jamison et al., 2003). Thus, tai chi is an effective method to prevent and manage morbidity, lowers the risk of falling, and was an essential portion of the Fall Prevention unit in my seminar.

Jamison et al. states, “inactivity may be an important behavioral risk factor for falls (2003), so I reviewed literature regarding other forms of physical activity that may prevent falls in the elderly. The research pointed to the use of resistance bands as an effective method to prevent falling. A study analyzing the effects of elastic-band exercise in the elderly concluded that the elastic-band exercise group presented significant improvement in “balance, gait function, flexibility, and fall efficacy” (Kwak et al., 2016). The study surveyed participants about their fall efficacy, or confidence in falling, and found that these aging adults had higher scores in fall efficacy after exercising with resistance bands (Kwak et al., 2016). Due to the benefits of muscle strength training exercises, I concluded the Fall Prevention unit with resistance exercises.

### ***Pharmacology***

As aforementioned, the preliminary literature review found that polypharmacy and multimorbidity are common experiences in the majority of the aging population (Masnoon, 2019). Thus, in the Pharmacology unit, it was imperative to include discussions about drug interactions, as the elderly population is prescribed multiple medications. With multiple prescriptions comes organizational challenges, highlighting the need for health education regarding proper storage and drug management to minimize poorer health outcomes and hazardous behavior. To provide pharmacological expertise to the students in this course, I asked Dr. Sondra Berger, professor emeritus of the Drug

Discovery & Biomedical Sciences Department at the University of South Carolina's College of Pharmacy, for her assistance. Dr. Berger graciously offered to design a brief overview of pharmacology and drug management to the students of one workshop. For the second workshop, Dr. Berger connected me with two candidates at the University of South Carolina College of Pharmacy's Doctor of Pharmacy degrees, Wesley McAlhany and Tatum Kinlaw. These guest speakers provided the clinical prowess and proficiency needed in the Pharmacology unit of the courses.

### ***Burn Care***

During the preliminary literature research of my methodology, I found that Hettiaratchy and Dziewulski asserted, "90% of burn injuries are preventable" (2004). This fact has led to several attempts to decrease their prevalence through both education and legislation (Hettiaratchy & Dziewulski, 2004). While legislation is "passive" and not dependent on individual behavior, education is "active" and a good method to help change individual behavior, especially if it targets a specific population (Hettiaratchy & Dziewulski, 2004). I turned to AlSCO, a company that sets industrial standards in the United States, to find material regarding burn care. Their burn-specific first aid guide detailed the three different burn classifications: superficial, partial thickness, and full thickness (AlSCO, 2016). The information gathered about burn classification comprised the first section of the Burn Care unit, so students could first be able to identify burn injuries. I used both AlSCO and the American Academy of Dermatology (AAD) to cover the material in the next section of this unit titled, "Burn Care: Do's and Don'ts". AAD recommended cooling and covering the burn, protecting the burn from the sun and

seeking professional medical attention if severe. Also's tips were detailed more technically, describing the appliance of bandages, which I also included in the presentation.

Peer-reviewed literature states that home burn injury occurs common among adults over 70 years and that burn prevention strategies should include a focus on safe home environments (Gregg, 2018). A whopping 84.3% of fire and burn deaths occur from unintentional house fires (McLoughlin & McGuire, 1990). To ensure that my course considered home safety, I looked towards the United States Fire Administration's (USFA) website to find information about fire prevention within the house. Their suggestions included space heater safety, smoke detector checks, and planning escape routes (USFA, 2016). I concluded the Burn Care unit of my course with these house fire prevention recommendations.

### ***Identifying Medical Emergencies***

Based on the findings of the preliminary literature search, the three chronic medical conditions that I chose to focus on during course development were: hypertension, heart disease, and diabetes. Dexter et al. states that newer models of health care delivery promote patient self-monitoring and vigilance, emphasizing the importance of education in regard to chronic diseases (Dexter et al., 2010). Because the purpose of the class was to teach emergency preparedness, I researched the medical events that can arise from blood pressure problems, heart conditions and diabetes. I narrowed down the medical emergencies to four sentinel events that this population may experience: (1) strokes, (2) heart attacks, (3) hypoglycemia, and (4) diabetic ketoacidosis (DKA).

Strokes can cause significant brain cell damage and are sentinel events in the aging population due to their intense recovery periods, thus “timing to treatment is critical” (Hogan et al., 2004). In order to seek treatment promptly, it is imperative for individuals to be able to identify the symptoms of stroke, including sudden diminution, loss of consciousness or sensation, speech, and weakness (Hogan et al., 2004). To help quickly identify these symptoms, I used the National Stroke Association’s *FAST* acronym checklist. To act *FAST*, first, ask the individual to smile and check for *Facial asymmetry*, then examine *Arm weakness*, followed by *Slurring speech*, and finally seek medical attention in *Time* (Harvard Health Publishing). Information about the causes, symptoms, and *FAST* method were included in the stroke section of the Identifying Medical Emergencies learning trajectory.

Next, I explored the existing literature about heart attacks in the older population for the next section of this unit. While normal myocardial infarction symptoms include “crushing chest pain, shortness of breath, and diaphoresis”, these symptoms are rarely exhibited in elderly patients (Hogan et al., 2004). The major symptoms experienced by aging adults when experiencing an event of myocardial infarction include shortness of breath (dyspnea), mental confusion, loss of consciousness (syncope), and general weakness (Hogan et al., 2004). Because these symptoms are not classic of heart attacks, like pain in the left arm and chest, it is important for the older population to understand the common symptoms of myocardial infarction in their age group. I emphasized these specific symptoms in my workshop presentation along with the common signs of heart attack.

The United States National Library of Medicine (NLM) asserts that “the average person waits 3 hours before seeking help for symptoms of a heart attack” (2018). After identifying a heart attack event, the students need to respond, particularly because elderly patients have a fourfold increase in mortality due to myocardial infarction, when compared with younger adults (Hogan et al., 2004). The NLM asserts the importance of calling 911 and then details the steps to take while expecting emergency response professionals (2018). Recommendations include sitting with the individual, loosening tight clothing, and asking about medication (NLM, 2018). Furthermore, literature points to the role of aspirin (acetylsalicylic acid) in prevention of heart attack events, stating that in low doses, it benefits acute coronary syndromes and previous myocardial infarction (Gaziano et al., 2018). In addition to the NLM recommendations, in this section, I included information about aspirin use for heart attack emergencies of conscious adults.

The final material covered in the Identifying Medical Emergencies learning trajectory involved diabetic emergencies. To introduce this section, I first provided a brief overview of diabetic conditions defining both mild hypoglycemia and hyperglycemia. Per the British Red Cross, the mild symptoms of low blood sugar include hunger, shakiness, sweating and blurred vision, whereas symptoms of high blood sugar include increased thirst, blurred vision, and frequent urination. These mild diabetic symptoms may be indicative of severe blood sugar levels which may eventually lead to a diabetic emergency. Severe hypoglycemia may be symptomatic with convulsions and unconsciousness, while diabetic ketoacidosis (DKA) can present with vomiting, labored breathing, fruity smelling breath, and numbness or tingly sensations in the feet (Diabetes.co.uk, 2019). After providing a brief overview of diabetic conditions and

emergency symptoms, I delved into preparedness. In the event of a diabetic emergency, it is recommended to activate emergency response (British Red Cross). Meanwhile, waiting awaiting medical professionals, if the person is unable to sit or stand, or they are unconscious, it is recommended to put the person in recovery position, lying on his or her side with their hand supporting their head and an anchoring knee in the “four” position (Diabetes.co.uk, 2019). I concluded the Identifying Medical Emergencies unit by discussing diabetic emergency preparedness and the use of recovery positions in any medical emergency resulting in unconsciousness of the individual.

## **BEST PRACTICES**

Once the content and lesson plan were gathered and organized, educational approaches were researched to deliver information and increase knowledge retention in the target population. Literature demonstrates that organizations found success in applying the Transtheoretical Model (TTM) to health promotion programs for older adults (Lach et al., 2004). The TTM proposes the six stages of changing behavior as: precontemplation, contemplation, preparation, action, maintenance, and termination (Lamorte, 2019). While formal lectures can be a successful educational approach, to enhance action and maintenance, demonstrations can be an effective method to apply the TTM. Demonstrations are capable of training in procedural and strategic knowledge, which are both applied in first aid and emergency preparedness (Salus et al., 2009). I decided to use demonstrations in this course to help promote risk-minimizing behavior, particularly in the Fall Prevention unit. The first demonstration involved a mini skit showing students how to get up safely after a fall, using a chair. Next, a guest instructor



who has practiced tai chi for 9 years, Rob McCrue, kindly provided a tai chi demonstration for the class. Lastly, I demonstrated simple resistance band exercises, including chest pulls, squats, chest presses and leg presses, specifically geared towards the aging population to improve bone density and muscle strength (Camino Retirement Apartments). These demonstrations were used to promote the active stage of the TTM by showing students the simple steps they can take to prevent falls.

Another important educational factor leading to knowledge retention and behavior changes is active learning in a public health intervention. While PowerPoint presentations have become commonplace in the classroom setting and serve as a tool to provide visual aid to students, it has been shown to promote passive learning among students (Kinchin, 2006). A key element to facilitate active learning is through note-taking (Brazeau, 2006), so I decided to provide handouts to the students in class for them to make notes on. When designing handouts for each unit, I found literature demonstrating the inefficacy of simply duplicating and printing out PowerPoint slides (Kinchin, 2006). College students who were given PowerPoint handouts were less likely to partake and participate actively in the classroom setting (Noppe, 2007). Thus, to provide a more challenging and engaging handout, I provided students with note sheets for each unit that complemented the PowerPoint, rather than duplicating the slides. These handouts were provided in a folder for the students to take home, giving them the option to reference them later.

## **SUPPLEMENTAL RESOURCES**

Along with handouts, other supplements can also enhance the educational experience of students, with research showing student improvement when given tokens

that do not interfere with learning (Birnbrauer & Lawler, 1972). Each unit in my seminar was complemented with curriculum-specific resources. In the Fall Prevention unit, participants were provided night lights to accompany the “Fall-Proofing Your House” section. Serendipitously, while planning the course at the Lourie Center, I met a solicitor promoting his business of grab-bar installation and was able to supply his fliers with course handouts to promote bathroom safety. Furthermore, in complement to the resistance band demonstration, all students received resistance bands to promote positive changes in behavior in preventing falls. Because this was a first aid class, I also dispensed course-specific first aid kits to every attendant (see Appendix B). The kits included bandages for burns to complement the Burn Care unit, as well as glucose pills in the event of a hypoglycemic emergency. Choosing and purchasing these materials was the final step in my course development process. These evidence-based supplemental tools were provided not only to make the first aid information tangible, but in an effort to complement the course content and promote risk-minimizing behavior and knowledge retention.

### CHAPTER 3: PARTICIPANT ATTENDANCE

Once the course and curriculum development phase of my thesis project was complete, I sought to engage community members and recruit students to attend the workshop. I first posted fliers promoting the class at the Lourie Center (see Appendix D). Because research has repeatedly found a positive change in class attendance if complementary food is provided, I made the decision to provide catering for the workshop in an effort to boost recruitment (Bro et al., 2008; Segovis et al., 2007). The free breakfast and supplemental materials were also advertised on the flier to attract and incentivize attendants.

Another method used to enhance the recruitment phase of this project involved eliminating financial barriers to health education. Hahn and Truman state, “Education is a *process and a product*” which can be used in public health to promote health equity (2015). Access to health care and education has been widely studied and the lack thereof is highly associated with financial barriers, that can be associated with and cause additional nonfinancial barriers (Shook, 2005). In an effort to stay cognizant of health inequity and financial barriers to health access, the offered courses were free of charge to any aging adult interested in learning first aid. Through the elimination of financial barriers, I did not limit my target population to those who could afford health education but expanded the scope of this class to impact individuals of all socioeconomic statuses. I broadcasted this to prospective students by ensuring that all parts of this class were free of cost and also published it while passing out fliers at the Lourie Center.

In addition to the fliers, sign-up sheets were also posted in the Lourie Center's lobby, allotting for 25 students per seminar. Chen et al.'s trial at a health promotion center found a positive correlation between attendance rate and reminders, indicating the need for me to contact those who registered for my class to improve turnout (2008). Due to these findings, I asked all registrants to provide preferred contact information on the sign-up sheets so I could follow up with them. I reached out to prospective students five days prior to each seminar via email and/or phone to confirm their attendance to the course.

Next, to spread awareness of the course more actively, I went to the Lourie Center and set up a table in the lobby to mingle with the foot traffic. In addition, I manned a booth at the Lourie Center's annual Fall Festival, a free health and wellness expo which hosts over 300 senior citizens in the Midlands area, which was held two weeks prior to my course. I promoted the class to the guests by passing out muffins, promoting sign-up sheets, and advocating with the community members about being proactive about health and wellness.

The sum of my recruitment efforts resulted in 26 registered students for the first seminar and 17 for the second. After contacting the 26 registrants for the first workshop, 11 individuals confirmed their interest, 4 individuals cancelled their registration, and 11 individuals did not respond. Of the 22 possible attendees, 15 turned up to attend the first course, making a 68% attendance rate for this session.

For the second session, after contacting the 17 individuals who expressed interest in the course, 3 students confirmed their attendance, 2 people cancelled their registration,

and 12 individuals did not respond. Of the 15 remaining possible attendees, 11 students participated in the second workshop, making a 73% attendance rate for this session.

Overall, for both courses, a total of 43 students registered, although only 37 were expected after contacting to confirm attendance. Out of the 37 students expected to attend both courses, the total class roster included 26 participants for an overall attendance rate of 70%.

## CHAPTER 4: COURSE EVALUATION

The success of my courses was measured using three equally important indicators: self-reported preparedness, knowledge gained and student feedback. All three indicators were measured through the completion of anonymous preliminary quizzes and concluding questionnaires. The preliminary quizzes, completed before class began, were designed to gauge the first two aforementioned indicators: first aid and emergency preparedness and cognizance amongst the students (see Appendix E). The students reported their perceptions of personal emergency preparedness using a Likert scale, with “1” indicating “Less Prepared”, and “5” indicating “Very Prepared”. Participants were also asked if they owned a first aid kit at home and whether or not it had been updated within the past year to assess their first aid preparedness. To determine the existing first aid and medical emergency knowledge of the class, the preliminary evaluation asked five true or false questions from course content of all four units. The quizzes from all students were graded and the classes were given a cumulative average score to gauge the emergency preparedness and existing knowledge of the overall sample size.

The concluding questionnaire helped assess all three indicators (see Appendix F). Preparedness was measured using the same Likert scale from the preliminary quiz, to test whether or not perceptions and confidence in emergency preparedness improved after course completion. Secondly, the concluding quiz asked six content-related true or false questions from all course units; five of these questions were also on the preliminary assessment. These questions were graded, and the class was given a cumulative average score for comparison with the average pre-test score. To address the third indicator of

course success, student feedback, attendants were finally asked about their suggestions and comments about the course.

To simplify course evaluation assessment, the data analysis was separated into two sections: student perceptions and performance (quantitative) and student feedback (qualitative). The quantitative data measured information retention and assessed Likert scale responses regarding student perceptions of preparedness, whereas the qualitative feedback was coded and used for insights on improvement. Both forms of data were instrumental in evaluating both success and impact of the course.

## STUDENT PERCEPTIONS AND PERFORMANCE

I first focused on student perceptions of emergency preparedness before and after attendance of the workshops. I first tallied the Likert scale responses to evaluate improvement in participant confidence in first aid and emergency preparedness (Table 1). Afterwards, I analyzed participant responses to the questions, “Do you own a first aid kit in your home? If yes, have you updated it within the last year?” (Table 2).

Table 1

<i>Student Perceptions of First Aid and Emergency Preparedness</i>		
Scale 1 to 5	Preliminary (Number of student responses)	Conclusion (Number of student responses)
1 (less prepared)	0	0
2	5	0
3	9	2
4	5	9
5 (very prepared)	3*	9

\*It should be noted that although 3 participants reported feeling very prepared for emergencies, these 3 individuals also admitted to not owning a first aid kit.

Table 2

<i>Do you have a first aid kit in your home?</i>	
Yes	7
No	16

<i>If yes, have you updated it within the last year?</i>	
Yes	1
No	6

The results from this portion of course evaluation reveal that student perceptions of first aid and emergency preparedness improved significantly following course completion. After attending the class, all students reported feeling better prepared for emergencies (Figure 1). The majority of course attendants did not feel prepared for emergency situations prior to the course and scored themselves a 3 out of 5 on the Likert scale. After course completion, the majority (90%) of students reported feeling more prepared, giving themselves a 4 or 5 out of 5.

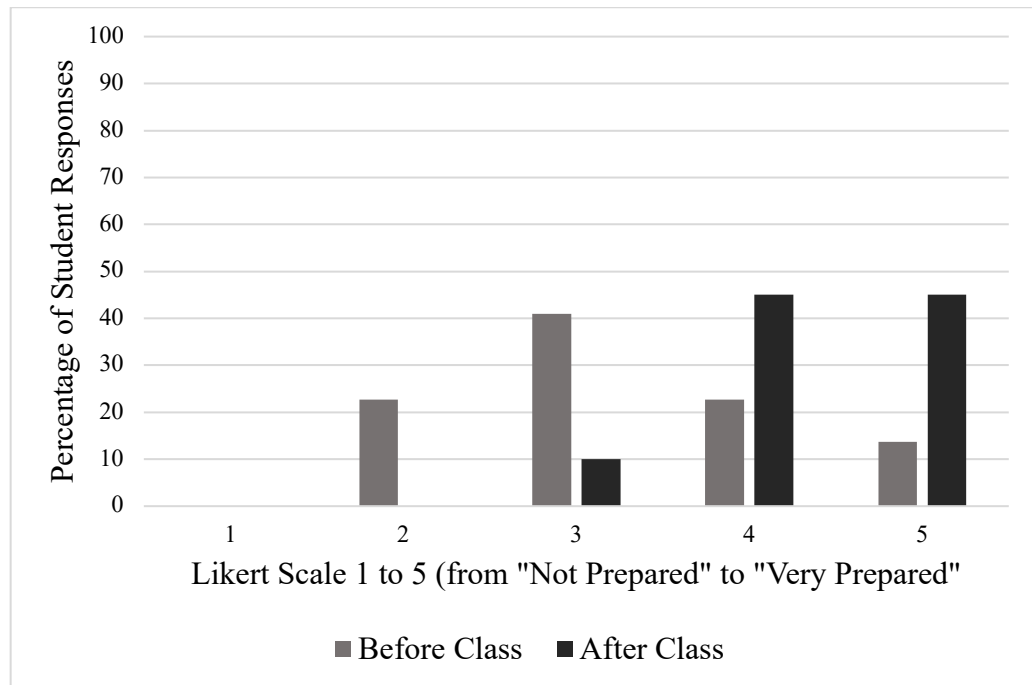


Figure 1. Student Perceptions of First Aid and Emergency Preparedness Before and After Course Completion.



After gauging student confidence in emergency preparedness, I examined their knowledge gained using the course curriculum questions in both preliminary and concluding quizzes. I evaluated each quiz by counting the number of incorrect responses per assessment and then averaged the class grades to compare average preliminary percentage to average concluding percentage (Table 2). While the class average for the preliminary exam was 77%, the students performed better following course completion and achieved a class average of 86%. The attendants chose more correct answers on the concluding questionnaire than the preliminary quiz (Figure 2).

Table 2

*Student Grade Performance on Assessments*

Incorrect answers	Preliminary (Number of students)	Concluding (Number of students)
6	0	0
5	0	0
4	0	0
3	2	1
2	6	3
1	7	9
0	7	9
Class average score	3.864	5.812
Class average percentage	77%	86%

*Note.* Preliminary tests had a total of 5 questions and concluding tests had a total of 6 question

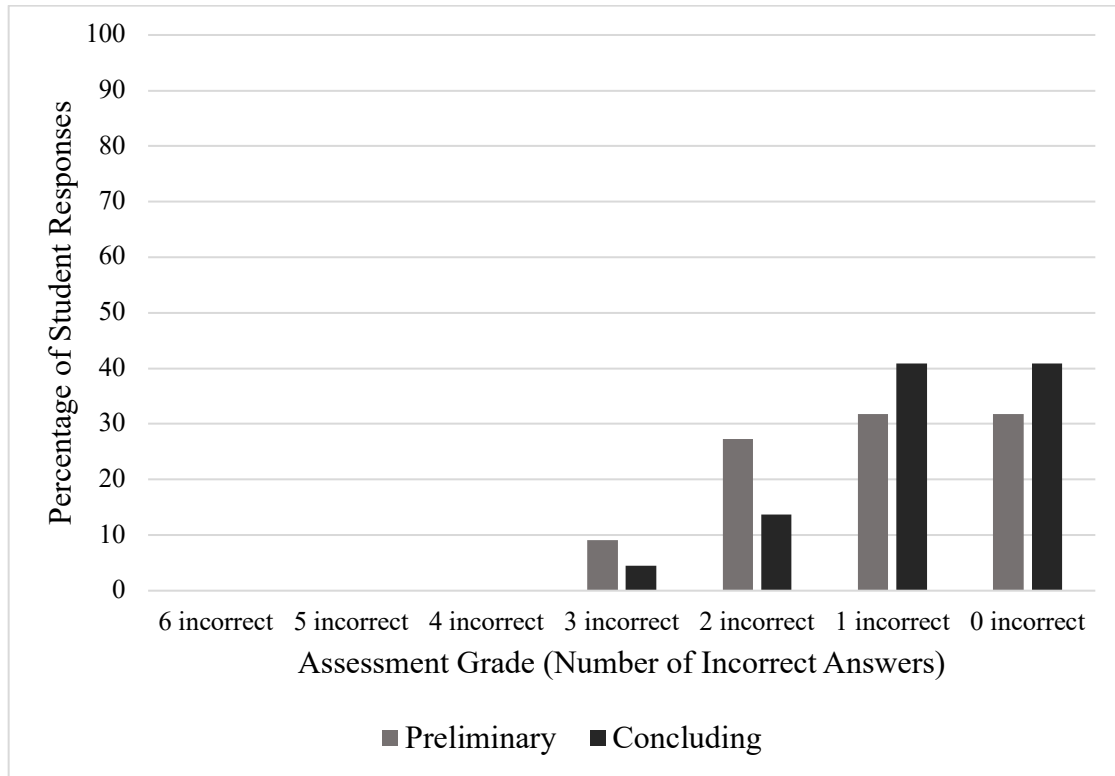


Figure 2. First Aid Knowledge Amongst Students Before and After Course Completion.

## STUDENT FEEDBACK

Once the quantitative analysis was complete, I sifted through the students' written feedback from the concluding questionnaires. I first separated positive and negative comments, and then merged the similar feedback by finding common themes (Table 3). After consolidating all of the written feedback, I included the verbal feedback I received from students who spoke with me after class. Then, I coded the qualitative themes and divided them into two categories: (1) course content and (2) course delivery. The comments in red reflect suggestions regarding the curriculum, themes in blue signify comments regarding course delivery, and feedback in green indicate miscellaneous comments.

Table 3

*Qualitative Student Feedback*

Positives / compliments	Negatives / suggestions
<b>Informative</b>	<b>No local hospital info</b>
Discussion was interactive	Did not offer decaf coffee
Demonstrations were helpful	Was not long enough
First aid kits were appreciated	Did not discuss GoodRx
<b>Presentation about drugs was informative</b>	Q&A was not long enough
Different speakers were interesting	Tai chi demonstration was not interactive
Questions were answered	<b>Did not discuss electrical injuries in depth*</b>
Handouts were helpful	
Classroom environment was comfortable	
<b>Course was empowering</b>	
<b>Course was easy to understand</b>	
Confirmation/reminder about class beforehand was helpful*	

Legend
Comments regarding course content
Comments regarding course delivery
Miscellaneous comments

\*Comments notated with an asterisk were provided verbally.

The class feedback was overwhelmingly positive, with many students from both seminar groups stating that they did not have any suggestions for improvement. In general, the suggestions did not differ between the groups. In regard to the course content, participants felt the curriculum was informative, particularly the Pharmacology unit. The students also felt the course was comprehensible and that the information clear and easy to understand. Moreover, the course content improved overall attitudes towards seniority and health by empowering the students to be proactive to prevent poor health outcomes. The class also conveyed their appreciation for certain aspects of course delivery including the interactive discussions and demonstrations, the supplemental resources, and the added effort to contact students and remind them of the classes beforehand.

While the positive feedback was encouraging to receive, the negative feedback and suggestions were perhaps even more valuable. The students provided insightful comments about a few holes in the curriculum content, stating they would have liked to learn about the local hospitals. Furthermore, it was brought to my attention that my desire to eliminate financial barriers was shortsighted as I omitted discussing GoodRx, a company that tracks drug pricing and provides discounts on certain medications in an effort to achieve health equity. Finally, a male student approached me after class to recommend teaching about electrical burns and hazards in a bit more detail to cater to individuals who work with utilities at home. These curriculum recommendations are astute and can be used in future health education initiatives targeting baby boomers.

The feedback regarding improvements of course delivery was equally eye-opening as several students stated their desire for a longer seminar. During course development, time constraints were a concern of mine, but in the opposite regard because I felt I needed to trim my presentation down. However, the feedback from the students proved that one hour was not quite long enough to fully discuss first aid and emergency preparedness to their desire, as they mentioned wanting a longer question and answer allotment. Finally, some students proposed a change in the tai chi demonstration, which they watched in the Fall Prevention unit. While the demonstration was interesting, the students did not get to actively learn and practice the moves. Thus, in future health education initiatives, it is important for interactive demonstrations to allow students to more actively participate and promote knowledge retention and the TTM for risk-minimizing behavior changes.

## CHAPTER 5: INSIGHTS AND RECOMMENDATIONS

As this thesis project served to explore health prevention in the geriatric population in preparation of the Silver Tsunami that is approaching the health sector, the designed course proved to be successful, and more importantly provided valuable insights for future public health initiatives that target the aging population. This course emphasizing First Aid and Emergency Preparedness proposes suggestions to the public health sector in regard to both curriculum content and educational delivery.

When catering to senior citizens, it is important for health professionals to discuss the infirmities that are prevalent in their population by addressing fall prevention, pharmacology, burn care, and common chronic illnesses. These discussions must be comprehensive and consider the daily lives of these individuals by relating risk-minimizing behaviors to lifestyle choices. As seniors begin to live more independently, their hobbies and daily tasks must be assessed in relation to their influence health outcomes. For example, as the aging population spends time within the household, the simple act of changing a lightbulb or fixing an electrical problem in the home can be hazardous and must be addressed. Thus, while curriculum development must begin with a formal needs assessment, it should continue with practicality and thoughtful consideration.

While developing a health education seminar, professionals must not only consider the lifestyles of a population and medical risks or symptoms, but also the steps necessary for prevention and emergency preparedness. Course content can be generalized to an extent based on findings from a needs assessment, however community health

initiatives must serve its population and optimize their impact by informing participants about local health issues, outcomes, and healthcare access as well. With comprehensive information about local healthcare facilities, students can feel more prepared to face medical emergencies as they contemplate plans of action.

This thesis project further served to reveal necessary health education delivery improvements. While formal lecture styles are commonplace and the norm, they must be accompanied with demonstrations to promote active learning and improve student engagement. These demonstrations should not simply be passive but should create an interactive environment that allows students to actively participate. Moreover, health professionals can promote active participation through supplemental materials and handouts that complement the curriculum, contribute to the tangibility of concepts, and foster critical thinking through notetaking. Thus, public health education initiatives can improve knowledge retention, student interest, and encourage risk-minimizing behaviors through the use of participant engagement.

Additionally, health professionals must be aware of health inequity throughout course development and delivery, even when targeting the aging population. Course content should reflect the everyday financial realities that people of lower socioeconomic status face in the United States, no matter their age. This includes discussion of access to healthcare and inexpensive methods of preventing poor health outcomes. Additionally, health education delivery should work to eliminate health inequity by confronting the financial barriers that community members may experience as obstacles to attending a health seminar.

One potentially effective method of improving accessibility of health education in the aging population is through virtual resources. Some studies have shown general positive impact of the Internet on health and well-being of older adults, especially the young-old population who are ages 65-74 (Hunsaker & Hargittai, 2018). Future research can explore the effectiveness of virtual education and Internet usage of the aging population, to possibly widen access to health education in this population.

A successful public health initiative targeting baby boomers will consider access, their needs, lifestyles, engagement, and potential disparities to effectively improve health outcomes through preventive measures. Through comprehensive health education, these aging adults can learn to be more proactive about their health and prevent poor health outcomes. Health initiatives can inspire senior citizens to actively partake in risk-minimizing behavior and can help relieve potential strain on the healthcare system due to the Silver Tsunami.

Nevertheless, proactivity in the aging population is half the battle, and health professionals must also set aside their negative attitudes against geriatric patients to help soften the strain of the Silver Tsunami. The development of a comprehensive and thorough health education initiative targeting older adults can also benefit health professionals by opening their eyes to their potential implicit or explicit biases against senior citizens and motivate them to work more efficiently in geriatric healthcare. Thankfully, I experienced this change of heart personally as I developed and conducted this thesis project.

## POSTSCRIPT

Four months after the *First Aid and Emergency Preparedness* seminars at the Lourie Center, the World Health Organization declared that a global pandemic was upon us. The coronavirus, officially named COVID-19, has spread widely across the United States and caused unparalleled nationwide quarantines and social distancing. Infectious disease experts and health professionals have stated that the risk of mortality from COVID-19 is significantly higher in aging individuals with comorbidities.

As I finish my thesis in lockdown, I decided to reach out to participants from the seminars to check in with them, reminding them to take advantage of the supplemental resources from the course. I reiterated the importance of updating their emergency contact lists (see Appendix C) and that the first aid kits contain alcohol wipes and gloves for use. In response, several attendees expressed their gratitude for the seminars and particularly noted the usefulness of the supplementary materials. While the current situation is challenging, I can find comfort in the local impact of my courses at the Lourie Center. I hope that as health professionals refine educational initiatives, the aging population is thoughtfully considered in preparation for emergency circumstances like those of the current pandemic.



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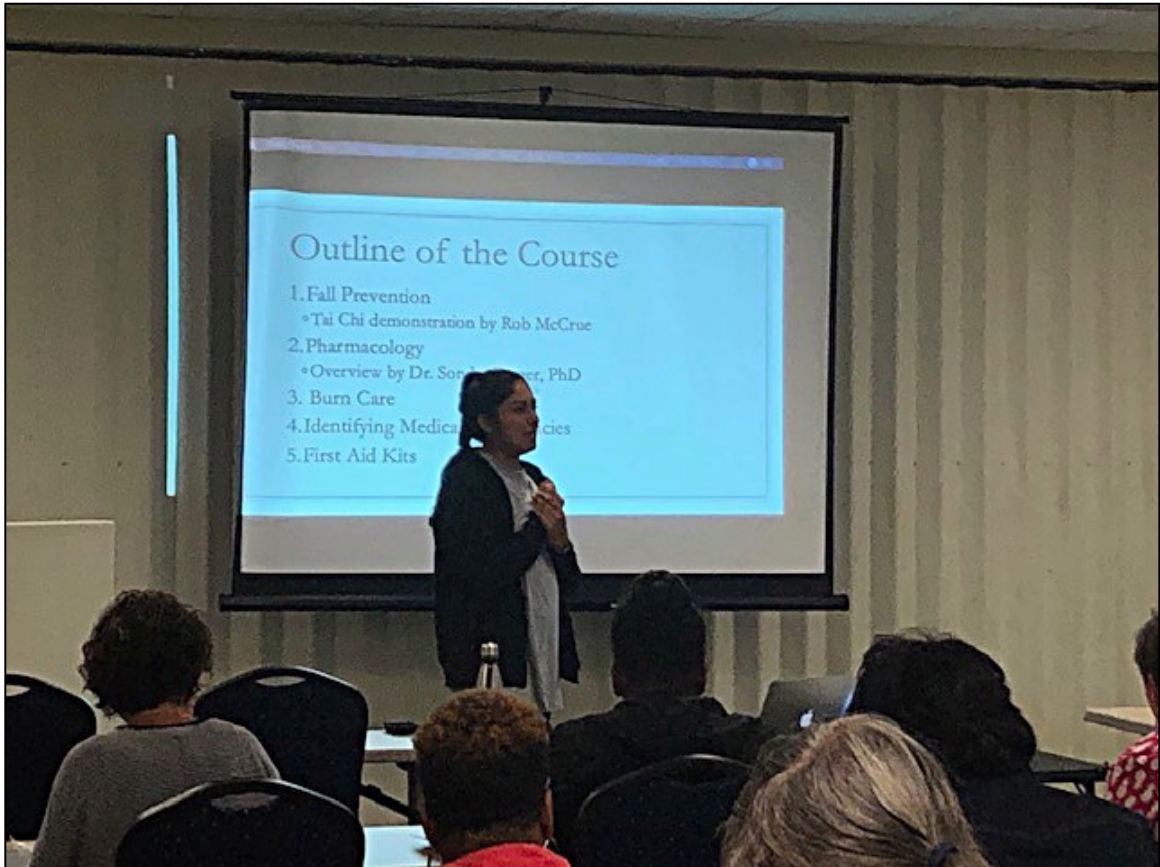
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## APPENDIX A

4 Units Outlining the Course Content (with 5<sup>th</sup> unit for distributing first aid kits)







## APPENDIX D

Flier Posted During Recruitment Phase of Project

OCTOBER 15<sup>th</sup> and OCTOBER 22<sup>nd</sup> at 8:30am**PARTICIPANTS  
WILL RECEIVE:**

Breakfast

First Aid Kits

Informational  
PamphletsTools for fall  
preventionAdvice from  
Pharmacology ExpertTai Chi Lesson from  
Experienced Teacher

# First Aid & Emergency Prep

a 1-hr seminar at The Lourie Center discussing:

- Fall Prevention
- Pharmacology
- Burn Care
- Identifying Medical Emergencies


Coordinated and instructed by USC Honors College student, Anna Kulangara. Anna is CPR and First Aid Certified and is organizing this course with USC professor Dr. Casey Goldston Giraudy for her Senior Thesis.





**APPENDIX G**

South Carolina Honors College Grant Application (page 1 of 4)



**UNIVERSITY OF SOUTH CAROLINA**  
South Carolina Honors College

**SENIOR THESIS GRANT APPLICATION**

Anna Kulangara [REDACTED]

---

Student First and Last Name VIP ID #

[REDACTED] [REDACTED]

---

Email address Graduation Date (Month and Year)

First Aid and Emergency Preparedness: Improving Health Outcomes Among Senior Citizens

---

Thesis Title

Dr. Casey Goldston Giraudy [REDACTED]

---

Thesis Director Name Department

**Have you received one of the following SCHC Research Grants? Please check below**

SURF Grant  
Please list the amount funded: \_\_\_\_\_  
Semester funds received (i.e. spring 2016): \_\_\_\_\_

Exploration Grant  
Please list the amount funded: \_\_\_\_\_  
Semester funds received (i.e. spring 2016): \_\_\_\_\_

**Do you want your application to be considered for the Foley Thesis Project scholarship?**  
*Your proposal/summary should explain why your thesis is a thesis creative project and should be considered for this award.*

Yes  No



**APPENDIX G (CONTINUED)**

South Carolina Honors College Grant Application (page 2 of 4)



**DESCRIPTION OF EXPENSES**

*Please include a detailed description of items and estimated costs.*

<b>DESCRIPTION OF EXPENSES</b>	<b>ESTIMATED COST</b>
Custom First Aid Kits (Med. Size) from MFASCO Health and Safety (x50)	\$1,534.00
Shipping Cost for First Aid Kits	\$35.65
Keychain light and whistle (x50)	\$42.50
Yoga Resistance Bands (x50)	\$115.00
Plug-in Night Lights (x50)	\$98.50
<b>TOTAL COST</b>	<b>\$1,826.65</b>
<b>TOTAL Amount of Money Requested</b>	<b>\$1,500.00</b>

[Redacted Signature] 09-05-2019  
 \_\_\_\_\_  
 Student Signature Date

I have read this proposal and certify that expenses are reasonable and essential for the thesis project and not otherwise available.


















[Redacted Signature] 09-05-2019  
 \_\_\_\_\_  
 Thesis Director Signature Date

**Administrative Use Only**

Date Reviewed: \_\_\_\_\_ Approved: \_\_\_\_\_  
 Funds Awarded: \_\_\_\_\_ Receipts Received: \_\_\_\_\_

**APPENDIX G (CONTINUED)**

South Carolina Honors College Grant Application (page 3 of 4)

Kit Items							
	First Responder Bag Small Empty Red Item #: 4876	\$15.00	1		Cold Pack Jr Each Item #: K2225	\$0.70	1
	Adhesive Tape 1/2" x 2.5 Each Item #: K1195	\$0.24	1		Thermometer Digital Each Item #: 7365	\$5.78	1
	Antiseptic Wipe Each Item #: K1880	\$0.06	2		First Aid Guide 3x4 Small Item #: 2003	\$0.37	1
	PVP Prep Pad Each Item #: K7955	\$0.07	2		Non Adhering Pads 2x3 Each Item #: K5605	\$0.07	5
	Bandage Assortment Refill Small Item #: 9381	\$1.20	1		Gauze Roll Non Sterile 4" Each Item #: 3436	\$0.33	1
	Burn Gel 1/8 oz Packet Item #: k8003	\$0.25	2		Nitrile Gloves Pair Item #: K3963	\$0.20	2
	Antacid Tablet Packet Each Item #: K1465	\$0.08	1		Non Aspirin Extra Packet Item #: K1035	\$0.14	2
	Glucose Tablets (10/Tube) Item #: 3936	\$4.40	1				
	Forcep Disposable Each Item #: 4213	\$0.13	1				
	Scissor Kit Size Each Item #: 4300	\$0.58	1				

**APPENDIX G (CONTINUED)**

## South Carolina Honors College Grant Application (page 4 of 4)

## Grant Proposal for Conducting a First Aid Class at the Senior Center

To whom it may concern:

I am writing this statement to request your consideration of my project for the Senior Thesis Grant. If I am granted this award, as a recipient, I will allocate the funds to enhance the curriculum of a First Aid and Emergency Preparedness class to be held twice in October (tentatively set for October 15<sup>th</sup> and October 22<sup>nd</sup>).

As the medical field continues to advance, it is imperative for the healthcare system to remain dedicated and tailored to the population demographic that it serves. As the "Baby Boomers" enter seniority, health care professionals must be proactive about preventing their extreme dependence on medical care. My project will focus on educating the local senior citizens about first aid, fall prevention, and overall health promotion, to improve their health outcomes and lessen the potential strain of the healthcare system.

Along with the curriculum and paper pamphlets for the course, I would like to distribute customized first aid kits to the 25 participants in each class (50 students total). These first aid kits will include items fit for this population (listed on the previous page) and will supplement the course's lesson plan. The inclusion of the items chosen for these first aid kits will be supported by existing literature and are not random. For example, the items included in the custom first aid kits are recommended by the American Red Cross. Furthermore, the additional purchases, such as night lights and resistance bands, can be used to prevent falls.

While the contents and lesson plan of a lecture are essential for education, engagement of students is the key to retaining knowledge. If the participants in this course are able to tangibly interact with the course material, they will have higher levels of motivation, and can then have improved health outcomes. I want my thesis project to be as impactful as possible.

I would also like to submit my application for consideration of the Foley Thesis Project scholarship because my thesis does not fall under the "normal thesis" category. While there is an investigatory aspect to my project, the meat of my thesis is the development and instruction of this course. Using existing literature, I creatively designed this course, and can hopefully distribute first aid kits to better engage the students in the classroom.

I look forward to hear back from you and can be contacted by email at [REDACTED], or by phone at [REDACTED]. Thank you for your consideration.

Respectfully submitted,

[REDACTED]  
Anna Kulangara