MSHAC

Program Plan & Evaluation Strategy:

A Manual For Program Leaders

Written by:

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EXECUTIVE SUMMARY

The University of North Carolina at Chapel Hill's Mobile Student Health Action Coalition (MSHAC) is an interdisciplinary, student-led program that strives to serve the local community and enrich early professional student education. It is comprised completely of volunteers: the students who provide the services, the faculty preceptors who mentor the students, and the referring providers and their patients.

MSHAC student volunteers are early in their professional training and are recruited from seven healthcare disciplines: medicine, nursing, occupational therapy, pharmacy, physical therapy, public health, and social work. Students are placed together onto teams with the disciplines represented on each team being determined by the needs of the patients, who are referred to the program. For the entire academic year, one team is paired with one older adult patient.

Persons referred to MSHAC typically are community dwelling older adults and are: people who have both complex medical and social needs and are challenging to care for in the traditional clinic setting. They are referred by the UNC geriatric clinic and community-based primary care practitioners.

By tailoring the configuration of the team to the needs of the patients, the students are poised to address the most salient issues that the older adults face. Student teams are encouraged to form connections with community agencies, bridge communication gaps between providers, and teach those patients who desire a better understanding of their health issues. The patients' referring providers stay in regular contact with the student teams. The student teams receive additional mentorship and guidance through meetings once a semester with volunteer multidisciplinary faculty clinicians, fellows, and residents specializing in geriatrics.

MSHAC affords students the opportunity to create rich relationships with older adults in the home setting. This context allows for the identification of underlying problems that may not be transparent or easily fixed within a clinic setting. As a result, MSHAC is an invaluable service to older patients and their healthcare providers, as well as an excellent medium for enriching students' understandings about the health care, environmental, and social issues facing older adults.

This Program Plan and Evaluation Strategy is meant to serve as an introduction and comprehensive, operations manual for new MSHAC leaders. The aim is to provide leaders with an explanation of MSHAC's origins, rationale, mission, goals, and objectives. In addition to providing a basis for understanding the basic tenets of the program, this manual will act as a reference and guide for the program's structures and processes. Thus, also included within the manual are tools such as an organizational chart, a program plan, a logic model, an administrative timeline, an explanation of participants' roles, and a budget. Finally, an evaluation strategy is provided –because for any program to be successful, leaders must constantly evaluate and make improvements to its structures, processes, and outcomes. Each year leaders should modify this manual to reflect the current state of the program for the benefit of the next year's leaders.

Table of Contents

SECTION I: INTRODUCTION

BACKGROUND

The University of North Carolina's Student Health Action Coalition (SHAC) is the oldest, student-run, free health clinic in the United States. In 1999, SHAC's student leaders recognized that the clinic was only able to serve persons who had knowledge of, and access to, the clinic. SHAC's leaders were aware that there were a number of socially and physically isolated individuals in the community. As a result, they began to explore the possibility of creating a program, ultimately Mobile SHAC (MSHAC), which would extend SHAC's reach to this isolated, but not yet clearly defined, population.

In the year 2000, MSHAC began as a pilot program with the aim of sending student volunteers into patients' homes to provide care. Over the subsequent five years, the program underwent considerable growth and organizational restructuring. By the 2005-06 academic year, MSHAC had grown to include nearly 150 student volunteers from seven different disciplines and to serve over 25 patients.

During MSHAC's first four years, evaluations and feedback from student and patient participants provided convincing evidence that there was a definite need in the community for such an organization. In this paper, I have attempted to take the next important step for the program by applying a public health perspective to MSHAC. The following sections describe MSHAC and lay out a systematic program plan and evaluation strategy. The overarching goal is that this program plan and evaluation strategy will be used by future leaders of MSHAC to ensure the program's sustainability, growth, and continued pursuit of increasing the quality of services that it delivers to its patients.

MSHAC MISSION

UNC MSHAC partners health profession students with older adult patients who have complex social and health-related needs. UNC MSHAC provides the organizational structure, resources, and continuity of care to foster and support the development of rich and meaningful relationships between student volunteers and older adults. The mission consists of two interrelated parts:

Service mission:
To facilitate a collaborative effort between student volunteers, patients themselves, and referring providers to identify and implement an appropriate plan to address the needs of the patients. All program participants will strive to achieve positive, sustainable, and significant outcomes; and to increase the community's awareness of the gap between its resources and the needs of many of its members.

Educational mission:
To enable students to learn that plans for care made in the context of understanding the patient's personal, social, and physical environments produce the most meaningful and sustainable outcomes, to become familiar with community resources, and to connect their patients to community resources. Students will incorporate this broad understanding in their interactions with future patients.

Central to this mission:

It is our organization's belief that students, empowered by service, can and will influence positive changes in their communities; moreover, the invaluable relationships that are created between students and older adults will enrich students' understanding of, and interactions with, future patients.

PROGRAM OVERVIEW

This overview of the program discusses 1) who the MSHAC participants are and what their various roles entail; and 2) MSHAC's activities

MSHAC PARTICIPANTS

MSHAC is comprised completely of volunteers. The participants include:

- **Student Leaders**
- **Student Participants**
- **Patients**
- **Referring Providers**
- **Faculty Advisor**
- **Preceptors**

The organization is operated by a dedicated group of nine Student Leaders, who assume specific roles as Program Director, Operations Manager, and Discipline Coordinators. These leaders coordinate all the various aspects of the program's management and day to day operations. A Faculty Advisor works closely with these students to provide oversight and guidance. Student Participants commit to the program for an entire academic year. They are assigned to teams by the Student Leaders. Teams consist of 3-5 students from multiple disciplines. The teams are each paired with one Patient in the community for the year. Patients are referred by UNC providers. The teams visit patients monthly in their homes and are mentored through meetings once a semester with clinical faculty, fellows, and residents, who serve as Preceptors. Recently, residents of a local retirement community, Carol Woods, have joined clinical faculty in a mentoring role in these meetings. The role of each MSHAC participant is described in detail below. The relationships between the participants are also depicted graphically in Figure 1.

Student Leaders

Who: A total of nine Student Leaders are recruited and selected by the previous year's leaders each spring. Student Leaders come from the seven disciplines that comprise UNC MSHAC: Medicine, Nursing, Occupational Therapy, Pharmacy, Physical Therapy, Public Health, and Social Work. These students are selected to fill the following positions that are listed and then described below. The application and selection process is outlined in Appendix V.

- Program Director (1 Student) - oversight of the entire program
- Operations Manager (1 Student) - responsibility for the program's operations
- Discipline Coordinators (7 Students) - responsibility of recruiting Student Participants from their specific discipline and fielding questions specific to

their disciplines throughout the year from Student Participants. In addition, the Discipline Coordinators assume one of the following additional coordinator roles: Team Coordinator (there are 4 team coordinators), Project/Finance Coordinator, Quality Improvement Coordinator, and Scheduling Coordinator.

Responsibilities:

Program Director (One student)

- Manage the organization and the coordinators
- Work to ensure that all students, patients, and referring providers are satisfied with their experiences and meet their goals for participation in the program
- Resolve conflicts
- Work closely with the MSHAC faculty advisor
- Serve on SHAC Coordinating Council

Operations Manager (One student)

- Responsible for patient recruitment and maintenance of the patient roster
- Communication of patient assignment status with referring providers
- Ensure that all equipment is present and working properly
- Manage the borrowing of MSHAC equipment by other organizations – make sure that everything is returned intact and in a timely fashion
- Check patient charts monthly to ensure that teams have filled out forms and documented patient visits appropriately
- Compile and send to the Program Director a master document containing monthly updates about the status of: 1) team visits, 2) the preceptor meeting schedule, and 3) team/provider assignments

Discipline Coordinator Roles

I. Team Coordinators (Four Students)
- Oversee 6 teams
- Contact the team leaders of these 6 teams to:
    - Make sure that each team has visited their patient
    - To see if there are any problems or concerns that need to be addressed (regarding the patient and the team)
    - Give advice and make suggestions as needed to guide the team
- Be available to answer questions from the teams and direct clinical questions to the appropriate coordinator or faculty member
- Send monthly updates on the 6 teams to the Operations Coordinator

II. Finance/Project Coordinator (One student)
- Serve as the contact for team leaders with projects that need outside assistance and resources
- Screen project ideas that teams submit to ensure that the projects meet the appropriate guidelines for approval

- Responsible for approval and documentation of all MSHAC expenditures
- Generate new sources of funding through such means as grant writing and fundraising
- Create and maintain contacts within the community that will be helpful in completing projects
- Select members and provide leadership to the Finance/Project Committee
- Serve as MSHAC representative to SHAC Finance Committee

III. Quality Improvement Coordinator (One student)
- Evaluate and compile a report outlining program's process, outcomes, and participants' experiences – includes evaluation of MSHAC training session, mid-year evaluation, and end of year evaluation
- Based on the evaluation findings, make recommendations to the Program Director and Coordinators
- Responsible for public relations –includes building partnerships with community organizations, maintaining those relationships, and coordinating efforts to increase the visibility of the organization

IV. Scheduling Coordinator (One student)
- Create and maintain a schedule for student teams to meet with faculty and community preceptors
- Ensure that every team has signed up for and attended at least one preceptor meeting during each semester
- Send reminders about precepting dates to the teams, the scheduled faculty/community preceptors, and their respective team coordinators
- Send monthly updates on each team's precepting status – "signed up/not signed up for preceptor meeting" or "attended meeting" to the Operations Coordinator
- Resolve scheduling conflicts

Faculty Advisor

Who: There is one faculty advisor. He/she should be passionate about the program and its cause and be someone who plans to be at the university for a long period of time. This person should have clinical experience working with older adults and experience with student instruction. The faculty member may volunteer for the position or the position may be partially supported by the Program on Aging or other sources.

Responsibilities:
- Provide support, guidance, and encouragement to the leadership team
- Recruit qualified preceptors and schedule preceptor dates for student team meetings
- Aid the organization in its growth and development within the university and the community
- Provide continuity for the program across the years as student leadership continues to change

Preceptors

Who: Clinical faculty members, fellows, and residents volunteer as preceptors. The program attempts to recruit preceptors who are familiar with the facets of older adult care and are from the various disciplines represented in the program. In general, MSHAC preceptors are individuals who have a passion for teaching students. They volunteer as often as their schedules allow. Preceptors do not attend home visits with the student teams, unless the preceptor deems it necessary. They have scheduled face to face meetings with each team at least once per semester. Recently, Carol Wood residents have begun joining in precepting meetings. The residents are able to contribute a wealth of knowledge and ideas from their experiences in life and the aging process.

Responsibilities:

- Guide student teams throughout the year by emails and meetings
- Ensure that student teams are getting the most out of their BCW experience by advancing clinical knowledge and highlighting educational opportunities
- Make certain that student teams are appropriately helping patients
- Offer advice to student teams on alternative ways to approach and or view their patient
- Help student teams explore ideas for identifying patients needs
- Help student teams develop and implement plans to help their patients
- Monitor the actions of student teams to ensure they are within the scope of the students' practice and knowledge level
- Provide feedback to students on presentation of patient information

Referring Providers

Who: Patients are referred to MSHAC by clinical providers both within the UNC health care system and the community. Our referring providers are typically physicians from Internal Medicine, Family Medicine, and Geriatrics. It is important that referring providers are well informed about the scope of the program so that patients that they refer will be a good fit with the services that MSHAC is able to deliver. The program also places a strong emphasis on provider communication because it helps to introduce students to the significance of continuity of care; moreover, information sharing and open communication set the stage for individualized care for participating patients. Another source of patient referrals is from the UNC HUBBARD program. The HUBBARD program performs interdisciplinary home assessments and makes referrals of appropriate patients to MSHAC. For a patient referred by HUBBARD, the student leaders may need to initially establish contact with the patient's primary provider.

Responsibilities:

- Obtain approval from the patient to be referred to UNC MSHAC
- Provide the patient's contact information, a brief medical history, and a list of concerns that UNC MSHAC might address
- Provide contact information for self and agree to be available to regularly communicating with the student team that is assigned to the referred patient

Patients

Who: UNC MSHAC patients typically live in the community and are: people who have both complex medical and social needs and are challenging to care for in the traditional clinic setting. UNC MSHAC coordinators keep an active roster of patients, who are waiting to be assigned to a team, as there may be more patients than teams. If and when student teams are available, then the referring provider is notified and the patient is assigned to the team for the entire year. At the year's end, the student team, patient, preceptors, coordinators, and provider reassess if the patient would continue to benefit from the program for another year.

Student Participants

Who: Student Participants are recruited by the Student Leaders. The students are recruited from seven health care disciplines: medicine, nursing, social work, occupational therapy, physical therapy, pharmacy, and public health. Student Participants typically participate during their non-clinical training, though there are no set criteria. Students are asked to commit to a year of volunteer service to the program.

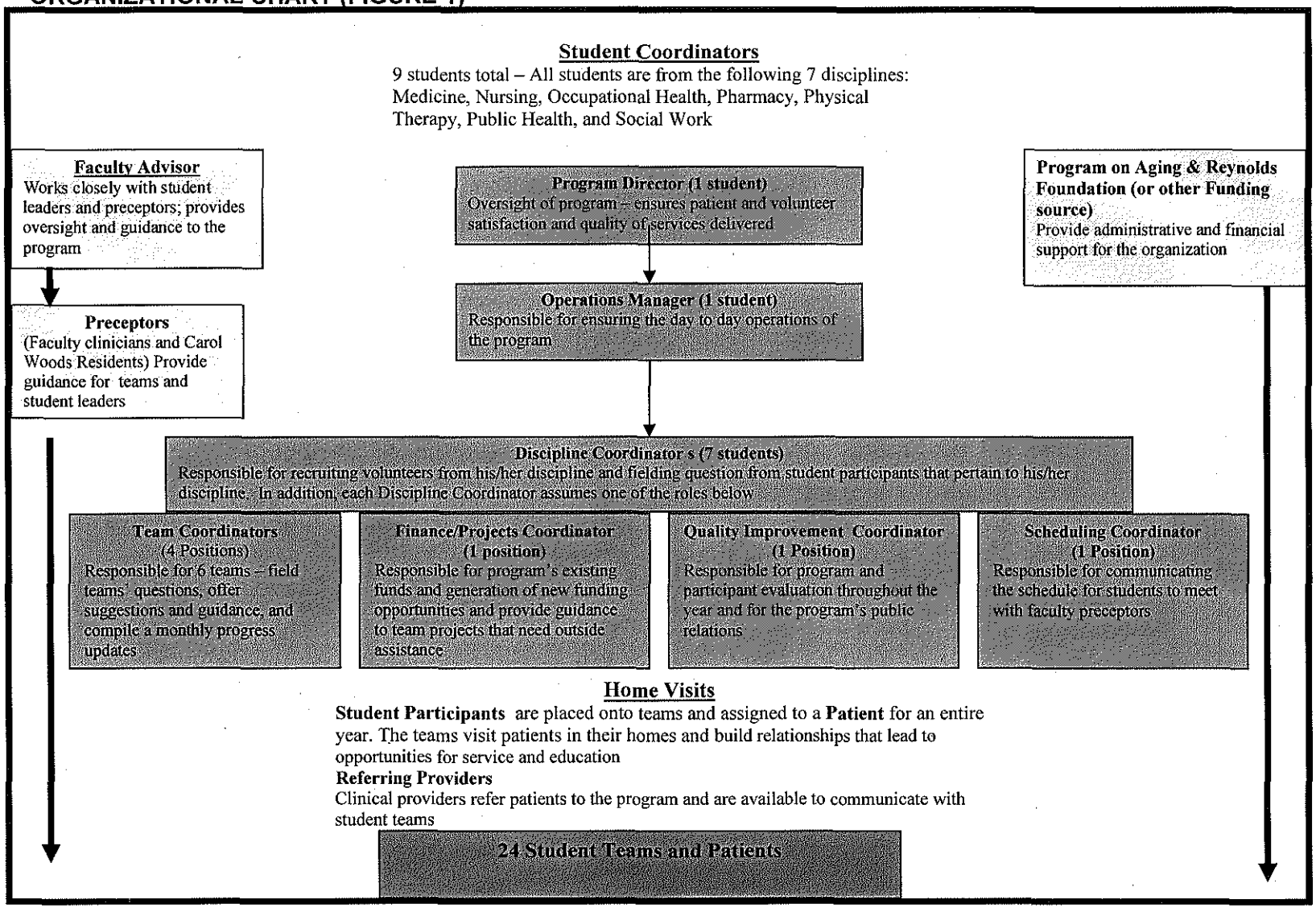
Responsibilities:
The Student Leaders assign the Student Participants to interdisciplinary teams. The student team is then matched with one patient for the academic year. The teams each consist of 3-5 team members. One team member volunteers at the beginning of the year to serve as the Team Leader of his/her team.

I. Student Participant: Team Leader
   - Ensure that the team fulfills all of the program requirements
   - Responsible for completion of the appropriate forms in the patient's chart
   - Schedule the team's monthly visits with the patient
   - Contact the referring provider monthly
   - Send monthly progress update to the Team Coordinator
   - Schedule the team's preceptor meeting each semester

II. Student Participant: Team Member
   - Visit the team's patient at least once a month – either as a whole team visit or with a smaller group of team members – do not go on visits alone
   - Attend with the entire team one Preceptor meeting each semester
   - Focus on building a close relationship with the patient
   - Communicate regularly through email and face to face meetings with other team members
   - Use the patient's provider and/or chart as a starting point and begin to explore with the patient any needs that the team may be able to help with
   - Develop a plan to address any needs that have been identified – collaborate with the patient, referring provider(s), and Preceptors
   - Work with the patient to find helpful resources within the community

- Identify a clearly defined project(s), which will help improve the patient's life in some way – special funding is set aside for these projects
- Arrange to have dinner with the patient at least once per semester – special funding is also set aside for this purpose
- Implement any plans and/or projects that the team has developed
- Evaluate the team's and the patient's progress over the year
- Collaborate as a team at the end of the year to complete an end of the year summary form for the patient
- Maintain patient confidentiality

ORGANIZATIONAL CHART (FIGURE 1)



MSHAC ACTIVITIES

Home Visits

Student teams are required to visit their patients at least monthly for an entire year. Prior to the first home visit, the teams consult with the referring providers to determine the providers' concerns and expectations for the patients they are referring. The teams focus initially on building a solid relationship with the patients. We encourage and provide financial support for teams to engage in social activities with their patients once each semester. For example, teams may choose to take patients to a favorite restaurant or cook and eat a meal together at the patients' homes.

As relationships progress overtime, teams begin to focus on the concerns that were initially raised by the referring providers. In addition, the unique home setting and the rich relationships that develop over the course of the year position students to identify issues that may not be readily transparent or easily fixed in a clinical setting. Teams are afforded the opportunity to follow-up with patients for an entire year. As a result, students are able to witness and evaluate the outcomes that may result from any plans of care that they implement. The teams are rewarded by seeing firsthand the positive influence that they may have on patients' lives. Below are the five goals that students attempt to accomplish through the year.

1. **Develop relationships**
   Student teams make frequent visits to the patients' homes over the course of a year. Through a variety of social interactions and activities, they develop a rich and meaningful relationship with the patients. Such a relationship provides a more in depth understanding of the individual and a clearer picture of the potential complexities of the patient's personal, social, and physical environment.

2. **Identify needs**
   The student teams, patients, preceptors, and referring providers all collaborate to identify potential environmental (including social and physical) and personal factors that exist as obstacles to an individual's achievement of the functional capacity that he/she desires.

3. **Create a plan of action**
   All participants again collaborate to make a plan of care that is appropriate to address these needs. Plans are focused on creating outcomes and an emphasis is placed on feasibility, sustainability, and cost-effectiveness. Plans may include but are not limited to the following actions:

   A. Community resources
      Teams are encouraged to form connections between patients and community resources.

   B. Education
      If patients identify areas within their care in which they would like clarification or further understanding, then teams

attempt to acquire the appropriate information to teach the patients.

C. Communication with providers

Teams may serve as initial bridges to fill the gaps in communication that may exist between a patient's providers. They also may communicate to the providers information on contextual findings that may be pertinent to improving the quality patients' care.

D. Direct Service

If projects are identified that are within the scope of the teams ability to address them, then the teams may directly attempt to address or fix the problem; or they may need to arrange for outside professional assistance.

4. **Implement plans**

The teams and patients, with involvement of the community and other participants when necessary, will work together to implement the plans.

5. **Evaluate outcomes**

A. Plan

All participants will collaborate to assess the progress and outcomes that result from implementation of the plans.

B. Continuation with the program

Evaluation will be conducted at the end of the academic year to determine whether or not the patient will benefit from another year of participation in MSHAC.

C. Lessons learned

Students will evaluate what they have learned from the experience and the relationships that they have developed; reflecting on the potential effects the experiences may have on future patient encounters.

Preceptor Meetings

Student teams are required to attend one preceptor meeting each semester. During these thirty minute meetings, the teams have the opportunity to present patients to clinical faculty members, who have volunteered to be preceptors. Preceptors and teams use this time period to address concerns and explore way in which the teams can help the patients. In addition to these meetings, preceptors and coordinators are available to teams by email and phone throughout the year

SECTION II: LITERATURE REVIEW

BACKGROUND

The quality and content of health professional student education has received a significant amount of attention as our nation strives to improve the quality of our health care system. A number of organizations, such as the Pew Health Commission (PHC), the Institute of Medicine (IOM), and the American Geriatric Society (AGS) have all independently put forth core competencies that challenge academic institutions to implement curricula changes to better prepare students to deliver high quality health care[1,2,3].

There are some common threads that run through the core fabric of these competencies such as: disease prevention, health promotion, involvement of the patient and family in care decisions, interdisciplinary teamwork, and caring for the community's health [1,2,3,4]. Additionally, the Association of American Medical Colleges identified altruism and duty as two of the four main attributes for all graduating students[5]. While the importance of these competencies has gained acceptance, they remain illusive and difficult concepts to teach within the constructs of traditional educational delivery methods. Perhaps the greatest challenge now is for academic institutions to find innovative ways to teach these competencies and implement such changes into curricula that is already filled to capacity. At the same time, academic medical centers are also feeling increasing pressure to regain the trust of their communities by placing renewed energy into their missions of service to those communities[5].

SERVICE-LEARNING

These changes are a daunting task for academic institutions to implement. However, a solution can be found in the unique and innovative theory of service-learning (SL). SL is an educational theory borrowed from undergraduate education[6]. It is a relatively new concept in the health professions, but one that may provide the vehicle necessary to teach the difficult concepts discussed above, while at the same time meeting the needs of the community. SL is defined as "a structured learning experience that combines community service with explicit learning objectives, preparation, and reflection. Students engaged in service-learning provide community service...and learn the connection between their service and their academic coursework, and their roles as citizens"[7].

The theory of SL underscores the importance of addressing health needs in the community, while incorporating into existing curriculum an understanding of the many other factors that influence health and quality of life. The Health Professions Schools in Service to the Nation Program (HPSISN) states that service-learning can provide health professional students with "transformational learning experiences", especially when students are placed in the non-clinical community[8]. A study by Dornan and Bundy concluded that such experiences strengthen, broaden, contextualize, and integrate early medical education[9].

SL can also help educators to enhance their ability to teach concepts such as professional tenets, interpersonal skills, understanding of other disciplines, effects of disease and health care decisions on patients and their families, and understanding of community health issues and resources[9,10]. Furthermore, SL is

a strategy for health professional schools to develop relationships with their communities, promote altruism amongst their graduates, and create social change[6].

SL must be distinguished from volunteer community-service or required community-service. The distinction lies in the reflection component of SL. Guided reflection serves as a means for students to connect their experiential learning through service to specific education objectives from the classroom[6].

SERVICE-LEARNING: MEDICAL SCHOOLS AND INTERDISCIPLINARY

While SL is a relatively new concept for health professional institutions, there are a number of schools that have implemented programs with demonstrable sucess over the past decade. In 1995, the HPSISN program selected twenty health professions schools to integrate SL into at least two required courses. Eighteen of these schools have included SL experiences that are interdisciplinary, and eleven schools included medical schools to some degree[4]. Evaluations from these projects indicate that because it connects with classroom objectives SL has a greater effect on students then elective or voluntary experiences alone. Also, SL was shown to be transformational for faculty and partner community agencies[6].

The University of Florida Health Science Center provides us with one example of a successful HPSISN funded initiative. They developed and required a SL course called Interdisciplinary Family Health (IFH). IFH is based on the theory that interdisciplinary teamwork is an important skill to be taught for quality improvement. Students are placed on interdisciplinary teams and paired with volunteer families in the community. The volunteer families initially were only elderly, but the school has expanded the scope now to include families of all ages. The teams are challenged to work together to develop a wellness prescription for the family. In 2005, over four hundred students and seventy faculty members from four colleges participated in IFH[11].

Davidson, Richard, Waddell, and Rhondda[11] report that home visits are capable of teaching students about communication skills, interacting with populations in a community setting, and an awareness of the community's health needs. In addition, the IFH students are able to practice skills learned in their first year coursework, such as history taking and physical exam techniques. The authors surveyed IFH students and the data show significant educational benefits to the students. Over 80% of students reported that the experience enhanced their professional education and increased their awareness of barriers to health promotion and wellness. They also report that students gained respect for other professions[11].

Another example of a successful interdisciplinary HPSISN sponsored program is at Georgetown University Medical Center. Georgetown recognized the need for physicians to acquire community competencies and the ability to focus on illness prevention and health promotion. They also felt that interdisciplinary collaboration is a learned behavior that must be taught early. As a result, Georgetown developed a SL curricula that partnered medical and nursing students together to work on one of four service projects in the community. The

students were able to count credit towards required coursework in their respective disciplines. The student teams visited the community sites four times and had four didactic planning sessions. All four community projects focused on health promotion and prevention of community health problems in populations of different ages[12].

Sternas, O'Hare, Lehman, and Milliagan[12] report that as a result of their program students gained respect for the different disciplines and an understanding of collaboration. The students also developed skills in working with communities and learned to better understand the lifestyle issues of community members. Furthermore, the authors found that faculty also benefited by learning teaching methods from one another and forming relationships that led to additional interdisciplinary research and educational collaborations[12].

The University of Minnesota School of Medicine, Duluth administered another SL experience called Minnesota Rural Health School (MRHS) from 1996 to 2003. MRHS was a community-based, interdisciplinary educational program. Student participants came from the disciplines of medicine, nursing, physician assistants, pharmacy, social work, and dentistry. The students were assigned to rural communities and given ten to twelve days during which they worked as an interdisciplinary team to assess the communities' needs and created service projects to improve their health and well-being. Mareck, Uden, Larson et al.[13] report that the importance of providing SL educational opportunities is underscored by the students' demonstration of creativity, resourcefulness, and a spirit of collegiality and cooperation in working with other disciplines to perform the service projects[13].

Tulane University Medical School also recognized the need to expand its learning environment and teaching methodologies in an effort to more explicitly address attitudes of altruism and duty. Because of their belief that service is a key part of medical education, the school began to implement a required SL component as part of its Foundations in Medicine (FIM) course. FIM requires that students in their first year of medical school perform twenty hours of community service. Twenty-eight hours of curricular time is devoted to this requirement. Students select or design their own community service projects, and faculty members provide oversight to ensure that projects meet the SL objectives[5].

Burrows, Chauvin, Lazarus, and Chehardy[5] report that data collected from surveys indicated that FIM had a positive impact on students' attitudes, gives them a realistic view of life situations, and increases their compassion towards others. Furthermore, the authors report that many students also assumed leadership positions related to their service projects. In these positions, they learned skills such as organizational management, resource acquisition, and program planning. They conclude that Tulane's SL experiences are successful and essential to producing doctors who are prepared to address society's needs[5].

SERVICE-LEARNING: SERVING THE ELDERLY

As our population continues to age, it will become more and more important for health professions education to focus on increasing students' knowledge of the aging process, skills in working with older adults, and improving attitudes towards the elderly[2,14]. Once again, SL provides the necessary vehicle to affect these changes. Knapp and Stubblefield[14] created an intergenerational SL course, where students and older adults worked together on a variety of service projects. They conducted a study of student participants, which showed that the course had a positive influence on the students' knowledge and perceptions of aging. The authors concluded that there is a large need for SL opportunities such as this where students have positive interactions with older adults[14]. This SL project is different from the other SL project reported here in that the students were not serving the older adults; rather, they were working together with the older adults on projects.

The Center for Healthy Communities in the Department of Family and Community Medicine at the Medical College of Wisconsin developed a SL program where medical students actually provided service to the elderly in the community. This program called, Chat and Chew, sent medical students and Family Medicine Residents to an elderly public housing site where they provided needed health information and socialized with the elderly tenets. Young, Bates, Wolff, and Maurana[14] report that the SL program benefits students because they gain knowledge of the unique cultural contexts of the aging process and see community members in real life situations. Moreover, the elderly public housing tenets are the recipients of needed health promotion information sessions and socialization[15].

In July 2000, Idaho State University started the Senior HealthMobile (SHM) project in order to serve rural elderly in the community and facilitate an interdisciplinary, geriatric educational opportunity. SHM provides such services as health and home assessments, medication and chronic illness management, and health promotion. Students from multiple disciplines conduct home visits with multidisciplinary faculty members. However, medical students have not been involved on these visits. Hayward, Kochniuk, Powell, and Peterson[16] found through the use of a pretest/post test research design that SHM had a significant effect on participants' perceptions of other professions. Students also learned to interact with the community's resources for older adults[16].

There is not an abundance of literature on interdisciplinary, longitudinal, service-learning experiences for health professional students, who are serving isolated elderly through home visits. This literature review provides a description of the service-learning theory and an overview of programs that incorporated one or more of these service or educational components. The available literature clearly establishes that there is a meaningful educational component to SL experiences and that they are beneficial to the communities that are served as well as the sponsoring academic institution.

The available research also suggests that there is a need for more programs like MSHAC. MSHAC provides students with this unique SL experience that enhances traditional clinic and classroom learning. Experiences unique to the

MSHAC include the vantage point of a patient's home and the opportunity for students to build a relationship with patients over an entire year. Through their experiences with MSHAC, students learn interdisciplinary teamwork skills and gain an invaluable appreciation of a patient's community, family, and home as a context for healthcare decisions. As a result, the program successfully empowers students to promote change for isolated frail elders, while incorporating into existing curricula an understanding of the many other factors that influence health and quality of life for seniors.

SECTION III: PROGRAM PLAN

RATIONALE: SERVICE TO THE COMMUNITY

The Orange County Community Health Assessment report (OCCHA) report states that seniors, who are physically and socially isolated are less likely to have access to community resources, preventative care, or interventional services. In addition, the majority of seniors, who are physically and socially isolated, tend to live in poverty. Older adults classified as low-income have access to fewer services including, quality health care, transportation, nutrition, and housing. Consequently, the vast majority in this population have poorer health outcomes than their more socially connected, more financially resourced counterparts[17].

In 1999, 25.6% of the general population of older adults in Orange County rated themselves to be in fair or poor physical health; almost 20% require some assistance with activities of daily living; and over 29% report periods of depression lasting two or more years[17,18]. While these numbers appear high even for the general population, the data found within OCCHA suggests that the isolated, poor elderly bear the brunt of the burden; therefore, a study would likely find that the numbers reported above are even higher when looking at just this subset of the general population.

The population of seniors in Orange County is expected to increase by 130% in the next 15 years from approximately 9,000 to over 20,000. This projected increase is the second largest in the state and almost twice the expected increase in the national average. Based on the 2000 Census, 686 older persons were living in poverty in Orange County. The OCCHA suggests that "choosing between purchasing medication and making an important payment for something like rent or heat is a reality" for the poorest group and the many more that fall near the poverty line[17].

Unfortunately, the OCCHA assessment goes on to suggest that our community's services are not expanding fast enough to meet the health and social needs of our growing senior population; moreover, the community is currently unable to meet the needs of this population[17]. As a result, older adults, especially those most in need, are not receiving the quality of care that they deserve. There is an obvious need to fill this gap in quality of care and to raise awareness of the need for quality health and social services within the community.

RATIONALE: ENHANCE STUDENT EDUCATION

In 2000, the American Geriatric Society (AGS) Education Committee[2] published a set of core competencies that it believed medical students needed to acquire to provide quality care for older adults. Additionally, in 2003, the Institute of Medicine (IOM)[3] identified core competencies for all 21st Century health professionals. While these sets of competencies provide a framework for changing the education and practice patterns of health care providers, the greater challenge now is for health professional schools to take on the task of revising existing curricula and developing new programs to address these competencies. Curriculum changes within the classroom and clinical settings alone may not be adequate to address the AGS and IOM competencies fully;

whereas, a service oriented program like MSHAC has the capacity to develop many of these core competencies through service-learning.

PROGRAM CONTEXT

It is important to consider how the program fits into the bigger picture. In our consideration of the program's context, we examined the factors that we felt would support or challenge the implementation of the program. We considered the context of all those who would participate directly and indirectly with the program. These participants include the community, the school, students, patients, and providers. We also looked at the context of MSHAC as it relates to potential funding sources and additional challenges the program might encounter.

Community – Orange County:

Orange County leaders recognized that it was necessary to create a task force to identify the unique needs that of its rapidly growing elderly population. Evidence of the community's potential support of an organization like MSHAC can be found directly in the recommendations made by this task force. First, the task force identifies three key areas that must be addressed, which in essence are very similar to MSHAC's mission. They are: 1) Access to services, information & assistance, and social activities; 2) Education and societal attitudes; 3) Mental health and emotional well-being. The report then goes on to suggest that, "If actions are not taken, an increase in the need for institutional care will likely occur, with an increase in the cost of care giving"[18]. The report also indicates a similarity between the community's awareness of the need for additional training of health professionals by stating, "Curriculum and instruction in geriatrics and gerontology curricula is inadequate in professional schools related to health care"[18].

School – UNC:

Because MSHAC primarily serves an elderly population, one obvious source of support could from the UNC Program on Aging (POA). The stated vision of the POA is to promote the well-being, independence and self determination of older adults in North Carolina. The program provides service to elders and training for students, health professionals, older adults and families throughout the state, especially in rural and underserved areas. The congruency between the vision of the POA and MSHAC is obvious and suggests that, in at least a contextual sense, the POA would support the development of MSHAC. Also in 2002, the POA was awarded a four year, national grant from the Donald W. Reynolds Foundation to support the training of medical practitioners in geriatrics.

Acceptability to students:

The number of student volunteers from each health discipline speaks to the acceptability of the program amongst students. Also, the qualitative evaluations from the pilot years of the program suggest that the majority of student participants enjoyed their experience and felt they had learned a lot about other disciplines, the value of teamwork, and about patients' home environments.

Acceptability to patients:

The program's acceptability to patients during its pilot years is reflected by the fact that if given the opportunity, over 90% of MSHAC's patients would choose to continue with the program for another year. Also, the evaluations during this time period suggested that the majority of patients felt that they had a positive experience with MSHAC.

Acceptability to providers:

From informal conversations with providers, who refer patients to the program or who might refer patients to the program, we found that they all had patients, whom they felt could benefit from participating in MSHAC. Furthermore, the providers all welcomed the potential help that MSHAC would provide them with to improve their patients' care.

Challenges

During the pilot years of the program, we have identified a number of challenges that will likely be encountered again in future years. The challenges are listed below in the form of the question that the program ultimately must answer; followed by a more detailed explanation and references to actions that we have taken in the past to counter the challenges. Each year, Student Leaders should modify and adapt these challenges to reflect the current status of the program.

1. *How do we avoid scheduling conflicts?*
    - Conflicting schedules within the team itself

      Team members come from various schools; consequently, each has a different class schedule. The result is an array of schedules that make scheduling home visits with the attendance of all five team members a formidable task. To counteract this challenge, MSHAC has waived its previous requirement that students make patient visits as an entire team. Now, if class schedules preclude the team from visiting their patient all together, then the team may visit their patient in smaller groups. A team leader position was also created on each team to facilitate scheduling between team members.

    - Scheduling home visits with patients

      Having different people calling patient and with no written reminder of the next visit, not surprisingly, proved to be a confusing process for patients. Patients frequently forgot their appointments with the teams. Creating the team leader position played a critical role in addressing this challenge. Now, the team leader is the primary contact person for the patient. Having one contact person allows the patient to more clearly understand who is calling and why. For additional patient clarification, we have created reminder flyers that include the names of the team members, the phone number of the team leader, and the date and time of the next visit. We

encourage the patients to hang these in a visible location, such as the front of the refrigerator.

- Scheduling preceptor meetings
  With the large number of teams, scheduling preceptor meetings has become difficult. To help counteract this problem, we created a student coordinator position, the Scheduling Coordinator, that is solely devoted to scheduling.

2. *How do we avoid redundancy on teams?*
   In deciding how large to make the teams, MSHAC leaders need to keep the number of students so that it is efficient, but at the same time, not sacrificing the interdisciplinary nature of each team. Students should be placed onto teams with as little overlap between disciplines as possible. For example, it might be necessary to place a medical student and a nursing student on separate teams. Also, if a patient has an obvious need that matches one discipline over another, then every effort should be made to place someone from that discipline onto the patient's team.

3. *How long should a patient remain in the program?*
   The best way to determine continued patient participation is for teams, patients, providers, coordinators, and preceptors to collaborate on this decision at the end of each year.

4. *What happens when a patient does not seem to be a good fit with the program but the year has already begun?*
   Another problem can arise when a patient is recognized in the midst of the year as being too challenging for a team to work with. Such a patient may be too complex or he/she may not have a vested interest in participating in the program. For example, one patient routinely left her home when the team came for scheduled visits. After two months, it was apparent that any additional effort from the team would be futile. To address this problem, teams, in concert with their preceptor, have permission to discontinue their patient visits.

5. *How does MSHAC support teams if a patient passes away?*
   Due to the close relationships that develop between the patients and teams, the death of a patient can be an emotional time for a team. MSHAC leaders should help teams cope with the loss by scheduling them to meet with a preceptor to talk about the experience. Additionally, teams should be encouraged to offer a show of support to the patient's family through a phone call, card, or flowers. If and when the team feels they are ready for a new patient, then they should be assigned to a patient from the waiting list.

6. *How do we avoid legal issues?*
   - Students act in accordance with program guidelines and their discipline specific practice guidelines.
   - Informed consent from patients is obtained at the beginning of each year

- Preceptors are to be informed of any potential areas of legal liability
- Program leaders need to ensure, via conversations with UNC legal counsel, that program activities are not subjecting students or patients to undo legal liability.

7. *What do we do about maintaining HIPPA requirements?*
   MSHAC teams regularly deal with private patient information. Because of this, the program must always be cautious that it is maintaining patient privacy and staying within the requirements of HIPPA. All patient information should remain in the patients' charts, which never leave the locked office. Also, emails containing patient information must only be sent and received through accounts that are protected by the medical school.

Funding

MSHAC requires yearly funding to support the purchase of equipment, food for the training meeting and a thank you luncheon, team projects, and stipends for relationship development with patients. We have depicted an example of a detailed budget in Figure 2.

The base of MSHAC's funding comes from the annual budget allotted to it from SHAC. This amount has typically ranged from $1500 to $2500. Each year it will be the responsibility of the Finance Committee under the direction of the Finance/Projects Coordinator to obtain additional funding grants, fundraisers, and support from UNC schools or departments. (Each year, Student Leaders should compile and pass on to the next year's leaders a list of all current and past funding sources –including funding opportunities that were attempted but rejected, the amount of funding for each, and copies of grant applications if applicable. Recording this information will make searching and applying for funding easier the following years. See Appendix IV).

One source of funding and support is through a partnership with the UNC School of Medicine Program on Aging (POA). MSHAC's educational objectives align very closely with those of the POA. In 2004-05 and 2005-06, the POA supported MSHAC with help from the Donald W. Reynolds Foundation, a four year grant that the POA received to support the education of medical students and physicians in the area of geriatrics.

For MSHAC's long term sustainability and independence, Student Leaders will need to strive to find a reliable, renewable source of funding. One such example is to use seed money from a grant, such as the Reynolds Grant, to create an annual fundraising event like a charity golf tournament.

Item		Item cost	Item number	Total cost
Supplies				
	Stethoscope	$100.00	5	$ 500.00
	Blood Pressure cuff	$ 50.00	5	$ 250.00
	Glucometers/supplies	$100.00	5	$ 500.00
	Band aids	$ 3.00	10	$ 30.00
	Alcohol swabs	$ 2.00	50	$ 100.00
	Patient Charts	$ 25.00	1	$ 25.00
	Locked filing cabinet	$ 50.00	1	$ 50.00
Food for training meeting		$400.00	1	$ 400.00
Food for end of year send off		$400.00	1	$ 400.00
Team stipend for social activities		$200.00	25	$ 5,000.00
Funds for Special Projects		$400.00	25	$10,000.00
Cameras for teams		$ 20.00	25	$ 500.00
Film Development		$ 12.00	25	$ 300.00
Student Travel to conferences		$300.00	1	$ 300.00
Total				$18,355.00

MSHAC Detailed Budget (Figure 2)

GOALS AND OBJECTIVES:

Goals:

MSHAC will attempt to accomplish the following goals that are aligned with its dual purposed mission of service and education:

- To improve the health and well-being of isolated individuals in our community with complex social and medical issues
- To increase health professional students' appreciation of the patient's community, family, and home as a context for health care decisions
- To increase students' familiarity with older adults and the aging process
- To increase students' knowledge and familiarity with the basic tenets and contributions of other health care disciplines
- To increase health professional students' leadership skills

Objectives:

In keeping with its mission and goals, MSHAC's objectives are best broken down into the two categories of service and education. The service objectives are further broken down into categories of the various groups of individuals that the organization directly serves: patients, referring providers, and the community. Where as, the student volunteers are the focus of the educational objectives.

Service Objectives

Patients:

1. In one year of participation with the program, > 50% of patients will report an improvement in their functional capacity.
2. In one year of participation with the program, > 50% of patients will report an increased understanding of their health status, medications, nutrition, and/or the health system.
3. In one year of participation with the program, >25% of patients will report an increase in their perceived quality of care.

Referring Providers:

1. Within one year of referring a patient to the program, >75% of referring providers will report having more complete information about their patient and/or the context in which they live, including information regarding a patient's personal, social and physical environment.
2. Within one year of referring a patient to the program, >75% of referring providers will report that the patients that they referred have received "better" care because of the MSHAC teams were able to teach patients about their health and appropriate preventative measures.
3. Within one year of referring a patient to the program, >25% of referring providers will report that they are able to provide more comprehensive, less fragmented care because MSHAC has enabled them to know who the other providers are and what they are doing.*

   ** Percentage calculation to include only patients with multiple providers.*

The Community Short term:

1. Each year, the Quality Improvement Coordinator will make contact with 100% of its partner organizations within the community to reaffirm the partnership and continue to create awareness of the program and its mission within the community.
2. Each year, either individually or in partnership with others community groups, the organization will pursue and/or sponsor >1 publicity effort that furthers the program's mission to increase the community's awareness of the gap between its resources and the needs of its members.

Education Objectives:

1. After one year of participation in MSHAC, >50% of student volunteers will report an increase in their knowledge and skills of at least half of the competencies listed below. We say only half of the competencies because each student's experience within MSHAC is so varied that everyone will not be exposed to all of these competencies. The following competencies have been identified by the IOM[3] and the AGS[2] as key to providing quality patient care to patients of any age and older adults respectively.

   IOM Core Competencies[3]

   A. Provide patient-centered care
      a. Identify, respect and care about patients' differences, values preferences, and needs
      b. Listen to, clearly inform, communicate with, and educate patients
      c. Advocate disease prevention, wellness, and promotion of healthy lifestyles

   B. Develop and promote interdisciplinary teamwork skills
      a. Cooperate, collaborate, and communicate with other disciplines. Learn the foundational contributions that each discipline makes to a patient's care
      b. Integrate care to make it more continuous and reliable

   C. Apply Quality Improvement
      a. Measure quality of care in terms of structure, process, and outcomes
      b. Design and test interventions to change processes and care to improve quality

   D. Increase awareness and applicability of community resources

AGS Competencies[2]

A. Awareness of the myths and stereotypes related to older people

B. Recognition that the elderly are a diverse group with different personalities, values, and functional levels and that they need to be viewed and treated as individuals

C. Openness and willingness to work with colleagues in other disciplines

D. Appreciation for the need to improve and optimize older people's functioning rather than just focusing on diseases.

E. Understanding of geriatric related problems including but not limited to: dementia, delirium, inappropriate prescription of medications, depression, falls, immobility, and nutrition deficiencies

F. Recognition and understanding of other geriatric issues such as: home safety, primary and secondary disease prevention, health care financing, and community resources.

2. After one year of participation in MSHAC, > 25% of the cohort of student volunteers will achieve an increased positive attitude towards older adults as determined by their scores on the validated University of California Los Angeles Geriatric Attitudes Scale.
3. After one year of participation in MSHAC, >50% of student volunteers will report a better understanding of other disciplines and ability to work on an interdisciplinary team
4. After one year of participation in MSHAC >75% of students within leadership roles will report an increase in overall confidence in their leadership ability and in performing one or more of the following tasks associated with leadership:
    A. Vision creation
    B. Decision making
    C. Delegation
    D. Networking
    E. Program and curriculum development
    F. Public speaking skills
    G. Grant writing and fundraising
    H. Teamwork
    I. Collaboration

MSHAC LOGIC MODEL:

Logic models are commonly used by program planners as an overview of all the resources, activities, and outputs that are necessary for a program to operate successfully and to ultimately achieve the program's objectives and long term impact. Furthermore, the logic model will provide Student Leaders with a framework and reference for evaluating the program.

Mobile Student Health Action Coalition Logic Model				
Resources	***Activities***	***Outputs***	***Short & long-term outcomes***	***Impact***
In order to accomplish our set of activities, we will need the following:	*In order to address our problem we will conduct the following activities:*	*We expect that once completed or underway these activities will produce the following evidence of service delivery:*	*We expect that if ongoing, these activities will lead to the following changes in one year and three years respectively::*	*We expect that if completed these activities will lead to the following changes in 7-10 years:*
• University recognition of the status and purpose of the organization • Efficient organizational and leadership structure • Adequate funding • Space for meetings and storage of equipment and patient information • Equipment and supplies • One faculty advisor • Student Leaders (7-8 students) • Access to and support from all health discipline schools (Medicine, Pharmacy, Social Work, Nursing, Occupational Therapy, Physical Therapy, Public Health) • Faculty preceptors from multiple disciplines • Providers who are willing to communicate with teams	*The Leadership Team/Organization is responsible for the following activities:* • Recruit multidisciplinary student volunteers • Identify an appropriate pool of patients to be served each year • Hold a training session for volunteers • Assign volunteers to teams and match each team with a patient • Keep website updated as a resource for teams: to include job descriptions, contact information, and information on community resources for patients. • Provide support for teams' questions and concerns • Ensure that each meets twice a year with a preceptor	• An adequate volunteer pool will be recruited – the number to be determined yearly by how many volunteers the leadership feels it can support (between 100-150) • 100% of volunteers will be trained by the end of September and placed on to teams. • 100% of patients will be identified, contacted, and assigned to teams by the end of August- (This number of patients will be dependent on the number of volunteers and should also include a small number of patients on a waiting list, should anything happen to any of the patients who are assigned to teams. Approximately 20-25 patients).	*Short term (1 year):* • Of patients with an identified need in the area of functional capacity >50% will report improvement at the end of one year. • Of patients with an identified need in the area of understanding their health status, medications, nutrition, or the health system >50% will report an increased understanding in one or more of these areas • >25% of patients will report an increase in their perceived quality of care • >75% of referring providers will report having more complete information about their patient and/or the context in which they live. • >90% of approved projects will be in progress or	• Overall improvement in the quality of life of isolated older adults in Orange County • Decreased numbers of older adults living in isolation in our community • Health professional students with increased appreciation of the patient's community, family, and home as a context for health care decisions

and able to refer patients to the program • Contacts within media organizations • Support from community agencies	• The organization will foster and support the development of close relationships between teams and patients by providing an annual stipend to each team for social activities • The organization will approve ideas and provide funding, advice and resources to help teams successfully accomplish projects • Pursue opportunities with the media and through other public events to increase awareness within the community of the situation that many of its elderly people live in • Hold a thank you luncheon for all participants at the end of the year • Recruit and train new student leaders --- • Preceptors will provide guidance and assurance to teams --- *Teams will be responsible for the following:* • Visit their patient > once a month • Develop a relationship with their patient and in doing so attempt to achieve a more in depth understanding of the individual and a clearer picture of the potential complexities of the patient's personal, social, and physical environment. • Collaborate with the patient, provider, and preceptors to identify their patient's needs • Teams will submit special project ideas	• 100% of teams will be assigned to patients by the end of September. • 100% of teams will make first visit to patient by the end of October • 100% of teams will have attempted to contact all of their patients' various providers and a member of the family by the end of November. • 100% of teams will have attended 1 scheduled meeting with a preceptor by the end of December. • Each team will have an assessment of their patient's needs and a plan of action to address those needs by the end of December. • At the end of each month 100% of team leaders will be contacted by their respective team coordinator for a progress report Spring: • 100% of teams will have attended a second scheduled meeting with a preceptor by the end of April • All project ideas requiring additional funding and support should be submitted by Jan 15th and approved by Feb 1st. • By the end of Feb. 100% of approved projects will be started • By the end of April 100% of program evaluations will be complete: evaluations include: project status and outcomes, patient satisfaction and improvement, and volunteer satisfaction • By the end of April 100%	completed • >75% of students within leadership roles will report an overall increase in leadership skills and confidence in ability to lead • > 25% of the cohort of student volunteers will have an increased positive attitude towards older adults as determined by the validated UCLA Geriatric Attitudes Scale • >50% of student volunteers will increase their knowledge and skills in a number of areas relating to the care of older adults • >50% of student volunteers will report a better understanding of other disciplines and ability to work on an interdisciplinary team • >1 successful publicity/media event will occur that raises awareness in the community *Long term (>3 years):* • >25% of patients, for whom it was agreed that MSHAC was no longer beneficial, will report that they continue to perceive a benefit from the services previously offered to them by MSHAC during the time of their participation • >90% of patients, who continue to remain with the program, will report that they are satisfied with the services MSHAC has offered them • >25% of referring providers, will report that they continue to provide better quality care to the referred	

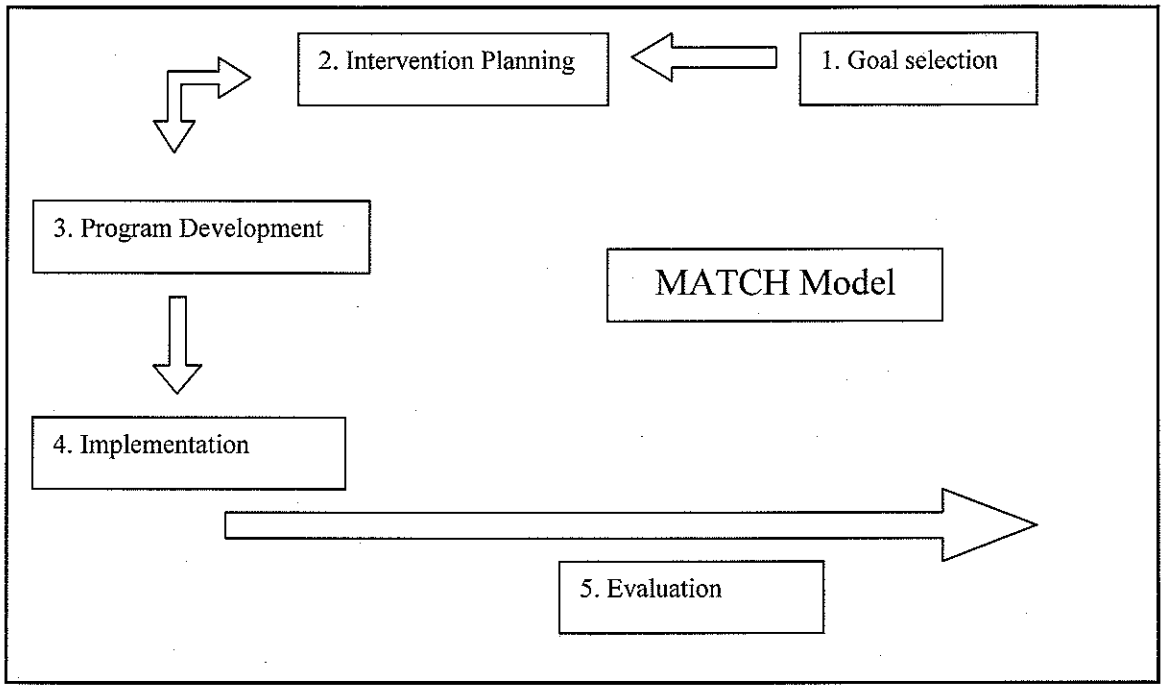
	• Create a plan of action to address the needs that are identified; focus on connecting patients to community resources, education, bridging communication with providers, and direct service • Implement plan (s) with the patients • Evaluate the patient outcomes from the year's efforts and the lessons that each student learned from the experience	of teams will have turned in an end of year summary for their patients with recommendations for continuation with the program • 100% of participants appreciated by luncheon if able to attend or email/thank you card if not able to attend • >1 attempt will be made to highlight the program's mission through media/publicity event(s)	patient due to the service MSHAC provided for that patient during 1 or more years of participation with the program • Outreach efforts, in addition to MSHAC, will be serving a larger percentage of isolated older persons in the community • An increased number of resources in the likes, of donations and partner agencies, that MSHAC has access to for its patients • >35% of students will report that MSHAC has contributed in a positive way to their care of patients • >35% of students will report that they work better with colleagues from other disciplines as a result of their participation with MSHAC • >35% of students will report that they have a better understanding of the resources that are available to help their patients and an increased confidence in their ability to use those resources as a result of their participation with MSHAC • >5% of students will report that their experience in MSHAC influenced their decision to work with older adult patients • >10% of students will report taking on leadership roles as a result of their participation in MSHAC	

Program Theory

Program theories provide leaders with a framework for shaping the structure and organizational processes of their programs. They enable program leaders to efficiently create and maintain their programs based on the scaffolds of other's experiences. Leaders are thus able to concentrate on the quality of the program, rather than becoming mired in the development process; or worse yet, ultimately failing because of an oversight of a key component. This aim of this section is to provide MSHAC leaders with the details of the structure and process necessary for the success of MSHAC. The program theory should be adapted each year to reflect the changing dynamics of the program. A logic model is also provided in the appendix where MSHAC's structure, process, and outcomes are presented in a chart form. The logic model may serve as a good reference or check list to monitor progress during the year.

We chose to use the program theory called Multilevel Approach to Community Health Model (MATCH) (Figure 3), which places an emphasis on program implementation. As Simons-Morton[19] suggests "MATCH is designed to be applied when behavioral and environmental risk and protective factors for disease or injury are generally known and when general priorities for action have been determined, thus providing a convenient way to turn the corner from needs assessment and priority setting to the development of effective programs". Because MSHAC has been piloted already for 4 years, the program is in a position to concentrate most of its efforts on successful implementation.

MATCH also incorporates an ecological theory, which means that it considers both the activities that change people's behaviors and also their environments. Change can only be realized through interventions aimed at the individual and at the multiple levels of society that interact with, enable, or inhibit the individual's ability to achieve change.



MATCH Model (Figure 3)
Adapted from McKenzie and Smeltzer[20]

Phase 1 – Goal selection

MSHAC's Health Status Goal:

To improve the functional capacity, understanding of overall health, and the quality of care for isolated individuals in the community. The rationale behind this goal is found in the aforementioned Orange County Community Health Assessment report (OCCHA)[17] and the Orange County Master Aging Plan Task Force report (MAPTF)[18].

MSHAC's Target Population:

Patients referred to the program are generally isolated, elderly individuals with complex medical and social needs and are challenging to care for in the traditional clinical setting. Again, the OCCHA and the MAPTF helped guide us in defining our target population.

Modifiable Behaviors: Patients' knowledge and understanding about the following:

- Disease prevention and control
- Medications
- Nutrition
- The health system

Environmental: Factor that contribute to the isolated and risky situations for older adults include:

- Hindrances to activities of daily living
- Basic home safety
- Use of assistive devices
- Social isolation
- Isolation from community resources
- Communication between various caregivers
- Providers lacking complete information about the older adult

We identified these environmental and behavioral factors through analysis of evaluation comments and patient charts. These lists are by no means all inclusive; however, they are the factors that we felt MSHAC held the potential to modify. Each year, the Quality Improvement Coordinator should determine if any changes need to be made to this list by a similar analysis of evaluation comments and data in the patients' charts.

Phase 2 – Intervention Planning

Phase 2 begins with identifying the targets of intervention action (TIAs). The TIAs are those levels of society which have the influence to change the environmental and behavioral factors identified in Phase 1[20]. For MSHAC, the TIAs are the individual level, the interpersonal level, and the societal/community level. The following section describes MSHAC's objective and intervention for each of the levels.

Individual level – patients referred to the program

Objective: Increase functional capacity, health behavior, and quality of care

Intervention:

- The context of home visits and meaningful relationships with patients provide a unique vantage point to see the potential complexities of the patient's personal, social, and physical environment
- Student teams use this unique vantage point to collaborate with the patient, their referring provider and faculty preceptors to identify modifiable environmental (including social and physical) and personal factors.
- Student teams educate patients to help them better understand their health status, nutrition, medications, and the healthcare system.
- Teams connect patients to community resources that are appropriate to their patients.
- Teams provide direct service to fix or remedy problems that fall within their scope of practice.
- The teams, patients and community will work together to implement plans that will ultimately improve the health and well-being of the patient.

Interpersonal level – family members, the patients' various providers, friends, and support network

Objectives: Increase involvement of the family, friends, and social network in patient's care. Improve communication between providers and provide them with a more complete context for patient care decisions.

Intervention: Teams are able to take the following actions:

- Fill the gap(s) in communication that exist between a patient's providers
- Communicate to the primary provider(s) information on contextual findings that may be pertinent to improving the quality of the patient's care
- Help patients' families become more knowledgeable and involved in their family member's care
- Help patients find new social networks or become more involved in existing ones
- Connect patients to appropriate community resources

Societal/community – community organizations and community members

Objective: Create connections with community organizations that are able to help improve the situations for MSHAC patients' situations; and raise awareness in the broader community of the disconnect between its resources and the needs of its members.

Intervention: Student leaders should strive each year to:

- Take advantage of media and publicity opportunities that arise
- Develop partnerships with community organizations and businesses that are able help to further MSHAC's mission
- Network with local leaders who have a similar interest in improving the well being of isolated older adults in the community

Phase 3 – Program Development

The program development phase is used to identify the various components, or structure, necessary for MSHAC to achieve the health status goal stated in Phase 1 and the interventions in Phase 2. Each group of new student leaders must take inventory of these components, making adjustments where necessary.

1. Updated training protocols, supplies, and forms:
   - Website with links to resources for volunteers and referring providers
   - Liability form
   - End of year summary form
   - Patient referral form
   - Volunteer handbook detailing program organization, mission and leadership roles and responsibilities
   - Schedule template for preceptor meetings
   - Training meeting agenda and curriculum
   - Supplies: stethoscopes, blood pressure cuffs, glucometers, band aids, alcohols swabs
   - Patient Charts

2. Recruited Personnel
   - Leadership team
   - Faculty advisor
   - Faculty preceptors
   - Student participants
   - Team leaders
   - Referring providers
   - Patients
3. Funding sufficient to cover:
   - Supplies
   - Special Projects
   - Team stipends for dinners and social activities
   - Food for training meeting and thank you luncheon

Phase 4 – Implementation

Phase 4 consists of two stages: 1) adoption of the program by participants and key stakeholders, 2) program implementation and maintenance[20]. Common to the success of both stages is good communication.

Adoption:
All participants need to fully understand MSHAC's expectations of them, and what they can respect to receive in return.

- Student leaders - Understand their roles and the program's goal, mission, and structure
- Patients (new and returning) - Contacted by phone well before the start of the year in order to explain the program's focus, answer any questions, and determine their interest in participation
- Referring providers - Contacted to confirm that their patient will be seen by a team or not, a timeline of when they can expect to hear from the team, and what they should expect to receive from the program
- Student participants - Understand what they can hope to get from their experience, the program's expectations of them, and the scope of what they are able to do
- Community and UNC Organizations - Updated on MSHAC's activities so that efforts are synergistic rather than antagonistic

Implementation and Maintenance:

April-May before start date

1. First meeting of the new leadership team, April
   At this meeting the student leaders meet each other and the faculty advisor. The Discipline Coordinators decide upon the additional coordinator roles that each will have. Note that the Program Director and Operations Manager should already know there positions and have a full understanding of the program at this time. The leaders will lay out a plan for recruitment of volunteers and patients, which will occur throughout the remainder of the spring and into the fall.

2. Student and patient recruitment, April and May
    - Discipline Coordinators will begin to recruit student volunteers by holding information sessions, through emails, and organization fairs.
    - The Operations Manager should consult patient evaluations, end of year summaries, and charts to determine each patients interest/need for continuing with the program for an additional year. When there are questions, the Faculty Advisor should be consulted.
    - The Quality Improvement Coordinator should work with the Program on Aging and the Department of Family Medicine to connect with clinical providers who will refer patients to the program. This recruitment will continue through the summer and the fall.

June-August Before The September Training Meeting

1. Contact patients and volunteers, July
   The Operations Manager will delegate responsibility to the other Student Leaders to make contact with all patients; they will explain the program and determine the patients' interest in participation with the program.
2. Maintain student interest, June, August
   The Operations Manager should maintain student interest in the program by sending 2-3 emails throughout the summer to those who have expressed an interest in participation.
3. Fine tune the program, June - August
   The Student Leaders will make any changes/improvements that are needed to the program during this time.
4. Continue to recruit new students participants, August
   The Discipline Coordinators should make another recruitment effort aimed at the incoming class of students within their respective schools.
5. Student participants RSVP to training meeting, End of August
   The Operations Manager should contact all students, who have expressed an interest in the program, to inform them of the date of the training meeting. Students should be required to RSVP for the training meeting. If attendance at the meeting is required, then student leaders will be able to make accurate team assignments before the training meeting.
6. Second leadership team meeting, End of August
   During this meeting, the leadership team will plan the curriculum of the upcoming training meeting. They will also assign student participants to teams. The teams that they create will then each be assigned to one patient. When there are no more teams to be assigned to patients, then the remaining patients will be placed on a waiting list. The disciplines placed on teams should ideally reflect the needs of the patients. However, when this is not possible, the student leaders should try to make each team with as little overlap between disciplines as possible.

7. Contact providers, End of August
   The Operations Coordinator will contact all of the providers, who have referred patients, to inform them of their patients' assignment status. If patients are on the waiting list, then the providers are told that they will be informed if a team becomes available for their patient

September-December

1. Training meeting, Mid September
   All of the student participants are to attend this meeting. The objective of the meeting is to make sure that everyone understands the program, the expectations, and is able to meet the student leaders and one another. We typically provide pizza.
2. Home visits, End of September - December
   Student teams begin to visit their patients and continue these visits throughout the year.
3. Monthly updates
   The Team Coordinators should stay in regular contact with the teams that they oversee. Each month the Team Coordinators should send a brief update on each team to the Operations Coordinator.
4. Preceptor meetings
   The Faculty advisor creates a preceptor schedule for the semester. Teams sign up for time slots through the Scheduling Coordinator.
5. Team Dinners and Projects
   The Finance/Projects Coordinator encourages teams to begin thinking of special project ideas and having team dinners with the patients. Both the Finance/Projects Coordinator and the Team Coordinators should provide advice and encouragement to teams throughout this process.
6. Additional leadership team meetings
   The leadership team may need to have additional planning meetings throughout the fall as deemed appropriate by the Program Director and the Faculty Advisor.

December

1. Abbreviated evaluation of program
   The Quality Improvement Coordinator should evaluate the program and participants during the early months of winter to provide a mid-year assessment of how the program is progressing.

2. Third leadership team meeting
   The coordinators meet again to discuss any changes that need to be made in the program for the second semester of the year.

January-April

1. Home visits and preceptor meetings continue, January-April
   Teams begin visiting their patients again, and they schedule another meeting with a preceptor. Team dinners and special projects also continue.
2. 4th Leadership team meeting, January
   Student leader should begin to discuss the process of recruiting replacement leaders and the steps that will be taken in the leadership transition process. This process should be coordinated with SHAC's recruitment strategy.
3. Recruitment for new leaders begins, February
   Each Discipline coordinator is in charge of recruiting a new leader from his/her school. The Program Director and Operations Manager positions are open to students from any discipline; and the positions should be publicized accordingly. Interested students are asked to submit an application and come to an interview.
4. New leaders selected, March
   The new leaders should be selected and encouraged during this month to meet one on one with the person whom they are replacing
5. End of year summaries, April
   Each team submits to their respective Team Coordinator an end of the year summary for their patient. The Team Coordinator should make sure that a copy of the form is placed into the patients chart. The summary is important to provide the following year's volunteers with the pertinent information that will improve continuity of care for that patient.
6. Evaluation, April
   All patients and student volunteers are asked to fill out and turn in an evaluation of the program. These evaluations are to be used to modify the program in the subsequent years.
7. 5th leadership team meeting-tranisition, April
   During this meeting, the new and old student leaders are present. The exiting leaders teach the new leaders how to run the organization and explain what they have found that works well and what does not work as well.
8. Thank you luncheon, April
   The first project for the new leaders is to plan a thank you luncheon. All participants including preceptors, patients, and referring providers should be invited to this luncheon.

Activities	Apr	May	Jun	Jul	Aug.	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
1st Student Leader Meeting -Planning for the next year													
Student Participant Recruitment													
Patient recruitment													
Operations Manager – Initial Contact with Patients to confirm participation with program													
Faculty Advisor Recruits Preceptors													
2nd Student Leader Meeting - planning for training meeting and assign student participants to teams and match teams with patients													
Training meeting – train Student Participants													
Contact providers to inform status of patients													
Teams visit patients													
Preceptors meet with teams once each semester													
Quality Improvement Coordinator – Mid year Program/Participant Evaluation													
3rd Student Leader Meeting - midyear program modifications based on evaluation report													
4th Student Leader Meeting - Discuss leadership recruitment and transition strategy													
Recruit new leaders													
Quality Improvement Coordinator – End of year Program/Participant Evaluation													
Teams turn in end of year summaries – using these and evaluation result the Student Leaders determine which patients wish to continue with the program for another year													
Thank you luncheon													
5th Coordinator Meeting - Transition of old/new leaders													

MSHAC Administrative Timeline (Figure 4)

Phase 5 – Evaluation

The evaluation phase examines the success of process, impact and outcome. The phase 5 evaluation should occur throughout the program planning processes of the other 4 phases. Planners should be flexible and willing to use the results to make the appropriate modifications to the program. The evaluation is explained in its own appendices, which should be read by the Quality Improvement Coordinator.

SECTION IV: EVALUATION STRATEGY

For a program to be successful, it must constantly be evaluated. Evaluations help us to identify both successes and failures. Perhaps more importantly, they help programs identify why and how these successes and failures happened. The Kellogg monographs[21] state that evaluation should be used to both "prove and improve" programs; furthermore, because of its importance in program improvement, the evaluation should be given such priority that it becomes inextricably linked to project management[21]. It is important to note that program evaluation should not be a one time event. Rather, evaluation should occur throughout the program planning and implementation process[21]. This section is written primarily to guide the Quality Improvement Coordinator in evaluating MSHAC. The strategy laid out here is comprehensive. It is unlikely that it can be completed in its entirety each year. The hope is, however, that the Quality Improvement Coordinator can use various components of the strategy in developing his/her own evaluation.

APPROACH

MSHAC's evaluation strategy is divided into two parts:

- Administrative evaluation
- Outcomes evaluation

The administrative evaluation will include evaluation of the program's context and implementation. Context evaluation examines the factors such as resources and support that can help or hinder the program's activities; where as, implementation evaluation assesses the program's activities and outputs. The outcome evaluation will appraise the degree to which the program is meeting its service and educational objectives.

We designed the evaluation strategy to include context, implementation, and outcomes so that it would closely mirror the design of the program's logic model. Thus, our goal is for program planners to use the program's evaluation strategy and logic model as synergistically related tools. The evaluation strategy will allow for measurement of the program's successes and shortcomings, which can then be used to make appropriate adaptations to the program's plan through the logic model.

In order to most effectively evaluate MSHAC's implementation and make meaningful changes to processes and quality improvement, the program will need to be evaluated at three points during each year. These three points are:

1. Before the year begins
2. Middle of the year
3. End of the year

The student leader in charge of evaluating the program will be the Quality Improvement Coordinator. This student should use the evaluation strategy as a model for conducting the yearly evaluations. This student

will also be responsible for keeping the evaluation strategy and questions up to date for the next year's Quality Improvement Coordinator.

As with program planning, it is necessary to involve key stake holders in the evaluation processes. The key stakeholders for this purpose are the Student Leaders, the Faculty Advisor, and the Preceptors. Each year, the key stakeholders should be approached to determine if additions or changes to the evaluations strategy and questions are needed.

STUDY DESIGN

As mentioned above, we have divided the evaluation strategy into the two parts: administrative and outcomes, each for which the design is described.

Administrative Evaluation:
The administrative evaluation is further divided into three phases.

Phase 1: Beginning of the year implementation evaluation

This phase will use qualitative and quantitative techniques to determine the program's preparedness for the coming year – including activities and outputs. The Student Leaders and the Faculty Advisor should be surveyed through both closed and open ended questions.

Phase 2: Mid-year implementation evaluation

This phase will also use qualitative and quantitative techniques to assess the mid-year status of the program's activities and outputs. The primary focus of this phase is to measure the quality of the experience for Student Participants and the quality of services delivered to the Patients and the Referring Providers. The Student Leaders, Faculty Advisor, Student Participants, Patients and Referring Providers will all be surveyed to determine if processes and outputs are functioning appropriately and if changes need to be made.

Phase 3: End of year implementation and context evaluation

This phase evaluates two things: program implementation and context. First, the Student Leaders, Faculty Advisor, Student Participants, Patients and Referring Providers will be surveyed using qualitative and quantitative techniques to determine what worked well and what did not –in terms of the program's process and outputs. Second, the Student Leaders and Faculty Advisor will be surveyed to determine what context changes are needed for the upcoming year –in terms of resources and support

Outcomes Evaluation

The outcomes evaluation is also broken up into two phases. A quasi-experimental design will be used. All patients and student participants will be given a pre survey at the beginning of the year and a post survey

at the end of the year, Phases 1 and 2 respectively. The goals are to show measurable changes in the Student Volunteers' knowledge, attitudes, and skills and to demonstrate changes in the Patients' health and well-being.
It will be necessary for the surveys in the outcomes evaluation Phases 1-2 to be linked with unique identifiers, so that comparisons can be made of each participant's answers. However, these identifiers will be deleted from the data once the participants' answers have been identified for comparison in each of the three phases. Because we plan to communicate outcomes findings externally, it will be necessary to submit a request for the study to be approved by the UNC Public Health Internal Review Board (IRB).

STUDY METHOD

Questionnaires: Questionnaires will be used to obtain information on the programs administration and outcomes. Questionnaires will primarily collect quantitative information by asking for responses using graded scales. However, each questionnaire will also contain a set of open ended questions that will provide a qualitative component.

Focus Groups: Semi-structured interviews can also be used to obtain more in depth qualitative responses. It may be necessary to use focus groups for both the administrative and outcome evaluations; however these are time consuming for both the evaluator and the groups being evaluated. Consequently, focus groups with the Student Participants should be conducted sparingly. The best time for focus groups may be following the teams' regularly scheduled preceptor meeting times. Because of the logistical limitations of forming groups with the program's patients, the Quality Improvement Coordinator may need to conduct individual semi-structured interviews with each of the patients on the phone or in person.

Charts/Document Review: Much of the information needed for the administrative evaluation will be found by reviewing the following documents: Patient Charts, Master Team List, Master Patient List, Master Community Partner List, MSHAC Website, and MSHAC Handbooks.

DISSEMINATION PLAN

Internal Communication:

The Quality Improvement Coordinator will prepare a report of the administrative evaluation during each of the 3 phases. He/She will present the report to the other Student Leaders and the Faculty Advisor. At the end of the year the Quality Improvement Coordinator will also report the results of the Phase 1 and Phase 2 outcome evaluations. Each report should highlight the strengths and weaknesses of the program. The report should also include recommendations on how to improve the program.

External Communication:

The evaluation results should be used to highlight the service-learning experiences of MSHAC through publications and presentations in journals and conferences that have an expressed interest in the education of health professionals. The results should also be disseminated to key stakeholders within UNC and the community. These key stakeholders include the Deans and Administrators of the schools that contribute students to MSHAC, practitioners, and community partners. In addition, the results should used as needed in soliciting future program funding. Finally, the results should include press releases for the media to highlight the program's achievements and raise awareness in the community for the patients that the program serves.

EVALUATION SCHEDULES AND PLANS

The charts in the following section are divided into the aforementioned two parts: administrative evaluations and outcome evaluations. For both the administrative and outcome evaluations, an evaluation schedule and an evaluation plan are provided. The evaluation schedules describe the various phases within the administrative or outcomes evaluation, when each of the phases should occur, the objectives of each phase, and who and what should be evaluated in each phase. The subsequent administrative and outcomes evaluation plans then provide the questions that will be used in the evaluation and the appropriate methods for delivering the questions.

ADMINISTRATIVE EVALUATION SCHEDULE

	PHASE 1 **Implementation evaluation of the program's preparation activities and outputs**	**PHASE 2** **Implementation evaluation of the program's mid-year activities and outputs – with a focus on quality**	**PHASE 3** **Implementation and context evaluation of the program's activities and outputs for the year**
Dates	Completed yearly before September 1st	Completed yearly before December 15th	Completed yearly before April 1st
Objective(s)	1. Assess program readiness	1. Assess mid-year performance from perspective of Student Leaders' and Faculty Advisory 2. Assess mid-year performance from perspective of Student Participants 3. Assess mid-year performance from perspective of Patients 4. Assess mid-year performance from perspective of Referring Providers	1. Assess the context factors of the program 2. Assess end of year performance from perspective of Student Leaders' and Faculty Advisory 3. Assess end of year performance from perspective of Student Participants 4. Assess end of year performance from perspective of Patients 5. Assess end of year performance from perspective of Referring Providers
Tasks	1. Evaluate Student Leaders and the faculty advisor 2. Report results and recommendations to the Student Leaders so that problems may be addressed before the training meeting	1. Evaluate Student Leaders, the Faculty Advisor, Student Participants, Patients, and Referring Providers 2. Determine areas where immediate attention is needed 3. Report to other Student Leader so problems may be addressed before students return in January 4. Make note of the positives and negatives from evaluation of the training meeting to report to the next year's leadership team	1. Evaluate Student Leaders, the Faculty Advisor, Student Participants, Patients, Referring Providers, and Community Partners 2. Determine areas where attention is needed 3. Provide new Student Leaders with a summary of evaluation results and recommendation for implementation and context changes

ADMINISTRATIVE EVALUATION PLAN

PHASE 1

Objective: To assess the extent program activities were planned and executed and the program's overall readiness for the coming year.

Evaluation Question	Participant	Evaluation Method
A. Have we implemented all the changes deemed necessary from last year's evaluations?	▪ Student Leaders ▪ Faculty advisor	1. Semi-structured interviews 2. Questionnaires
B. Have we recruited an adequate volunteer pool and informed them of the program goals and expectations?	▪ Student Leaders ▪ Faculty advisor	1. Semi-structured interviews 2. Questionnaires 3. Review of documents (e.g., master patient list)
C. Have we recruited a sufficient number of patients to match the number of volunteers and to maintain a waiting list of additional patients? Have we contacted all of these patients to explain the program goals, program timeline, confirm interest, and answer questions?	▪ Student Leaders ▪ Faculty advisor	1. Semi-structured interviews 2. Questionnaires 3. Review of documents (e.g., master patient list)
D. Are the website and all training material up to date?	▪ Student Leaders ▪ Faculty advisor	1. Semi-structured interviews 2. Questionnaires 3. Review of documents (e.g., website, handbooks)
E. Have we finished planning the training meeting? Are all coordinators, the faculty advisor, and preceptors prepared for the role they will play at the meeting? Have we made the student volunteers aware of the date?	▪ Student Leaders ▪ Faculty advisor	1. Semi-structured interviews 2. Questionnaires 3. Review of documents (e.g., meeting agenda)
F. Have we assigned students to teams and assigned the teams to patients?	▪ Student Leaders ▪ Faculty advisor	1. Semi-structured interview 2. Questionnaires 3. Review of documents (e.g., master list of team assignments and patient list)

G. Have we contacted all referring providers to inform them of their patients' status (e.g., assigned to team, assigned to waitlist, or ineligible)?	▪ Student Leaders ▪ Faculty advisor	1. Semi-structured interview 2. Questionnaires 3. Review of documents (e.g., master patient list)
H. Have we made contact with all of our community partners?	▪ Student Leaders ▪ Faculty advisor	1. Semi-structured interviews 2. Questionnaires 3. Review of documents (e.g., master community partner list)
I. To date, are there ways we can improve the implementation of the program? Are there changes that could be made in leadership structure and/or style that would facilitate the organization's operations? Can we improve communication in any areas?	▪ Student Leaders ▪ Faculty advisor	1. Open-ended interviews

PHASE 2

Objective 1: To assess the program's midyear performance in processes, activities, and quality of services from the perspective of the Student Leaders and the faculty advisor.

Evaluation Question	Participant	Evaluation Method
A. Did we successfully train 100% of volunteers?	▪ Student Leaders ▪ Faculty advisor	1. Semi-structured interview 2. Questionnaires
B. What were the things that worked well at the training meeting? What were things that we should consider changing for next year?	▪ Student Leaders ▪ Faculty advisor	1. Open-ended questionnaire
C. If a team lost a patient, or a patient lost a team, have appropriate reassignments been made; and have the respective referring providers been informed of any changes in their patients' assignment status?	▪ Student Leaders ▪ Faculty advisor	1. Semi-structured interview 2. Questionnaires 3. Review of documents (e.g., master patient list and team list)

D. Have all teams attended at least 1 preceptor meeting?	▪ Student Leaders ▪ Faculty advisor	1. Semi-structured interview 2. Questionnaires 3. Review of documents (e.g., master team list)
E. Have all teams created a plan of action to address their patients' needs?	▪ Student Leaders ▪ Faculty advisor	1. Semi-structured interview 2. Questionnaires 3. Review of documents (e.g., master team list)
F. Have we attempted to highlight any of the organizations activities through publicity efforts? Are there any activities that we could highlight?	▪ Student Leaders ▪ Faculty advisor	1. Semi-structured interview 2. Questionnaires 3. Review of documents (e.g., master team list)
G. Have we built any new partnerships in the community and/or within the school? Have we added those partners to the master list of community partnership?	▪ Student Leaders ▪ Faculty advisor	1. Semi-structured interview 2. Questionnaires 3. Review of documents (e.g., master list of community partnerships)
H. Have we attempted to find additional funding sources? Have we recorded what those sources are and what has been done to date for each?	▪ Student Leaders ▪ Faculty advisor	1. Semi-structured interview 2. Questionnaires 3. Review of documents (e.g., master list of existing and potential funders)
I. Have all students been contacted for mid-year evaluation? Have all patients been contacted for mid-year evaluation? Have all referring providers been contacted for mid-year evaluation?	▪ Student Leaders ▪ Faculty advisor	1. Semi-structured interviews 2. Questionnaires 3. Review of documents (e.g., master team list, master patient list)
J. Are there ways we can improve the organization's operations for the next semester? For next year? Are there changes that could be made in leadership structure and/or style that would facilitate the organization's operations? Can we improve communication in any areas?	▪ Student Leaders ▪ Faculty advisor	1. Open-ended interviews

Objective 2: To assess the program's midyear performance in processes, activities, and quality of services from the perspective of the Student Participants.

Evaluation Question	Participant	Evaluation Method
How effective was the large group session in helping you to understand MSHAC's mission, objectives and expectations?	▪ Student Participants	1. Questionnaires
A. How effective was the large group session in helping you to understand who the patients are that MSHAC serves?	▪ Student Participants	1. Questionnaires
B. How effective was the session with your school in showing you how you can contribute to your team and patient?	▪ Student Participants	1. Questionnaires
C. How effective was the session with your school in clarifying what you are able to do and not do within the confines of your scope of practice?	▪ Student Participants	1. Questionnaires
D. How effective were the individual team meetings in allowing you the opportunity to begin to get to know other members of your team?	▪ Student Participants	1. Questionnaires
E. How effective were the handbooks in helping you to understand the program?	▪ Student Participants	1. Questionnaires
F. Is there anything that you would change about the training you received for MSHAC?	▪ Student Participants	1. Open-ended questionnaires
G. Name one goal that you have entering the program. In other words, what do you personally hope to gain from your experience with MSHAC?	▪ Student Participants	1. Open-ended questionnaires
H. Is communication between team members effective? Do you have any suggestions of how we can facilitate better communication?	▪ Student participants	1. Open-ended questionnaires

I. Are you provided adequate guidance and leadership from your team coordinator? How can the team coordinators provide more help?	▪ Student participants	1. Open-ended questionnaires
J. Were you provided adequate guidance from your meeting with a faculty preceptor? How can we improve the preceptor meetings?	▪ Student participants	1. Open-ended questionnaires
K. Please list one or two suggestions of how we can improve MSHAC.	▪ Student Participants	1. Open ended questionnaires

Objective 3: To assess the program's midyear performance in processes, activities, and quality of services from the perspective of the patients.

Evaluation Question	Participant	Evaluation Method
A. Do you enjoy having the students visit?	▪ Patients	1. Semi-structured interview 2. Questionnaires
B. Do the students visit you often enough?	▪ Patients	1. Semi-structured interview 2. Questionnaires
C. Please comment on your experiences so far with your team?	▪ Patients	1. Semi-structured interview 2. Questionnaires
D. Are there any things that we could improve to make your experience with MSHAC more enjoyable?	▪ Patients	1. Semi-structured interview 2. Questionnaires

Objective 4: To assess the program's midyear performance in processes, activities, and quality of services from the perspective of the referring providers.

Evaluation Question	Participant	Evaluation Method
A. Have you been contacted by the team leader that is assigned to the patient, whom you referred to the program? Would you like the team leader to contact you either more or less frequently?	▪ Referring providers	1. Semi-structured interview 2. Questionnaires

B. Are you happy with the information that you have received from the team? Is there any additional information or help that the team could provide you?	▪ Referring providers	1. Semi-structured interview 2. Questionnaires
C. Do you have any suggestions of improvements that we can make as an organization, which would help to improve the quality of life of the patient(s), whom you have referred?	▪ Referring providers	1. Semi-structured interview 2. Questionnaires

PHASE 3

Objective 1: To assess the context factors (influences and resources) that influence the organization's ability to conduct its activities.

Evaluation Question	Participant	Evaluation Method
A. What factors within UNC are helping the organization? What factors within UNC are hindering the organization? What factors within the POA are helping the organization? What factors within the POA are hindering the organization? What are factors within the various disciplines' schools that help the organization? What factors within the various disciplines' schools that hinder the organization?	▪ Student Leaders ▪ Faculty advisor	1. Semi-structured interviews 2. Questionnaires

B. What factors within SHAC are helping the organization? What factors within SHAC are hindering the organization? How is MSHAC helping and hindering SHAC?	▪ Student Leaders ▪ Faculty advisor	1. Semi-structured interviews 2. Questionnaires
C. Who are our community partners? How can they help the organization? How can MSHAC help our community partners?	▪ Student Leaders ▪ Faculty advisor	1. Semi-structured interviews 2. Questionnaires 3. Review of documents (e.g., master list of community partners)
D. Do we have enough funding, space, equipment, and institutional support? If not, what do we need and why?	▪ Student Leaders ▪ Faculty advisor	1. Semi-structured interviews 2. Questionnaires 3. Review of documents (e.g., equipment inventory list)
E. Is each coordinator's role manageable? Name2-3 weakness of the existing leadership structure. Name 2-3 strengths of the existing leadership structure.	▪ Student Leaders ▪ Faculty advisor	1. Semi-structured interviews 2. Questionnaires 3. Review of documents (e.g., meeting agenda)
F. Are the program's activities in keeping with the program's mission? Does that mission still align with the needs of the students and the community?	▪ Student Leaders ▪ Faculty advisor	1. Semi-structured interviews 2. Questionnaires

Objective 2: To assess the program's yearlong performance in processes, activities, and quality of services from the perspective of the Student Leaders and the faculty advisor.

Evaluation Question	Participant	Evaluation Method
A. If a team lost a patient, or a patient lost a team, have appropriate reassignments been made; and have the respective referring providers been informed of any changes in their patients' assignment status?	▪ Student Leaders ▪ Faculty advisor	1. Semi-structured interviews 2. Questionnaires 3. Review of documents (e.g., master patient list and team list)
B. Have all teams attended a 2nd preceptor meeting?	▪ Student Leaders ▪ Faculty advisor	1. Semi-structured interviews 2. Questionnaires 3. Review of documents (e.g., master team list)
C. Have all teams completed and submitted an end of year summary for their patient?	▪ Student Leaders ▪ Faculty advisor	1. Semi-structured interviews 2. Questionnaires 3. Review of documents (e.g., master team list)
D. Have we planned the thank you/send off luncheon? Have all participants been invited?	▪ Student Leaders ▪ Faculty advisor	1. Semi-structured interviews 2. Questionnaires
E. Have all new leaders been recruited, picked and trained?	▪ Student Leaders ▪ Faculty advisor	1. Semi-structured interviews 2. Questionnaires
F. Have all patients been contacted, thanked, completed evaluations, and given an explanation of their future with the program?	▪ Student Leaders ▪ Faculty advisor	1. Semi-structured interview 2. Questionnaires 3. Review of documents (e.g., master patient list)
G. Have we attempted to find additional funding sources? Have we recorded what those sources are and what has been done to date for each?	▪ Student Leaders ▪ Faculty advisor	1. Semi-structured interview 2. Questionnaires 3. Review of documents (e.g., master list of potential and existing funding sources)
H. Have we built any new partnerships in the community and/or within the school? Have we added those partners to the master list of community partnership?	▪ Student Leaders ▪ Faculty advisor	1. Semi-structured interview 2. Questionnaires 3. Review of documents (e.g., master list of community partnerships)

I. Are there ways we can improve the organization's operations for the next year? Are there changes that could be made in leadership structure and/or style that would facilitate the organization's operations? Can we improve communication in any areas?	▪ Student Leaders ▪ Faculty advisor	1. Open-ended interviews

Objective 3: To assess the program's yearlong performance in processes, activities, and quality of services from the perspective of the Student Participants.

Evaluation Question	Participant	Evaluation Method
A. Name one goal that you had entering the program. In other words, what did you personally hope to gain from your experience with MSHAC? Did you accomplish this? If not, why not?	▪ Student Participants	1. Questionnaires
B. Did you benefit from working on an interdisciplinary team? As a result of your experience, do you understand other disciplines better? Do you feel better prepared to work on an interdisciplinary team?	▪ Student participants	1. Questionnaires
C. Were you provided adequate guidance and leadership from your team coordinator? How can the team coordinators provide more help?	▪ Student participants	1. Questionnaires
D. Were you provided adequate guidance from your meetings with faculty preceptors? How can we improve the preceptor meetings?	▪ Student participants	1. Questionnaires

E. Please comment on 2-3 things you learned from your experience with MSHAC. Please list 2-3 suggestions of how we can improve MSHAC for next year.	▪ Student Participants	1. Open-ended questionnaires

Objective 4: To assess the program's yearlong performance in processes, activities, and quality of services from the perspective of the patients.

Evaluation Question	Participant	Evaluation Method
A. Did you enjoy participating in MSHAC? Would you recommend the program to someone else?	▪ Patients	1. Semi-structured interview 2. Questionnaires
B. Did the students visit you often enough? Did they call far enough ahead? Were they respectful?	▪ Patients	1. Semi-structured interview 2. Questionnaires
C. In what ways did your team help you?	▪ Patients	1. Semi-structured interview 2. Questionnaires
D. Are there any things that we could improve to make your experience with MSHAC more enjoyable?	▪ Patients	1. Semi-structured interview 2. Questionnaires
E. Are there any issues that you feel your team should have addressed but did not?	▪ Patients	1. Semi-structured interview 2. Questionnaires

Objective 5: To assess the program's yearlong performance in processes, activities, and quality of services from the perspective of the referring providers.

Evaluation Question	Participant	Evaluation Method
A. Were you contacted frequently enough by the team leader that was assigned to the patient, whom you referred to the program?	▪ Referring providers	1. Semi-structured interview 2. Questionnaires
B. Are you happy with the information that you received from the team? Is there any additional information or help that the team could have provided you?	▪ Referring providers	1. Semi-structured interview 2. Questionnaires
C. Are there any ways that we can change our program to be a better service to you and/or other providers in the future?	▪ Referring providers	1. Semi-structured interview 2. Questionnaires

SCHEDULE FOR MSHAC OUTCOMES EVALUATION

	PHASE 1 **Pre-Intervention Evaluation**	**PHASE 2** **Post-Intervention Evaluation** **[1 year outcomes]**
Dates	Completed yearly before September 1st	Completed yearly before April 1st
Objective(s)	1. Short-term outcomes for Patients 2. Short-term outcomes for Referring Providers 3. Measure changes in Volunteer Students' knowledge, attitudes, and skills	1. Short-term outcomes for Patients 2. Short-term outcomes for Referring Providers 3. Measure changes in Volunteer Students' knowledge, attitudes, and skills
Tasks	1. Approve pre and post- intervention evaluation through UNC School of Public Health IRB 2. Conduct evaluations of Student Volunteers (Leaders and Participants), Patients, and Referring providers.* 3. Record the data	1. Conduct evaluations of Student Volunteers (Leaders and Participants), Patients, and Referring providers.* 2. Record data and analyze for changes from pre-intervention values 3. Disseminate the results

**The pre and post-intervention evaluation should be combined and conducted simultaneously with the Implementation evaluations to limit the time volunteers are asked to spend filling out evaluations.*

OUTCOME EVALUATION PLAN

PHASE 1 and 2

Objective 1: Evaluate patients' short term (1 year) outcomes. Ratings on a scale of 1 to 5: 1 = Poor...5 = Great

Evaluation Question	Participant	Evaluation Method
A. Please rate your functional capacity. Please list the areas where you feel your functional capacity is limited.	▪ Patients	1. Questionnaire
B. Please rate your understanding of your health status and health conditions. Please rate how well you understand what your medications are, why you take them, and their potential side effects. Please rate your understanding of your interactions with your health provider(s) and your insurance company (ies).	▪ Patients	1. Questionnaire
C. Please rate the quality of care you receive.	▪ Patients	1. Questionnaire
D. Please rate your quality of life.	▪ Patients	1. Questionnaire

Objective 2: Evaluate referring providers' short term (1 year) outcomes.

Evaluation Question	Participant	Evaluation Method
A. Please rate your knowledge of this patient's personal, social, and physical environment. [1 = NO KNOWLEDGE to 5 = COMPLETE KNOWLEDGE]	▪ Referring Providers	1. Questionnaire

B. Please rate the extent to which the care that you give this patient is effected by inaccurate or inadequate information provided to you by the patient and/or limited access to the patient [1 = NOT AT ALL EFFECTED to 5 = COMPLETELY EFFECTED]	▪ Referring Providers	1. Questionnaire

Objective 3: Evaluate outcomes in students' knowledge, attitudes and skills in the short term (1 year).

Attitudes and behavior assessment

Please use the scale to indicate the degree to which you agree or disagree with the following 18 statements. "Older people" and "elderly people" refer to persons 65 and older. "Patients" refer to persons of any age. Adapted with permission from The University of California – Los Angeles (UCLA) 14 Item Geriatric Attitudes Scale[22].

	Strongly Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Strongly Agree
1. Most old people are pleasant to be with.					
2. The federal government should reallocate money from Medicare to research on AIDS or pediatric disease.					
3. If I have the choice, I would rather see younger patients than elderly ones.					
4. It is society's responsibility to provide care for its elderly persons.					
5. Medical care for older people uses up too many human and material resources.					
6. As people grow older, they become less organized and more confused.					

7. Elderly patients tend to be more appreciative of the medical care I provide than are younger patients.					
8. Taking medical history from elderly patients is frequently an ordeal.					
9. I tend to pay more attention and have more sympathy towards my elderly patients than my younger patients.					
10. Old people in general do not contribute much to society.					
11. Treatment of chronically ill old patients is hopeless.					
12. Old persons don't contribute their fair share towards paying for their health care.					
13. In general, older people act too slowly for modern society.					
14. It is interesting listening to old people's accounts of their past experiences.					

Items added to the UCLA test:

	Strongly Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Strongly Agree
15. I feel comfortable working with older adults.					
16. I appreciate the need to improve and optimize older people's functioning rather than just focusing on diseases.					

17. The patient's community, family, and home are an important context for understanding how to make health care decisions.					
18. I understand the foundational contributions that each discipline makes to an interdisciplinary team.					

Knowledge and skills assessment:

Please indicate using the 1 to 5 scale your level of confidence in your ability to do each of the following 16 tasks. "Older people" refers to persons 65 and older. "Patient(s)" refers to any persons of any age.

1 = Not at all confident, 5 =Fully confident

	1	2	3	4	5
1. Advocate disease prevention, wellness, and promotion of healthy lifestyles to patients.					
2. Listen to patients.					
3. Communicate with patients.					
4. Educate patients.					
5. Implement a plan of care to positively influence the health and well-being of older people.					
6. Identify factors that increase the risk for older people to fall.					
7. Implement a plan of care to reduce falls risk in older patients					

8. Describe community resources and services important to the health and well-being of older people.					
9. Obtain appropriate community resources and services for patients.					
10. Recognize the signs and symptoms of dementia in older adults.					
11. Recognize the signs and symptoms of depression in older adults.					
12. Describe issues affecting the functional status of older people.					
13. Assess the functional status of older people.					
14. Implement strategies to improve the functional status of older people.					
15. Work effectively on an interdisciplinary team.					
16. Cooperate, collaborate, and communicate with other disciplines. 17. discipline makes to a patient's care					

SECTION IV: DISCUSSION

Many individuals in our society are marginalized and largely isolated from our social networks and support systems. The elderly make up a significant and growing portion of this marginalized group. Especially at risk are those elderly individuals with a low socioeconomic status, who live alone. It is imperative that students be trained as compassionate health professionals with the knowledge and skills that are needed to make a difference for the most vulnerable individuals in our society. Such a skill set requires students to learn about the health of their communities, interdisciplinary teamwork skills, health promotion, disease prevention, community resources, and the contexts within which patients live. In addition, the changing demographics of our aging population make it increasingly important for all health profession students to understand the aging process and how best to provide care to older adults.

Though service-learning is a new theory in health profession schools, it is developing a proven track record as an enjoyable experience for students, which also enables schools to teach students difficult concepts while providing valuable services to the community. As a service-learning program, MSHAC supports health professional students, who are linked by the common desire to help others, to make a difference in their community. Students provide invaluable services to isolated older adults through interdisciplinary home visits and the rich relationships built throughout an entire year.

This setting provides a unique experience for students early in their training to interact with patients in the context of their homes, to longitudinally follow a patient for a year, and to interact with other disciplines throughout the process. As a result of their participation in MSHAC, students gain exposure to and learn about many of the core competencies identified by institutions such as the Pew Foundation, the IOM, and AGAS. They become familiar with the basic tenets and contributions of other health care disciplines, learn to utilize community service agencies, and most importantly, learn how to incorporate a broader understanding of care delivery into their future interactions with patients. Students develop and nurture their altruistic qualities and learn invaluable lessons that will continue to shape their professional lives for years to come.

APPENDIX I: MSHAC AND PROGRAM ON AGING FUNDING PROTOCOL

I. Social Activities

- Team leaders will turn in completed reimbursement forms (Form A) to Room 141 MacNider at the POA – the box will be clearly marked "MSHAC REIMBURSEMENT FORM A".
- The POA will ensure proper documentation of expenses and documentation of justification for those expenditures. A copy of the updated master document will circulated to the appropriate persons within the POA at the end of each month.
- It will be the responsibility of the POA accounting staff to ensure that reimbursement forms are delivered to the appropriate UNC accounting service department.
- Checks will be mailed by the aforementioned UNC accounting department directly to the individual being reimbursed.

II. Team Projects

- Team leaders will turn in completed project request forms (Form B) in 141 MacNider at the POA – the box will be clearly marked " MSHAC PROJECT REQUEST/REIMBURSEMENT – FORM B & C".
- The POA will examine requests for compliance with previously stated MSHAC criteria of outcome, cost, and sustainability; and for fit with POA reimbursement guidelines. Projects meeting the criteria will be conditionally approved.
- The POA will email final approval/disapproval status within 7 days after receiving the request to the following persons: the Team Leader, the respective Team Coordinator, the Finance/Projects Coordinator, and the Operations Manager.
- Teams will be asked to stick to the timeline that will be given on Form B.
- It will be the responsibility of the Finance/Projects Coordinator with the help of the Team Coordinators to oversee projects and ensure that the teams stay on schedule with the project.
- The Finance/Projects Coordinator will send monthly updates to the Operations Manager on teams' progress with projects
- Team leaders will fill out Form C for project reimbursements and again turn it into the box marked "MSHAC PROJECT REQUEST/REIMBURSEMENT – FORM B & C".
- The reimbursement process from here on will be the same as that for social activities
- The POA will ensure proper documentation of expenses and documentation of justification for those expenditures. A copy of the updated master document will be sent monthly to the appropriate persons within the POA

Frequently Asked Question About MSHAC Team Expenditures:

How quickly will I be reimbursed?
Reimbursement checks will be processed and mailed to the individual within 2-3 weeks of turning in a reimbursement form.

Is it absolutely necessary for me to provide my social security number on Forms A and C?
Yes. Unfortunately this is a UNC policy that cannot be avoided. Anytime an individual is reimbursed, the school must have that person's social security number. We will make every attempt to ensure that the forms are kept secure. The office where the forms are dropped off is locked after business hours.

When can we have dinner with our patient?
Anytime starting now. You do not need to have dinner purchases approved beforehand. But please note that we will need an itemized receipt attached to FORM A and the names of everyone who attended the dinner (Form A explains this)

What if everyone cannot attend dinner at the same time?
It is okay to split into two groups if it is not possible for the entire group to attend. Please let Andy McWilliams know that your team will be submitting more than one reimbursement request for dinner. Note – As a collective team though, you should not go over the budget of $150 –it is the responsibility of the team leader to make sure that the team remains under their budget.

Can we have dinner more than once with our patient?
Yes, but your team's budget is $150. You can have dinner as many times as allowed by that budget.

What if our team leader is unable to make the purchases – dinner or special projects –can another team member do it instead?
Yes. We would like to encourage the team leader to make the purchases because it simplifies the process. However, we understand that this won't always be possible. If it is not possible, then simply have another person on the team make the purchase(s) and submit the appropriate reimbursement forms. We do ask though that you try to minimize the number of persons on the team making purchases (e.g. if you go to dinner have one person pay instead of 5 individual checks and payments from each team member).

What are some ideas for projects?
Past teams' projects included such things as: creating a scrap book for a patient with memory loss, making a porch garden for a patient who loved gardening but had limited mobility, doing home repairs to improve the safety of a home, purchasing an automatic blood pressure cuff for a patient who could not afford it, purchasing therapeutic shoes for a patient with back problems, going to the theater with a patient who used to enjoy such outings but can not longer leave the house, et cetera.

What items should we avoid submitting as requests for special project approval because they cannot be reimbursed?
We cannot reimburse for gift cards, payment of medical bills, or payment for prescriptions. Other items may come up, but they will be identified on a case-by-case basis. If you are not sure, then please just ask.

What do we do if our patient needs a medical device?
First check to see if Medicare and/or the patient's private insurance will cover the purchase. You must check before the project will be approved. The other advantage to investigating the potential coverage is that you may help your patient find additional serves that could be covered by their existing insurance

How much can our project cost?
There is no fixed budget for each team. Projects in the past have ranged anywhere from $5 to $2000. However, we do have limited funding, so projects will be approved on a first come first serve basis and examined for funding priority against the other projects.

Can we submit a request for more than one project idea?
Yes. But if you think of the ideas at the same time, please include them all on the same form –it will make everyone's life easier.

What if our project is not 'sustainable' because it is a one time event like purchasing a shower chair?
That is fine. Just let us know that you have thought about sustainability. For example, will this purchase cost the patient money in the future, will repairs have to be made, etc? Ultimately, the reason for this is that we don't want a good intentioned idea to create more of a problem or expense for the patients in the long run.

What happens if something costs more than someone on the team is willing to pay for and then be reimbursed?

Please contact the POA and we will look into whether or not UNC can be directly billed. If UNC cannot be billed directly, then we may have to look at an alternative project.

Form A: Team-Patient Dinner Reimbursement Form Food Only

Date: _____
Team Number: ____
Name of Person Submitting Request: _____
Social Security Number of Person Submitting Request: _____
Address: _____
_____
Phone #: _____
Email address: _____

Signatures of all students present for dinner with the patient (including team leader):

_____
_____
_____
_____
_____
_____

Write a brief explanation of the activity. Please include reflection of how this interaction affected the team and/or patient.

_____
_____
_____
_____

Staple the ORIGINAL receipt to this form

DO NOT PLACE TAPE OVER PRINT – IT MAKES IT DISSAPPEAR

Please make every attempt to get an itemized receipt

Make a copy of the receipt for your own records

Quick checklist to ensure expedited reimbursement:

___ Name and address
___ Attached receipt
___ Signatures of all students present

Place in envelope found in box – marked COMPLETED MSHAC FORMS A, B, & C
Box located in 141 MacNider

Please direct any questions to the Special Projects Coordinator

Form B: Team Project Request Form

Date: _____
Team Number: ____
Name of Team Leader: _____
Leader's Phone #: _____
Leader's email: _____

Briefly give an overview of proposed project –include how team members will be involved:

_____
_____
_____
_____

Itemize Projected Costs:

Description of Item	**Estimated Amount**
	$
	$
	$
	$
	$
	$
Total Amount	**$** _____

Describe the desired outcome/goal of the project for the patient:

_____
_____
_____

Comment on how the project will be sustained after the team has left for the year. If sustainability is not applicable to your project, then please explain why.

_____
_____
_____

Projected timeline for project completion – include details such as start date, group meetings, contacting agencies, and completion of project:

Description of Activity	**Estimated Date of Completion (month/date/year)**
Project Start Date	
Project Completion Date	

Please note we will not be able to reimburse the following:

____ *Gift cards*

____ *Payment of medical bills or payment for prescriptions*

____ *Projects that don't directly impact a patient*

____ *Projects that do not involve some level of team involvement*

(e.g. Please do not just buy a blood pressure cuff and give it to a patient – instead the team should give the blood pressure cuff AND instruct the patient on appropriate use, the importance of hypertension management, prevention strategies, and notify the primary provider that his/her patient is now able to monitor blood pressures and will bring a record of them to the next office visit)

Quick Check list to ensure quick response:

___ **Team leader's name and contact info**
___ **Description of project**
___ **Comment on outcome, sustainability, and cost**
___ **Time-line**

Approval Process:
Approval of project requests will take 7 days. Approval status and feedback will be sent to the team leader's email address. Advice for revision will be provided for projects that are not approved.

Place in envelope found in box – marked COMPLETED MSHAC FORMS A, B, & C
Box located in 141 MacNider
Please direct any questions to the Financial/Project Coordinator

Form C: Project Expenses Reimbursement Form

Date: _____
Team Number: ____
Name of Person Submitting Request: _____
Social Security Number of Person Submitting Request: _____
Address: _____
_____
Phone #: _____
Email address: _____

Write a brief explanation to justify each requested reimbursement and describe how it relates to completing the team's approved project (ie for each receipt attached to this form).

_____
_____
_____
_____

Please include a reflection of how this activity has affected the team and/or patient. These reflections may be used to help us secure funding for similar service activities in the future.

_____
_____
_____
_____
_____

Staple the ORIGINAL receipt to this form

DO NOT PLACE TAPE OVER PRINT – IT MAKES IT DISSAPPEAR

Please make every attempt to get an itemized receipt

Make a copy of the receipt for your own records

Quick checklist to ensure expedited reimbursement:

___ Name and address
___ Attached receipt
___ Justification for expenses

Place in envelope found in box – marked COMPLETED MSHAC FORMS A, B, & C

Box located in 141 MacNider

Please direct any questions to the Finance/Projects Coordinator

APPENDIX II: CASE EXAMPLES OF MSHAC ACTIVITIES

These examples are provided to help Student Leader to better understand the program. The examples should also be made available to Student Participants at the training meeting.

The examples are based on actual team experiences at UNC to further illustrate the needs and services that a Beyond Clinic Walls program is able to addresses. In each of these examples, the teams all learn extraordinary things about their patients. They hear the stories that make up that person's history and help to more completely explain the person that they are seeing. While it is difficult to capture the depth of these relationships in written examples, it is important to recognize that both student and patient participants oftentimes reflect that these very relationships are the most meaningful part of their experience. The relationships are an invaluable opportunity to learn about each other; moreover, they are often prerequisite to discovering opportunities that may help improve the patients' lives.

Case 1

Mr. P is 75 and lives alone in a small rural community. He has recently been diagnosed with diabetes. When he was first diagnosed, he was given suggestions for diet changes along with a stack of information on portion sizes and nutritional needs. Feeling overwhelmed by the amount of information and not able to understand much of it, Mr. P continues to eat the same diet he has been eating all of his life. The BCW team goes to a doctor's appointment with Mr. P to help him understand what the instructions he is getting are and to help him voice his concerns to his physician. The BCW team then goes over the importance of the diet with Mr. P and takes him to the grocery store to find new foods that he can try. Because they have gotten to know Mr. P so well, the team is able to understand his frustration with the idea of changing the diet that he has known for 75 years. They are able to reach a compromise with him by finding alternative healthy foods that match closely to his past diet and incorporating new foods that are more congruent with the diet recommended by his physician. Over the course of the year, the team and Mr. P make many more trips to the grocery store and even cook some of the new recipes together.

Case 2

Ms. C is a recent widower, whose husband died 3 months ago. She has been too depressed to continue with her day to day activities. She also has a number of health problems of her own that require her to spend a significant amount of money on monthly on medications. Ms. C's team is able to build a close relationship with her. They explore her sadness and try to encourage her to become involved with a community support group. They also discover that one of Ms. C's biggest concerns is what she is going to do now that she is on her own financially. The team finds that due to the change in her financial status after her husband's death, she may now be eligible for a drug assistance program. Together the team and Ms. C fill out the application. Then they make sure that she has successfully enrolled in the program. They also communicate this

problem to Ms. C's provider, who is able to change some of her medications to cheaper generic alternatives.

Case 3

Mr. E is concerned that his wife's Alzheimer's is becoming worse. He is becoming increasingly frustrated with her and feels he is unable to ever do anything himself. A BCW team learns of this frustration after the first few visits with the couple. After researching some appropriate responses that families have taken in similar situations and seeking guidance from a preceptor, the team comes up with a plan to suggest to the couple. They have discovered that Mrs. E really enjoys cross-word puzzles, so the first thing that they do is purchase a cross-word puzzle book that the couple can work on together. They also help Mr. and Ms. E begin to make a historical scrap book. The scrap book serves as a connection between the couple and also as a means for Ms. E to reflect on her past. Finally, the team helps Mr. E get his wife enrolled into an adult daycare in the community. Mr. E now can run the errands that he wasn't able to do before, with the peace of mind that his wife is okay and being cared for.

Case 4

Mr. L has become increasingly lonely and depressed since his son died. He does not speak with his other son and is unable to leave his home because he doesn't own a car. Mr. L's team finds that these factors are largely contributing to his depression. They see how Mr. L enjoys their company, the opportunities to leave the house, and the walks they take in the park. Mr. L's team is able to connect him to a community transportation system that will pick him up once a week and take him to a senior center that offers activities that he might enjoy, like group walking. Though this greatly helps Mr. L, the team notices that he is still bothered by the rift that remains between him and his son. Over many more visits, they are able to convince him to call his son and try to repair the old wounds.

Case 5

Ms. T lives alone in a home that is in disrepair, and her provider is worried that she is at a high risk of falling. Additionally, if she were to fall, then her remote location might render her unable to get assistance. The provider feels it may be best for Ms. T to go to a nursing home. Ms. T's team discovers though that she has no desire to leave her home and that she feels she can still function fine. Together they decide that there are some things that they can address in order to help her stay more safely in her home. They find a community organization that is able to do some repairs around her home, such as installing railings and repairing wobbly stairs. The team then helps Ms. T to clean the inside of her home, thereby removing many tripping hazards such as the throw rugs that Ms.T had been consistently sliding and stumbling on. The team also helped to get Ms. T an alert necklace that allows her to communicate with the hospital if she were to fall. Throughout the process, the team worked with Ms. T and her family to take a more active role in the upkeep of the home and her health.

Case 6

Ms. L has uncontrolled diabetes and hypertension. Despite her provider's efforts, she has not taken a vested interest in working to correct her health issues. Her team discovers that she is interested in exercising but does not feel that she can due to her leg and back pain that result from working all day as a waitress. She also does not understand the need to change her diet because she has tried once or twice and hasn't seen any results. The team works with her to explore different exercises that she could perform that do not bother her back and knees. They also help her to get a new pair of shoes that help to reduce some of the leg and back pain. Finally, after speaking with Ms. L's provider about her diagnosis, the team is able, over the course of many visits; to guide Ms. L towards a better understanding of her conditions and the importance of her doctor's suggestions.

Case 7

Mr. D's physician is concerned that Mr. D is not taking his medications as prescribed. Mr. D lives alone and does not come in regularly for visits. His doctor has been unable to discern whether or not he is taking his medications, but his health does not appear to be controlled as well as it should be. The team is able to coordinate with the doctor to find out what Mr. D's medications are supposed to be and when they should be taken. After a number of visits, Mr. D has begun to trust them enough that he discloses he doesn't really understand what his medications are for and that he is confused about when to take them. He did not want to tell his doctor because he was afraid she would think he was losing his mind and tell him to go to a nursing home. The team also discovers that Mr. D is sporadically taking expired medications from his previous doctor. The team provides Mr. D with reassurance that he is not losing his mind; they explain to him what his medications are for and when he should take them. They then are able to develop a more systemized method for Mr. D to take his medications appropriately. Using a pill box, a check off log sheet, and a schedule coinciding to his favorite TV shows, Mr. D is able to begin taking his pills as prescribed. The team makes the physician aware of Mr. D's concern that she wishes to place him in a nursing home. She is now able to reassure him otherwise. Mr. D also now brings his medications, pill box, and medication log to his visits to confirm that he is taking his medications appropriately.

Case 8

Ms. B has had increasing difficulty functioning within her home. Her primary provider has made a number of suggestions such as a referral to a home health agency, a walker, and a shower seat. It is unclear to the provider if any of this has been done. She is concerned that Ms. B does not understand how to use these devices, and she has a list of concerns that she feels the home health aid should be focusing on; however, she cannot seem to reach the agency. Ms. B's team serves as an intermediary between the home health agency and Ms. B's physician. The agency is made aware of the physician's concerns and is able to more appropriately address them. The team also discovers that though Ms. B has gotten a shower seat, the seat was never installed properly.

They are able to arrange for the seat to be installed. They also discover that Ms. B has not gotten the walker that her physician had suggested because she didn't want to feel like an invalid; furthermore, the walker was to large to allow her to move about her house. After a number of visits, the team was able to help Ms. B overcome her fears of beginning to use an assistive device in public. The team then communicates back to the provider the issue of space within the home. The physician then makes the suggestion for Ms. B to get a three legged cane instead. The team helps Ms. B to get the cane and makes sure that she is able to use it appropriately and effectively.

Case 9

Mr. and Mrs. K recently turned 65. The have not had insurance for the many years since Mr. K was laid off. As a result, they rarely make it to the doctor. Consequently, Mr. K has been in and out of the hospital frequently with problems that likely could have been avoided with regular doctor visits. The K's physician would like to see them more frequently but has not been able to find a way to achieve this. One possible option is that the K's are now eligible for Medicare; however, the K's are concerned about using Medicare because they view it as public assistance and they have never needed help before. The physician cannot seem to change their minds. The K's team first gets to know the couple and is able to better understand their feelings against receiving assistance. With this understanding, they are able to explain Medicare in a way that helps the couple understand the benefits that are available to them. Additionally, they then are able to explore the pros and cons of the couple signing up for prescription drug coverage through Medicare Part D.

Case 10

The F's no longer have any family and are relying more and more on each other for company and physical support. There are some areas where they are beginning to need additional assistance and they both have a desire to interact with young people. The F's team helps them to become connected to Meals on Wheels. They see how much the F's enjoy their company and help to set them up with a local Friend of Friend program that matches students with elderly people in the community for social visits. Finally, they find another community agency called Helping Hand that can aid the couple with some of the household chores until Mr. F recovers from a shoulder injury.

APPENDIX III: Miscellaneous forms

PHOTO RELEASE FORM

UNC™
SCHOOL OF MEDICINE
PROGRAM ON AGING

Photograph Release Form
The University of North Carolina—Chapel Hill
Program on Aging
School of Medicine
Mobile Student Health Action Coalition

Date:_____

I give my permission to the University of North Carolina at Chapel Hill, the Program on Aging within the School of Medicine, and the Mobile Student Health Action Coalition to photograph my face and/or property to use, duplicate, and distribute for educational purposes. I waive all individual claims to any copyright of this/these photographs.

Participant's Name and Signature:

_____

_____

LIABILITY RELEASE FORM

Mobile Student Health Action Coalition

Participant Agreement and Information Release Form

I, _____, agree to participate in the Community Outreach Program run by Mobile SHAC. I understand that I will receive services from UNC students in various health care fields for the duration of the year and if I wish to continue after a year, I will have to re-enroll. I also give permission to have my doctor informed of my taking part in this program and of any health concerns that may arise at these visits. I give my consent for people involved in the program to contact agencies that are providing me with support services, medical care, or social services in order to obtain or share information related to my healthcare needs. This information will not be shared with others without my written consent, except with those agencies/services involved in my care. I also understand that I am able to terminate visits received from Mobile SHAC at anytime upon my request.

_____ _____

participant's signature date

_____ _____

witness' signature date

Mobile SHAC

END OF YEAR PATIENT SUMMARY FORM

Patient name:
Team Leader's Name:
Team Leader's Email:*
*if willing to be contacted by next years team

1. **SUMMARY OF TEAM'S INTERACTIONS WITH PATIENT FOR '04-'05**

2. **CURRENT PROBLEM LIST (INCLUDE MORE THAN JUST MEDICAL)**

3. **POTENTIAL GOALS FOR NEXT YEAR'S TEAM WITH THIS PATIENT**

4. **IMPORTANT CONTACTS RELATING TO YOUR PATIENT (PLEASE INCLUDE CONTACT INFO)**

5. **PATIENT'S PREFERENCES (EG WHAT TIME DOES HE/SHE LIKE TO BE PHONED, FAVORITE FOOD, ETC)**

APPENDIX IV: RECORDS
These forms should be filled out and past on to the subsequent year's Student Leaders

Community Partners

Name of Partner	Contact (title)	Phone Number	Date/Description
Project Compassion	James Brookes (Exec. Director)	(919) 402-1844	2005-2006 -Project Compassion helps to organize team of volunteers in the community. James has helped build our partnership with Carol Woods. The plan is for Project Compassion to train teams of volunteer residents from Carol Woods, who can then be assigned to patients with MSHAC teams
Department on Aging	Vibeke Tally (Care Manager)	966-2087	2005- The Department on Aging has numerous resources for elderly people in the community. A great contact for projects and information. Eventually MSHAC may be able to help them by accepting patient referrals.
Carol Woods	Tim Heninger (Community Relations Committee Chair)	timdothening@mindspring.com	2005 – We have begun a partnership with Carol Woods Retirement Community. To begin with the Community is going to host our Wednesday preceptor sessions in their boardroom; 2 residents will attend each session to listen and give advice. In 2006, we plan to begin forming teams of Carol Woods residents that will be partnered with a MSHAC patient and team. The Community Relations Committee has spearheaded the effort.
Strong Women Organizing Outrageous Projects (SWOOP)	Terri Murphy	swoop4u@nc.rr.com	2005- We partnered with this organization to reconstruct a patients deck and stairs and other miscellaneous projects. They are a great group to work with. We contributed half of the monetary amount for the project.

Funding Sources

Name	Date Submitted	Funding Amount (Status)	Description (Include where funds are housed and amount left at year end)
Sunshine Fund	September 2004	$10000 (Rejected)	Submitted a proposal for funding our special projects. The Foundation was interested but concerned about the logistics of funds being administered by a student organization. They asked for clarification. We did not resubmit because at the time we had received additional funding. Florence Soltys is friends with an administrator of the grant and is a good contact if another attempt at funding is made.
UNC Education for Life Long Service	March 2005	$2500 (Accepted)	We applied for and used this funding to help with three specific projects for three different patients. Since, ELS has been converted to the UNC School of Medicine Office of Community Service.
UNC Program on Aging and The Donald W. Reynolds Foundation	January 2005	$21,000	The POA became interested in the unique geriatric educational experience that MSHAC student were having. We approached them and they agreed to fund the program using their own matched funds with those of the Donald W. Reynolds Foundation Grant, which was given to the SOM to support medical student and physician education in geriatrics. We have used the funding to support team-patient dinners, purchase of cameras, and special projects. IN addition, the funds have supported refining the program, increasing publicity, and the development of a program model.

APPENDIX V: MSHAC STUDENT LEADER APPLICATION

Thank you for your interest in a Mobile Student Health Action Coalition (MSHAC) leadership role. Year after year, the services that MSHAC offers to our community are made possible by the dedicated, hard work of student leaders like you.

INSTRUCTIONS

I. There are 9 MSHAC leadership positions available

- 1 Program Director
  - This position requires excellent communication, organizational, and delegation skills
  - Available to students from all disciplines
- 1 Operations Manager
  - Attention to detail and the ability to assimilate information from multiple sources are important skills for this position
  - Available to students from all disciplines
- 7 Discipline Coordinators
  - One student from each of the seven disciplines* that comprise MSHAC will be chosen to fill the 7 Discipline Coordinator positions
    **Medicine, Nursing, Occupational Therapy, Pharmacy, Physical Therapy, Public Health, and Social Work*
  - Discipline Coordinators will be responsible for the recruitment of volunteers from his/her school and will be available to answer questions from volunteers that relate to his/her discipline.
  - Discipline Coordinators will also be asked to assume one of the Coordinator roles described on page 3

II. Carefully read the descriptions of the Program Director position, the Operation Manager position, and the Discipline Coordinator roles. Please completely fill out the application on page 2 and rank your preference for ALL of these positions. Return completed applications via email to the current MSHAC coordinator for your school.

ABOUT MSHAC

- Mobile SHAC is an interdisciplinary, student-led organization that was created in 2000 by students as a way to extend SHAC's reach to socially and physically isolated individuals in the community
- MSHAC's mission is to improve the life quality of individuals who have limited access to the formal health care system because of their declining health, social isolation, and limited financial resources; and to foster health care students' appreciation of the patients' community, family, and home as a context for health care decisions
- MSHAC is dedicated to providing the organizational structure and resources to support the services that the students provide; to pursuing meaningful partnerships with community agencies, organizations, and businesses; and to increasing the community's awareness of the gap between its resources and the needs of its members

NAME _____
UNC EMAIL _____
PHONE NUMBER _____

PLEASE CHECK THE SCHOOL/DISCIPLINE THAT YOU ARE IN

___ Medicine
___ Nursing
___ Occupational Therapy
___ Pharmacy
___ Physical Therapy
___ Public Health*
___ Social Work
* SPH STUDENTS: PLEASE INDICATE AREA OF STUDY_____

WHAT IS YOUR CURRENT YEAR IN THE SCHOOL/DISCIPLINE CHECKED ABOVE?

_____

WILL YOU BE IN CHAPEL HILL DURING THE '06-'07 ACADEMIC YEAR – IF NOT PLEASE EXPLAIN

_____

WILL YOU BE IN CHAPEL HILL DURING THE SUMMER OF 'O6

_____

PLEASE DESCRIBE IN THE SPACE BELOW WHY YOU ARE INTERESTED IN BEING A MSHAC COORDINATOR

_____
_____
_____
_____

PLEASE LIST LEADERSHIP POSITIONS YOU HAVE HELD IN THE PAST:

_____ _____
_____ _____
_____ _____

PLEASE RANK 1-6 YOUR INTERST IN THE FOLLOWING COORDINATOR POSITIONS (POSITIONS ARE DESCRIBED ON THE NEXT PAGE)

___ Program Director
___ Operations Manager
___ Team Coordinator
___ Finance/Project Coordinator
___ Quality Improvement Coordinator
___ Scheduling Coordinator

PLEASE BRIEFLY EXPLAIN WHY YOU ARE INTERESTED IN YOUR TOP CHOICES – INCLUDE WHY YOU FEEL YOU ARE BEST QUALIFIED FOR THIS POSITION

Coordinator Position 1

_____
_____
_____

Coordinator Position 2

_____
_____

ATTACH AN UP TO DATE DESCRIPTION OF POSITIONS

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