IMPROVING THE EFFECTIVENESS OF THE BARNABAS MINISTRY VOLUNTEER PROGRAM AT THE MIDWEST CENTER FOR HEALTH THROUGH THE APPLICATION OF QUALITY PROCESSES

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Ann Marie Getchius

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PROJECT: IMPROVING THE EFFECTIVENESS OF THE BARNABAS MINISTRY VOLUNTEER PROGRAM AT THE MIDWEST CENTER FOR HEALTH THROUGH THE APPLICATION OF QUALITY PROCESSES

AUTHOR: ANN MARIE GETCHIUS

APPROVED:

_____

Robert Spencer, MA, MSQA
Project Committee Chair

_____

Pamela Dunahay, MBA, MSQA
Committee Member

_____

James Clauson, D. Sc.
Committee Member

This project is dedicated to my grandfather, Alfred Rynning.

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Jamie Getchius and Grandma, thank you for your support.

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ABSTRACT

Due to variations in donations and volunteer support, maximizing effectiveness is crucial to the survival of nonprofit organizations. This project evaluates the ability of Six Sigma, TQM, ISO 9000 and Malcolm Baldrige criteria to help a small nonprofit in the healthcare industry better manage its processes. Six Sigma is the framework selected as it is straightforward, small-organization friendly, exhibits timely results, and is quick to implement. The Six Sigma DMAIC methodology is applied to the nonprofit to define the organizational stakeholders, processes and goals, and then FMEA is used to determine appropriate areas to target for initial corrective actions. Corrective actions are successfully implemented on the area of highest impact, the volunteer feedback form. The DMAIC process used for this nonprofit may be adapted and applied to other nonprofits seeking to begin use of quality approaches.

CHAPTER 1

INTRODUCTION

Background

St. Barnabas was an early Christian evangelical who assisted St. Paul in spreading the Christian faith. He is attributed with being an energetic, patient man and great listener. The Barnabas Ministry volunteer program is thus aptly named as its volunteer workforce dedicates significant time and energy to visiting, comforting, and listening to the residents of a nonprofit retirement home facility that, for this project, shall be referred to as the Midwest Center for Health.

The Midwest Center for Health residents are elderly, some there short-term to receive rehabilitation services, and others there for long-term care. For virtually all of the residents, receiving a friendly visit from a volunteer can considerably brighten their day and improve the overall quality of their lives. Social visits not only improve the mood of the residents, but also result in lower rates of depression or other mental illness (Wethington, 2000), faster recovery times from sickness (Meyerstein, 2005), and improvements in longevity (Temkin-Greener, 2004). The Barnabas Ministry program attempts to contribute to these health benefits by matching a volunteer to a resident, referred to as the volunteer's "Special Person." In this way, an actual relationship is developed between the volunteer and resident, allowing a greater chance for the unique needs of each elder person to be met (Hawthorne, 2006).

In order to maximize the effectiveness of the Barnabas Ministry program, challenges must be overcome that are common to all volunteer organizations, as well as those that are unique to it. Like with many volunteer organizations, the workforce has limited time yet is in high-demand. The population of volunteers is ever-changing as new volunteers join the program and the interests of existing volunteers change. This changing volunteer population poses problems with communication, both for maintaining up-to-date volunteer contact lists, and with planning activities where it is vital to know how many volunteers to expect. In addition to these challenges, the fact that this program matches volunteers to an individual resident presents the problems of determining the residents' needs, tracking the interactions between volunteers and residents, and assessing the effectiveness of a particular relationship. It is of utmost importance to ensure that the residents' needs are met to the highest degree possible during the volunteer visits, through soliciting and synthesizing meaningful feedback. With identification of the aspects of the program that are most in need of improvement, and the application of quality management methods to address these gaps, the volunteer workforce will be better able to support the benevolent goals of the Barnabas Ministry.

Problem Statement

For any organization, proper management of its workforce results in gains in efficiency and productivity. The Barnabas Ministry volunteer program is no exception; it is an organization ripe for analysis, since it has implemented no formal quality frameworks. By analyzing the current state of the program, its existing processes, and

current methodologies, it will be determined which management improvements will result in the greatest benefits to the organization and to the residents it serves.

Purpose and Significance

The Midwest Center for Health is one of over sixteen thousand nursing home facilities in the United States (U.S. Department of Health and Human Services, 2006). Most of these nursing homes attempt to provide some forms of social activity. Common activities include pet therapy, provided at 86% of retirement homes; off-site trips and outdoor activities, each occurring at over 90% of homes; and weekend activities, occurring at about 97% of retirement homes (U.S. Department of Health and Human Services, 2006). For the residents, many of whom may have infrequent visits from other family and friends (Port et al., 2001), such social activities are a cornerstone to fostering happiness (Hendy, 1987).

Despite the importance of these social and recreational activities, providing such activities on a regular basis may be difficult as the resources of many nursing homes are continually challenged just to provide basic required medical needs (Rehnquist, 2003). This challenge is exacerbated by the steady increase in the elderly population in the United States (U.S. Department of Health and Human Services, 2009), accompanied by a slower rate of increase of health professionals (Tumulak, 2010; U.S. Department of Labor, 2010a) and high turnover rate of nursing home staff (Quadagno & Stahl, 2003). As the number of elderly people increases and the staff of health care professionals are continually challenged to meet their needs, volunteers are taking on an increased role in

supporting the emotional and social needs of residents, which raises the importance of managing volunteers' time and activities in the most effective manner possible.

Scope

This study shall provide an analysis of the Barnabas Ministry volunteer program and provide recommendations on quality methods that may be applied to improve the effectiveness of the volunteer workforce. While the recommendations are specific to the volunteer program at the Midwest Center for Health, the applications of quality management tools may serve as a guide for other retirement homes to develop and make the most of their programs.

Definition of Terms

Barnabas Ministry – The Barnabas Ministry is a volunteer program that works closely with a retirement and health facility in the Midwest. It recruits and trains volunteers to visit with the elderly residents of the facility.

Care Report – When a volunteer of the Barnabas Ministry visits a resident, after their visit the volunteer is asked to submit this report. The report collects data about how the resident is doing and if any follow-up action is needed.

Cause and Effect Diagram – This tool, also called a fishbone diagram, is used to show the causes of observed effects and ultimately determine the root causes.

Centers for Medicare and Medicaid Services (CMMS) – These programs are part of the U.S. Department of Health. CMMS helps to ensure the quality of nursing home care, including through administration of the Quality Indicator Survey (QIS).

Chaplain Leader –The Chaplain Leader is employed by the Midwest Center for Health, and as part of his duties of fulfilling the spiritual and emotional needs of the residents the Chaplain Leader also is the head of the Barnabas Ministry volunteer program.

Define, Measure, Analyze, Improve, Control (DMAIC) –This is a Six Sigma management tool to methodically improve processes.

Failure Mode and Effects Analysis (FMEA) – FMEA is a procedure for analyzing potential failures, classifying these potential failures by their severity, likelihood of occurrence, and ease of detection, and taking corrective actions.

Five "S" System – The Five "S" philosophy is comprised of five Japanese words that translate to the concepts Sort and order, Straighten and organize, Shine and Sanitize, Standardize and regulate, and Sustain best practices. These concepts represent considerations to guide workspace organization and efficiency.

ISO 9000 – ISO 9000 is a set of standards, put forth by the International Organization of Standardization (ISO), which is used to guide good business management practices.

Malcolm Baldrige National Quality Award (MBNQA), or Baldrige Award – The Baldrige Award is a performance excellence award that is administrated by the National Institute of Standards and Technology (NIST).

Midwest Center for Health – The health and retirement center, in this paper called the Midwest Center for Health for privacy reasons, is a nonprofit, long-term care facility in the Midwest that receives the volunteer services provided by Barnabas Ministry.

National Institute of Science and Technology (NIST) – The National Institute of Science and Technology, known as NIST, is part of the U.S. Department of Commerce. It administers the Baldrige Award.

Not-for-profit, or Non-profit – Not-for-profit organizations provide services that benefit the public and do not disperse surplus funds. The Barnabas Ministry, operating with the Midwest Center for Health, is a non-profit.

Pareto Principle – This principle expresses the idea that there is usually not an even distribution of effects from a group of causes. For example, of the problems uncovered in during an analysis, such as FMEA, often a few solutions will address many of the problems. The Pareto Principle is also known as the 80, 20 rule, implying that by managing some small set of carefully-selected issues that this will often result in upwards of 80% of problems being addressed.

Plan, Do, Check, Act (PDCA) – PDCA, also known as the Deming Cycle, is a business process tool used to iteratively improve a system.

Process Mapping – Process mapping diagrams depict workflows, defining boundaries and listing steps within the process. A swimming lane diagram is a type of process map.

Quality Indicator Survey (QIS) – The Quality Indicator Survey (QIS) is an evaluative tool administered by the Centers for Medicare and Medicaid Services to help ensure the quality of care received at nursing home facilities.

Risk Priority Number (RPN) – The Risk Priority Number (RPN) is found during the application of the Failure Mode and Effect Analysis (FMEA) tool. Potential failures are identified, and then assigned a RPN that is calculated by multiplying the severity, occurrence, and detection likelihood estimates for the failure.

Shepherd – In the Barnabas Ministry volunteer program, Shepherds are leaders. A Shepherd helps a group of volunteers to relate to the residents, and provides them with additional resources as needed.

SMART Goals – This is an acronym used to help managers identify goals that meet the characteristics: Specific, Measurable, Attainable, Relevant, and Timely.

Special Person – A volunteer with the Barnabas Ministry regularly visits residents of the Midwest Center for Health. The resident matched with a volunteer is known as that volunteer's Special Person.

Swimming Lane Diagram – This is a type of process map, shown with either horizontal or vertical lanes to organize the workflow or steps presented.

Total Quality Management (TQM) – Total Quality Management is an approach to managing an organization, adopted from the philosophies of various quality professionals, including W. Edwards Deming.

CHAPTER 2

REVIEW OF LITERATURE

Nonprofits and their Challenges

A nonprofit organization is characterized by applying its assets to fulfill a compelling mission that benefits the general public. There are nonprofit organizations throughout the world and over 1.5 million in the United States (National Center for Charitable Statistics, 2009). The missions of nonprofits are diverse, including arts and cultural, religious, educational, environmental, healthcare, research, social services, foundations and other charitable causes.

Nonprofit organizations are distinguished from other organizations in a number of ways. Most notably, the nonprofit organization does not disperse surplus resources to stakeholders and investors (Powell & Steinberg, 2006). Because of this, in the United States, nonprofits have the benefit of tax exempt status under IRS section 501(c)3 (U.S. Department of the Treasury, 2010). The workforce of nonprofits differs from other organizations in that from the leadership of the Board of Directors to the general staffing, most of the positions are volunteer-based (United Nations, 2003). In addition to much of the leadership and labor being volunteer-based, a significant portion of operating funds may result from donations and charitable gifts.

While the altruistic objective of the nonprofit draws volunteer support, and the organization's purpose and its tax status are motivations for individuals to donate their time and money, nonprofits still have many challenges to overcome. There are

difficulties with recruiting, training and organizing volunteers. Inadequate organization and management of volunteer schedules and activities has led to "fervor without infrastructure" (Wethington, 2000). Volunteers are a primary workforce in four of every five nonprofits (Hager & Brudney, 2004). Yet, over half of charities lack a paid staff position to manage volunteers (Urban Institute, 2004). And, of the organizations that do have a volunteer coordinator position, many do not provide training for that staff member (Urban Institute, 2004). The nonprofits' poor management of volunteers is impactful. Volunteers indicate poor management is a top reason for when they choose to discontinue their volunteer service with an organization (Hager & Brudney, 2004), resulting in up to one third of lost volunteers (Eisner, Grimm, Maynard, & Washburn, 2009).

Besides managing volunteers, nonprofits have many stakeholders to consider. The needs and interests of those they serve, the Board of Directors, donors, the community and their volunteers, are numerous and sometimes in conflict (Salamon, 2002). Beyond managing volunteers and considering various stakeholders, nonprofits must also fundraise and spread the word about their mission. These various tasks to fulfill and multiple stakeholders to satisfy may be challenged by the limited resources of the nonprofit, and by the often limited management training of the staff (Jensen, 1997; Paton & Mordaunt, 2001).

The many challenges that nonprofits face have grown in recent years. In a recent survey by GuideStar, an industry leader in maintaining information on the state of nonprofits, of the 2,288 organizations surveyed more than half report a decline in charitable giving (McLean, 2009). The same study also found decreases, of about one

third, in the value of the grants awarded to nonprofits. Nonprofits in the healthcare sector are not faring any better than other sectors, with half facing trying to meet their goals with lessened funding and tighter budgeting (Healthcare Finance News, 2009). Even with measures like wage and hiring freezes, layoffs, reducing employee benefits, and decreasing the services that the nonprofit offers, eight percent of nonprofit organizations are at a high risk of being forced to close (Coffman, 2009; McLean, 2009). Regardless of the type of nonprofit and the mission it strives to achieve, applying quality-based strategies to effectively manage resources and volunteers, and to improve businesses processes, is important for the organization's long-term success.

Quality Processes in Nursing Homes

Quality processes are not foreign to the healthcare industry. The Agency of Healthcare Research and Quality operates as one of the twelve agencies that comprise the U.S. Department of Health and Human Services, with the objective of providing safe and high-quality healthcare to Americans (U.S. Department of Health and Human Services, 2010). Each year it researches and produces the National Healthcare Quality Report, containing measurements of quality and benchmarks within the industry.

In order to determine the level of care that nursing home residents receive, nursing homes may be evaluated with the relatively new Quality Indicator Survey (QIS), an analysis tool developed by the Centers for Medicare and Medicaid Services that contains Quality of Care Indicators (U.S. Department of Health and Human Services, 2011). The QIS process includes off-site reviews, on-site tours, interviews of staff and residents, and contact with administration officials (Minnesota Department of Health,

2008). The QIS survey has been well received as it focuses on the measurement of quality criteria (Medline Industries, 2010), and a structured approach to ensure consistency in the evaluation process (Pappalardi, 2010).

The U.S. Department of Health and Human Services does not only provide broad standards on healthcare; it also applies more specific standards depending on the type of facility. For nursing facilities, there must be compliance with the federal industry regulation 42 Code of Federal Regulations [CFR] Part 483, Subpart B (U.S. Department of Health and Human Services, 2011; U.S. National Archives and Records Administration, 2011). There are 17 regulations, shown in the table *Nursing Home Regulations, 42 CFR Part 483, Subpart B*, which cover a broad range of patient care issues, from nursing, dietary, and physician services to be provided, to quality of life considerations. All of these regulations must be met for the nursing care facility to be eligible for coverage from Medicare or Medicaid.

Table 1

Nursing Home Regulations, 42 CFR Part 483, Subpart B

Regulation	**Topic**
483.1	Basis and scope.
483.5	Definitions.
483.10	Resident rights.
483.12	Admission, transfer and discharge rights.
483.13	Resident behavior and facility practices.
483.15	Quality of life.
483.20	Resident assessment.
483.25	Quality of care.
483.30	Nursing services.
483.35	Dietary services.
483.40	Physician services.
483.45	Specialized rehabilitative services.
483.55	Dental services.
483.60	Pharmacy services.
483.65	Infection control.
483.70	Physical environment.
483.75	Administration.

There are many sections of the regulations that govern the practices of long-term care facilities. However, section 483.15 is the only one of these sections that is concerned with the quality of life of the residents. Regulation 42 CFR Part 483.15 provides eight sections discussing requirements for Quality of Life at a Health Care Facility, listed in the table *Nursing Home Regulations, 42 CFR Part 483.15: Quality of Life*. One of these sections, part F, outlines the need for activities to be provided for nursing home residents. Per this section, there are requirements for the organizer of the activities to have a background in therapeutic recreation, and be licensed or registered in

the state in which he or she works (U.S. Department of Health and Human Services, 2011). However, which activities to provide and how to manage them is undefined, allowing for individual nursing homes to approach this in their own way. This leeway lets the nursing home meet the residents' needs to the best of their abilities, considering the interests of the residents and taking advantage of any local recreational pursuits. However, the openness of the activities provided at each facility results in less consistency as to how nursing homes pursue this requirement, and also leaves the management of these recreational activities to the discretion of the individual care facilities.

Table 2

Nursing Home Regulations, 42 CFR Part 483.15: Quality of Life

Section	**Topic**
A	Dignity
B	Self-determination and participation
C	Participation in resident and family groups
D	Participation in other activities
E	Accommodation of needs
F	Activities
G	Social services
H	Environment

While information on how to run and manage activities is minimal in regulation 42 CFR Part 483.15, the regulations provide no guidance for nursing homes to help manage the volunteer groups that may support these activities. This lack of definition leads to a broad spectrum of volunteer programs. In some healthcare organizations, the

volunteers must be licensed medical professionals that can respond to medical emergencies (Community Healthcare Association of New York State, 2008; State of Delaware, 2008). In many others, and particularly in nursing homes, the volunteers that they are seeking are not required to have a specific skill. Whatever skills in arts and crafts, music, or any other area that the volunteer has are a welcomed addition to the organization, and the organization generally tries to accommodate the volunteer (Armed Forces Retirement Home, 2011; Hilltop House Seattle, 2011; Vinson Hall Retirement Community, 2010). These volunteers may work fairly independently, or as part of a more formal program like the Barnabas Ministry at the Midwest Center for Health.

With the volunteer programs at healthcare and nursing home facilities having significant diversity in both volunteer base and missions, the most appropriate way to manage a given volunteer program will depend on its current state and the organization that it helps serve. To introduce quality processes into the Barnabas Ministry volunteer program at the Midwest Center for Health retirement home, there are several well-accepted quality frameworks that should be considered: Total Quality Management (TQM), Malcolm Baldrige criteria, ISO 9000, and Six Sigma.

Total Quality Management and Nonprofits

W. Edwards Deming was a champion of quality processes. His philosophy includes use of statistical quality control, and a quantitative and methodical approach to problem solving. Deming's ideas were well received and widely implemented by Japanese businesses. Japan created the Deming Prize in 1951 as a way to recognize businesses that effectively implemented quality processes (Beckford, 1998). While the

United States, in contrast, was slower to adopt this philosophy (Talha, 2005), many of Deming's philosophies are now used a foundation for the Total Quality Management (TQM) framework. The TQM philosophy strives for continuous quality improvement of processes, with participation at all levels of the organization.

Deming's philosophy, the basis for TQM, was summarized by Deming in a series of fourteen points (Evans & Lindsay, 2008). These points are:

1. A clearly communicated vision, and commitment to it.

2. The company's philosophy must be taught to all levels of employees. For the philosophy to succeed, it must be taught and understood.

3. Understand inspection and reduction of variance.

4. Cost should not be the only factor when making a decision.

5. Improve constantly; there is always room for improvement.

6. Training programs will develop the important resource of personnel.

7. Leadership is needed to guide employees towards their goals.

8. Base relationships on trust, not fear. Employees should be comfortable and encouraged to point out areas for improvement.

9. Teamwork can help with problem solving.

10. Eliminate targets for the workforce and motivational sayings that imply people are the source of problems. Recognize that the system is also a cause of problems.

11. Avoid quotas and strive for longer-term improvement.

12. Create the ability for workers to have pride in their work; avoid performance appraisals which by definition will have to rate some workers as "below average."

13. Support employees' interests to learn independently and further their education.

14. Action is needed to realize success – do not just make plans, act on them.

In addition to these fourteen points, another aspect to Deming's work is the Plan, Do, Check, Act cycle, often referred to as PDCA. It is an approach for taking an idea, implementing it, verifying if the implementation is successful, and then taking appropriate actions based on the feedback to achieve even better future results. The iterative PDCA process contributes to the fundamental idea of TQM that there is always a way to improve.

While TQM did not originate specifically for not-for-profits, it has been successfully adopted by organizations of this nature. The United Way of Allegheny County, Pennsylvania implemented TQM (Kearns, Krasman, & Meyer, 1994). Here, employees formed teams that used TQM to look at removing duplicate instances of individuals for mailings, improving inventory management, streamlining donor management, improving billing processes, and formulating more effective communication materials. Two years after the initial efforts, the teams were satisfied with the results of their efforts, though they believe the full payoffs of their efforts would take more time before becoming apparent. Another nonprofit sector to adopt TQM with some level of success includes libraries, like the Harvard College Library and Oregon State University (Jurow & Barnard, 1993), and TQM has been adopted in many healthcare-related nonprofits too (Kaluzny, McLaughlin, & Simpson, 1992; St. Martin, 1996; Dansky & Brannon, 1996).

By definition, TQM encompasses all areas of an organization to include employee empowerment and management (Reid & Sanders, 2011), which for a nonprofit would include its volunteers. Volunteer management via TQM has been implemented at various

non-profits. Improved volunteer management is one of the many areas that were considered by Canadian nonprofit organizations that overhauled their processes with TQM with the help of their local American Society for Quality groups (Sinha, 1997). The Management Assistance Program, working to help nonprofits in Texas reach their goals up until the time of their closure in 2010 (Texas Nonprofit Management Assistance Network, 2010), had employed TQM approaches to solve various problems, including volunteer management (Landskroner, 2002). For these and other nonprofits, TQM may serve as a useful tool for managing volunteers.

Baldrige and Nonprofits

The Malcolm Baldrige National Quality Award (MBNQA) was established in the 1980s, through the work of Malcolm Baldrige, former Secretary of Commerce. Its purpose is to help guide American businesses to achieving better practices, higher productivity, and better quality products, which in turn will keep these companies competitive in the global economy (U.S. Department of Commerce, 2010). The award is geared towards use with industries of businesses and nonprofits, as well as education and health care (Juran & Godfrey, 2001; U.S. Department of Commerce, 2010).

Baldrige guides quality processes by means of seven categories of criteria (U.S. Department of Commerce, 2010):

1. Leadership
2. Strategic planning
3. Customer focus
4. Measurement, analysis, and knowledge management

5. Workforce focus
6. Operations focus
7. Results

The seven criteria determine an organization's eligibility for the Baldrige Award. These criteria are quite broad and to fully adopt these changes an organization may expend considerable effort. The Wallace Company spent several years and several million dollars making the necessary changes to conform to Baldrige criteria (Hill & Freedman, 1992), and for Eastman Chemical their implementations occurred over six years (Green, Long, Suddarth, Taylor, & Yang, 2005).

Once an organization has adjusted their practices to conform to these criteria it is ready to apply for the award. The organization's level of conformity to these categories is scored from a total of 1,000 possible points (Seymour, 1994). For organizations with strong applications, a team of quality examiners visits organizations to further evaluate their eligibility for the award (Hill & Freedman, 1992).

The Baldrige criteria can also serve as a guide towards organizational improvement for organizations not applying for the award. The award covers a broad range of areas that an organization should consider for analysis, and, given its broad scope, the Baldrige framework may be considered as a type of Total Quality Management (TQM) system.

The Baldrige criteria are applicable to nonprofits. Past nonprofit recipients are few as the award only became available for nonprofits beginning in 2007 (Wong, 2010). Nonprofit recipients include the VA Cooperative Studies Program Clinical Research

Pharmacy Coordinating Center, the City of Coral Springs, and the U.S. Army Armament Research, Development and Engineering Center (ARDEC) (U.S. Department of Commerce, 2010). Furthermore, the Baldrige criteria have been used to improve healthcare organizations. There have been eleven healthcare institutions that have received the Baldrige award (U.S. Department of Commerce, 2010), and others, like the University of Michigan Hospitals, have implemented its criteria to achieve better results (Gaucher & Kratochwill, 1995).

The issue of volunteer management for nonprofits is addressed in Baldrige primarily through the first and fifth criteria: Leadership and Workforce focus (U.S. Department of Commerce, 2010). In the category of Leadership, section 1.1 considers the organization's Senior Leadership. And, in the category of Workforce focus, sections 5.1 and 5.2 address Workforce Engagement and Workforce Environment. Given that up until 2010 the only recipients in the nonprofit sector of Baldrige have been government based organizations (Wong, 2010), which are operated by employees, not volunteers, there is limited data on the successful application of the Baldrige criteria specifically to volunteer-based workforces. However, from the Baldrige criteria, the workforce focus is based on the belief that "an organization's success depends increasingly on an engaged workforce that benefits from meaningful work, clear organizational direction, and performance accountability and that has a safe, trusting, and cooperative environment" (Why HR needs Baldrige, 2009). These priorities of allowing workers to pursue impactful endeavors in a positive environment readily apply to both for-profit and not-for-profit organizations.

ISO 9000 and Nonprofits

ISO 9000 is a set of quality standards that may be employed by management to improve an organization's performance. It is comprised of eight guiding principles (International Organization for Standardization, 2011) with which an organization must comply before receiving formal ISO certification.

1. Customer focus
2. Leadership
3. Involvement of people
4. Process approach
5. System approach to management
6. Continual improvement
7. Factual approach to decision making
8. Mutually beneficial supplier relationships

The process of receiving certification includes providing extensive documentation that each of these principles has been successfully adopted by the organization (Walsh & Lenihan, 2006), that are reviewed during an in-depth audit process (Seaver, 2001). For organizations that go through this lengthy process, they reap the benefits of an improved image, distinguishing the organization from their competition (Boiral, 2003).

While initially developed for certification of technical organizations, ISO 9000 standards have been applied to achieve over 700,000 certifications in various industries, including nonprofits (Sweatt, 2008). Cambodia Trust, an organization that supplies prosthetic limbs, implemented ISO 9000 to make its international offices better able to

run autonomously and better manage work at their own sites (Walsh & Lenihan, 2006). The Business Education Council of Niagara, Canada is another nonprofit that adopted ISO 9000 in order to achieve greater accountability and promote communication between educational institutions, industry, and the community (ISO 9001 seen as framework for accountability in North American non-profit sector, 2002; Shea, 2005).

The issue of volunteer management is considered in ISO 9000 with the principles of Leadership and Involvement of People. As Hoyle (2005) asserts, it is important for all organizations to have a process to manage their resources; the volunteers of a nonprofit are no exception. For managing volunteers, or any other workforce, ISO 9000 helps to ensure that job functions are well defined, which aids recruiting the right talent and measuring the success of workers in these positions (Eicher, 2000).

Six Sigma and Nonprofits

Six Sigma is an approach to reviewing a process, reducing variation in that process, and thereby achieving more consistent and desirable results. It was developed in the 1980s by Motorola, and became well known a decade later after GE's success with the method (Yang & EI-Haik, 2008). It has since been successfully applied to various industries from manufacturing to service, from improving customer service at Best Buy (Kumar, Strandlund, & Thomas, 2008), to applications in healthcare (Buck, 1998).

A basic approach to Six Sigma is a cycle consisting of the steps Define, Measure, Analyze, Improve, and Control, known as DMAIC. Although not part of Motorola's initial Six Sigma approach (Hallowell, n.d.), it has become a fundamental approach as it provides the organization with a "structured method to follow, no matter what type of

project one is working on or what type of problem is being solved" (Burton & Sams, 2004).

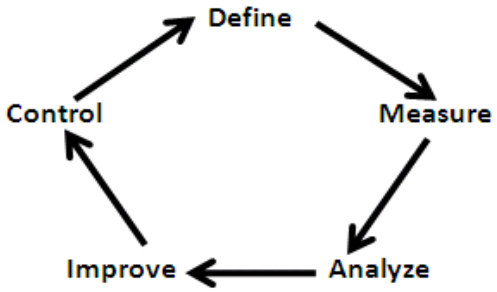


Figure 1. The DMAIC cycle.

The define phase of DMAIC is used to establish an understanding of the current status of a process. Once basic process definitions are established, these processes are then measured as a way to quantify current performance and set benchmarks to assess future performance. The results of these measurements are analyzed to determine the underlying causes for the observed results. Any less than desirable results that are analyzed then undergo corrective actions so that improvements may be realized. Finally, in the control phase it is considered how to sustain results in the future, through periodic process review.

Six Sigma tools have been successfully incorporated into many nonprofits. Starfish Family Services, a small nonprofit in Ohio, implemented Six Sigma to improve their practices, and estimate possible yearly savings of $200,000 (Begin, 2004). Iowa's Easter Seals also adopted Six Sigma, estimating the increased productivity and identification of recurring challenges may result in thousands of dollars of savings to the organization (Iowa Easter Seals adopts Six Sigma, 2005). The United Way of Buffalo &

Erie County helps other nonprofits see the benefits of Six Sigma. This organization has helped several dozen small nonprofits implement and benefit from the techniques, with some of these nonprofits seeing up to 30% increases in productivity, and finding themselves able to serve a twice as many clients (United Way of Buffalo & Erie County, 2010; McKeon, Roccisano, & Calisto 2010).

Addressing volunteer management challenges is possible with Six Sigma. For nonprofit organizations that worked on Six Sigma projects with the United Way of Buffalo & Erie County, skills learned in training were passed on to other staff and volunteers (McKeon, Roccisano, & Calisto 2010). Consumer Credit Counseling Service of Buffalo Inc., and other nonprofits that worked with the United Way, have attributed increased staff productivity to the Six Sigma lessons learned (McKeon, Roccisano, & Calisto 2010).

Selection of Quality Management Framework

The Barnabas Ministry volunteer program has characteristics that need to be accounted for in the quality framework chosen. Over half of all volunteers dedicate fewer than 50 hours each year to their volunteer pursuits (U.S. Department of Labor, 2010b), so the hours a largely volunteer-supported staff can dedicate to quality efforts is significantly lower than in many for-profit organizations. Given this time constraint, it is important that any quality approach used is easy-to-learn and may be implemented relatively quickly. Furthermore, volunteers are committed to the cause of visiting residents, but may have little motivation to devote themselves to seemingly extraneous efforts, which from their initial perspective could include the implementation of a quality

framework. It is therefore crucial that the framework be able to exhibit some positive results after a short time, so that the volunteers realize the quality efforts are indeed helping them to more effectively accomplish their work. Finally, the Barnabas Ministry is a small organization that employs neither a quality professional nor a volunteer coordinator. The quality management process selected must be able to be effectively implemented and sustained by a small organization and understandable to those with little or no background in quality processes.

Based on these organizational needs, the following four criteria should be considered when selecting a Quality Management Framework for the Barnabas Ministry program:

1. *Quick implementation*. The process must be able to be seamlessly introduced to the Barnabas Ministry in two months or less.

2. *Timely results*. Improvements in effectiveness must be recognizable to volunteers almost immediately.

3. *Straightforward*. The framework must be able to be readily understood by volunteers with little or no background in quality.

4. *Small organization compatible*. The framework must be effective in a small organization.

To decide which of the quality management frameworks to use for the Barnabas Ministry volunteer program, each will be analyzed with respect to the above four criteria. A numerical value will be assigned based upon how well the framework satisfies the criteria. A score of “1” is assigned for the best of the four frameworks. A “2” is assigned to frameworks that satisfy an individual criterion but do not do so optimally. A “3” is assigned to frameworks that do not satisfy an individual criterion. The quality

management framework chosen reflects the lowest numeric score when all of the grades from the four criteria are totaled.

The results of the score assignments are summarized in Table 3. All of the frameworks considered have been used for nonprofits, and may be used as methods to improve volunteer management. While this makes all of these applicable, the quality framework with the best overall score, given the needs of the Barnabas Ministry volunteer program, is Six Sigma. A discussion of how the rating for each quality framework was determined is provided after the table *Quality Framework Selection Matrix*.

Table 3

Quality Framework Selection Matrix

		Criterion				
		Quick Implementation	Timely Results	Straightforward	Small Organization Compatible	**Score**
Quality Framework	Six Sigma	1	1	1	1	**4**
	Baldrige	3	3	2	2	**10**
	ISO 9000	3	3	2	2	**10**
	TQM	2	2	3	2	**9**

Quick Implementation

The amount of time to implement a Six Sigma project will vary based upon the scope of a given project (Tucci, n.d.). With manageable-sized undertakings, Six Sigma allows for accelerated implementations that may produce results in as little as six or

seven weeks (Burton & Sams, 2004). Based upon this, Six Sigma receives a score of "1" for this criterion.

TQM, is less amenable to the Barnabas Ministry's need for a quick approach by their time-limited, volunteer-based workforce. Even with scaled implementations, there is a perceived complexity with TQM (Light, 2000) that could hinder initial implementations. And, while TQM's organization-wide approach is comprehensive, this broad approach may be time-consuming, at least for initial implementations of quality processes at the Barnabas Ministry. Therefore, TQM receives a score of "2" for this criterion.

Baldrige and ISO 9000 are the least favorable choices for the Barnabas Ministry volunteer program with respect to implementation time. For Baldrige, given that the organization does not already have any quality programs in place, Baldrige implementation would be a very large undertaking (Fiddick, 2005), and thus potentially time consuming. The documentation-centric approach of IS0 9000 may unnecessarily add time to the Barnabas Ministry's quality efforts (Walsh & Lenihan, 2006). These quality frameworks both receive a score of "3" for this criterion.

Timely Results

Appropriately scoped Six Sigma projects will not achieve quality throughout an entire organization immediately, but those problems that are tackled may be achieved on a shorter time scale, so that positive results may be quickly seen (Burton & Sams, 2004). Six Sigma receives a score of "1" for this criterion.

For TQM, Baldrige and ISO 9000, the approaches are designed to review all aspects of an organization to achieve optimal results. The long-term benefits of such programs may be favorable, but the time to achieve these results is not. For TQM, the potential turn-around time for realizing payoffs may take up to three to five years in some organizations (Kearns, Krasman & Meyer, 1994; Light, 2000). Some organizations that have implemented Baldrige may spend years to do so (Green, Long, Suddarth, Taylor, & Yang, 2005; Hill & Freedman, 1992). And for ISO 9000, it is not uncommon for certification to take up to 18 months (Boiral, 2003; ISO 9000: More than just a pretty trend, 2008). While the Barnabas Ministry would not wish to apply for the Baldrige award or ISO 9000 certification during its initial adoption of quality efforts, there would still be additional time associated with separating the award or certificate requirements from the basic management concepts the organization needs to pursue. TQM, Baldrige, and ISO 9000 are designed to be broad reviews of an organization, all emphasizing thoroughness over speed, so these approaches may not receive a score of "1." TQM shall receive a score of "2." Baldrige and ISO 9000 each score "3" as an organization like the Barnabas Ministry that is not applying for the award or certification would waste time sifting through extraneous information on the award and certification processes.

Straightforward

The Barnabas Ministry, in its early state of adopting quality tools, needs a straightforward approach to quality. Six Sigma aligns with this expectation. It has been described as "organizational common sense" by Bill Smith, a leader of its implementation at Motorola (Larson, 2003). While not all of the tools of Six Sigma may

be easily adaptable, Six Sigma approaches like DMAIC provide the simple structure (Burton & Sams, 2004) that the Barnabas Ministry seeks. Based upon this, Six Sigma receives a score of "1."

For Baldrige and ISO 9000, an obstacle to learning the approach may come from separating the basic quality principles from the steps necessary to apply for the Baldrige Award or the ISO certification. Additionally, while the quality principles of these methodologies are relevant, in the context of the Baldrige award these principles broadly examine the organization, which may be "too large of a scope for an organization without an initial quality management system" (Fiddick, 2005). Similarly for ISO 9000, the complexity of the system does not align with the nonprofit's need for a straightforward approach (Herman, 2005). This is not to say that the Baldrige and ISO 9000 criteria are not relevant for the Barnabas Ministry, but that these approaches embody more than what the Barnabas Ministry is looking for as it takes its first look to adopt quality processes. Baldrige and ISO 900 each receive scores of "2" for this criterion.

For TQM, the scope of the project is often broader than it is for Six Sigma projects, particularly when the DMAIC Six Sigma approach is used (Keller & Pyzdek, 2004). This broadness of TQM may lead to more depth and complexity than is desirable for Barnabas Ministry's initial quality undertakings. Furthermore, TQM is best described as a philosophy, not as a ready-to-implement plan (Bishop, n.d.). Creating a plan from the TQM philosophy is unnecessary and avoidable work for the Barnabas Ministry, given the other quality frameworks available. The TQM framework receives a score of "3."

Small Organization Compatible

It is important that the quality approach be tailored to the relatively small size of the Barnabas Ministry volunteer program, with its volunteer base of around 100 members. Six Sigma is very applicable and adaptable to small organizations (Burton, 2003; Burton & Sams, 2004; Munro, n.d.). For this criterion, Six Sigma receives a score of "1."

While TQM, ISO 9000, and Baldrige may be used with small organizations, these frameworks are not as well-suited. TQM has not been overwhelmingly adopted by nonprofits (Light, 2000) and is more readily adapted by larger organizations (Ghobadian & Gallear, 1997). Therefore, TQM receives a score of "2."

The Baldrige award offers a category for small businesses and in 2007 expanded the Baldrige award offering to include nonprofits (Thomas, 2007). However, an organization may still be considered a small business for the purpose of Baldrige with up to 500 employees (U.S. Department of Commerce, 2010); the criteria are designed for organizations larger than the Barnabas Ministry. Furthermore, the results of implementing the Baldrige criteria are perceived as more impactful at larger companies than at smaller companies (Seymour, 1994). Based upon this, Baldrige receives a score of "2."

For ISO 9000, the negative aspects are perceived as more impactful to smaller organizations than larger organizations (Van den Berghe, 1997). This probably contributes to the reason for which most organizations with ISO certification are at least medium sized, between one hundred and three hundred employees (Pinar, Pinar, &

Crouch, n.d.). As ISO 9000 is better suited to organizations larger than the Midwest Center for Health, this framework receives a score of "2."

Final Scoring

The frameworks of Six Sigma, TQM, ISO 9000, and Baldrige are judged according to the criteria most important to the Midwest Center for Health. The Midwest Center for Health requires a quality framework that is quick to implement, produces timely results, is straightforward to implement, and is compatible with small organizations. Given these considerations, the total summed score of Six Sigma for the Midwest Center for Health is "4". TQM, ISO 9000, and Baldrige receive less compatible scores of, respectively, "9," "10", and "10." These scores are also summarized in Table 3. With the lowest score indicating the most appropriate choice, Six Sigma is used for the Midwest Center for Health's initial adoption of quality processes.

CHAPTER 3

METHODOLOGY

Selection of Quality Management Methodology

Six Sigma is the preferred quality framework given the needs of the Barnabas Ministry, but selecting a quality framework is not enough. The quality framework should not be blindly applied, nor used as a formulaic approach to solving problems. Rather, the specific implementation of the selected quality framework must be tailored to fulfill the requirements of the organization to which it is applied (Burton & Sams, 2004; Paton & Foot, 2000). A "one-size-fits-all approach to Six Sigma is a prescription for failure, especially in small and mid-sized organizations" (Burton & Sams, 2004).

While adjustments need to be made to ensure that the application of Six Sigma suits the needs of the organization where it will be used, it is common for small organizations to apply Six Sigma using the DMAIC framework (Burton & Sams, 2004; Munroe, n.d.). DMAIC, the acronym for Define, Measure, Analyze, Improve, and Control, is a way to methodically understand a system and make corrections to it. DMAIC provides organizations with "a structured method to follow" (Burton & Sams, 2004) and is also a favorable tool as it may serve as a standalone approach (Snee, 2007). DMAIC furthermore allows for flexibility, as there are a variety of tools that may be implemented, as applicable, to satisfy each stage of the DMAIC process, depending on the needs of the organization (Pande & Holpp, 2001). Given the framework it provides,

its straightforwardness, and its adaptability to the organization, DMAIC is used as a way to implement Six Sigma and analyze the Barnabas Ministry volunteer program.

Define

The "define" phase of DMAIC for the Barnabas Ministry Volunteer Program is crucial to understanding the organization and how it may be improved. It is necessary to be familiar with the current organizational situation, all stakeholders, and any other important contextual information early on so that these relevant factors may be considered (Larson, 2003; Pande, Neuman, & Cavanagh, 2001). Clear descriptions of all relevant information are necessary in order for the measurements, analysis, and improvements to accurately align with the organization's current state and needs.

To achieve these objectives, this phase includes a review of the program objectives and scope, stakeholder analysis, and process maps (Burton & Sams, 2004; Evans & Lindsey, 2008; George, 2003). The understanding of the program's objectives, its stakeholders, and its processes allows the organization to have well defined goals and problem statements (Pande, Neuman, & Cavanagh, 2001).

The program objectives and scope provide a basic definition of the organization and its intentions. This foundation is important so that later, as specific problems are uncovered in the DMAIC analysis phase, the problems may be understood within the context of the organization (Burton & Sams, 2004).

The stakeholder analysis includes a detailed review of all of the roles that comprise the Barnabas Ministry volunteer program. This analysis includes those involved with the processes of volunteer management and those who interact with

volunteers, whether as staff or residents, at the Barnabas Ministry. Identifying all of the program participants is necessary to ensure that they are considered and accommodated in the program analysis and improvements (Eckes, 2001; Pande, Neuman, & Cavanagh, 2001; Rath and Strong Staff, Federico, & Beaty, 2003). The Barnabas Ministry has these roles well documented and defined within their current system.

Process maps are created to further define and understand the volunteer processes at the Barnabas Ministry. This allows for a clear representation of how key individuals interact and work together (George, 2003; Larson, 2003). A swimming lane process map is created to demonstrate the typical interactions that a volunteer has with the Barnabas Ministry, from his or her start with the program through to the point at which he or she becomes a regular volunteer. This diagram is shown in the figure entitled "Typical volunteer interactions with Barnabas: Initiation, Volunteering, and Meetings" in section B of the Appendix.

After consideration of the organizational objectives, scope, stakeholders, and processes, the organization's formal goals are reviewed. The objectives and interests of the program, the activities performed by its stakeholders, and the needs of the residents should be reflected in these goals. A clear definition of goals is important as the success of any organization depends in part on the ability of participants to work together to achieve a common goal. Without a shared vision among the volunteers, the efforts put forth will not be unified or measurable, and this lack of cohesion may result in diminished benefit to the residents. Or worse, without the direction goals provide, the volunteers may lack motivation (Nelson & Economy, 2005). This common direction

through goals is especially vital for nonprofits. As noted by Oster (1995), for nonprofits a shared mission is crucial given "the ambiguity of control and criteria for success in this sector." That is to say, without guidance the individual volunteers of a nonprofit may have different ideas as to how to best help the residents, but such an approach is too broad to produce the meaningful, cohesive, and measurable impact for which the organization strives.

For the Barnabas Ministry volunteer program, the organization's current goals are listed and evaluated. One approach to evaluating goals is using SMART (Nelson & Economy, 2005), an acronym used to remind an organization to be sure that their goals are Specific, Measurable, Achievable, Realistic, and Timely. Goals that meet these criteria are better able to keep the workforce engaged (Miller, 2005) and provide meaningful ways to measure when goals are achieved. The current goals of the Barnabas Ministry are adapted to more closely align with the SMART goal criteria.

Measure

Using the SMART goal criteria in the "define" phase of DMAIC ensures that the program's goals are measurable so that there is a way to determine if the goals are in fact being achieved (Pande & Holpp, 2001). The "measure" phase of DMAIC is used to collect the data needed to determine if these organizational goals are being met (Pande, Neuman, & Cavanagh, 2001).

DMAIC tools of measurement may include review of an organization's improvement goals, review of the data that is currently available to determine if these goals are being achieved, and possibly the identification of any new data that may need to

be collected (Burton & Sams, 2004; George, 2003). The Barnabas Ministry at present collects some data. Data available includes the program's volunteer training literature, minutes of board meetings, and the notes and agendas from monthly meetings.

Additionally, a deeper understanding of the program may be achieved through first-hand participation, particularly for service-based organizations like the Barnabas Ministry (George, 2003). This participation includes attending the Barnabas Minister volunteer training, volunteering with the organization, attending monthly volunteer meetings, and participation in the organization's bimonthly Board meetings.

While some documented data is available and participation in the program has enriched this data, the Barnabas Ministry could improve the methods it uses to collect data as well as the specific pieces of information it seeks.

Analyze

The "analyze" phase of DMAIC considers what is known about the organization and goes a step further, making methodical determinations about areas of strengths and weaknesses in the system (Burton & Sams, 2004). These problematic areas are prioritized, and a plan can be formed for how the organization may mitigate these issues.

Tools that may be used to perform analysis as part of DMAIC include cause and effect diagrams, Pareto charts (George, 2003), and Failure Mode and Effects Analysis (FMEA) (Burton & Sams, 2004). As a starting point for the Barnabas Ministry program, FMEA, cause and effect diagrams, and the Pareto Principle are used.

The FMEA process allows for the identification of potential process failures and their effects, prioritization of these potential failures, and subsequently allows for

consideration of how to mitigate this potential failure (Aven, 2008; Yang & El-Haik, 2008). It is used in many industries, from education to healthcare (Cleary, 2010), and even in service applications (McCain, 2006) given its broad and adaptable approach to guiding the identification and resolution of problems. The FMEA process is used in conjunction with the Pareto principle. The Pareto principle states that the majority of the problems come from just a few of the causes. It thus is not necessary to attempt to address every potential problem that is uncovered with the FMEA, at least not initially, but rather the solutions with the highest impacts should be pursued first. A primary issue of the Barnabas Ministry that is uncovered through FMEA is the need for better processes related to Care Reports.

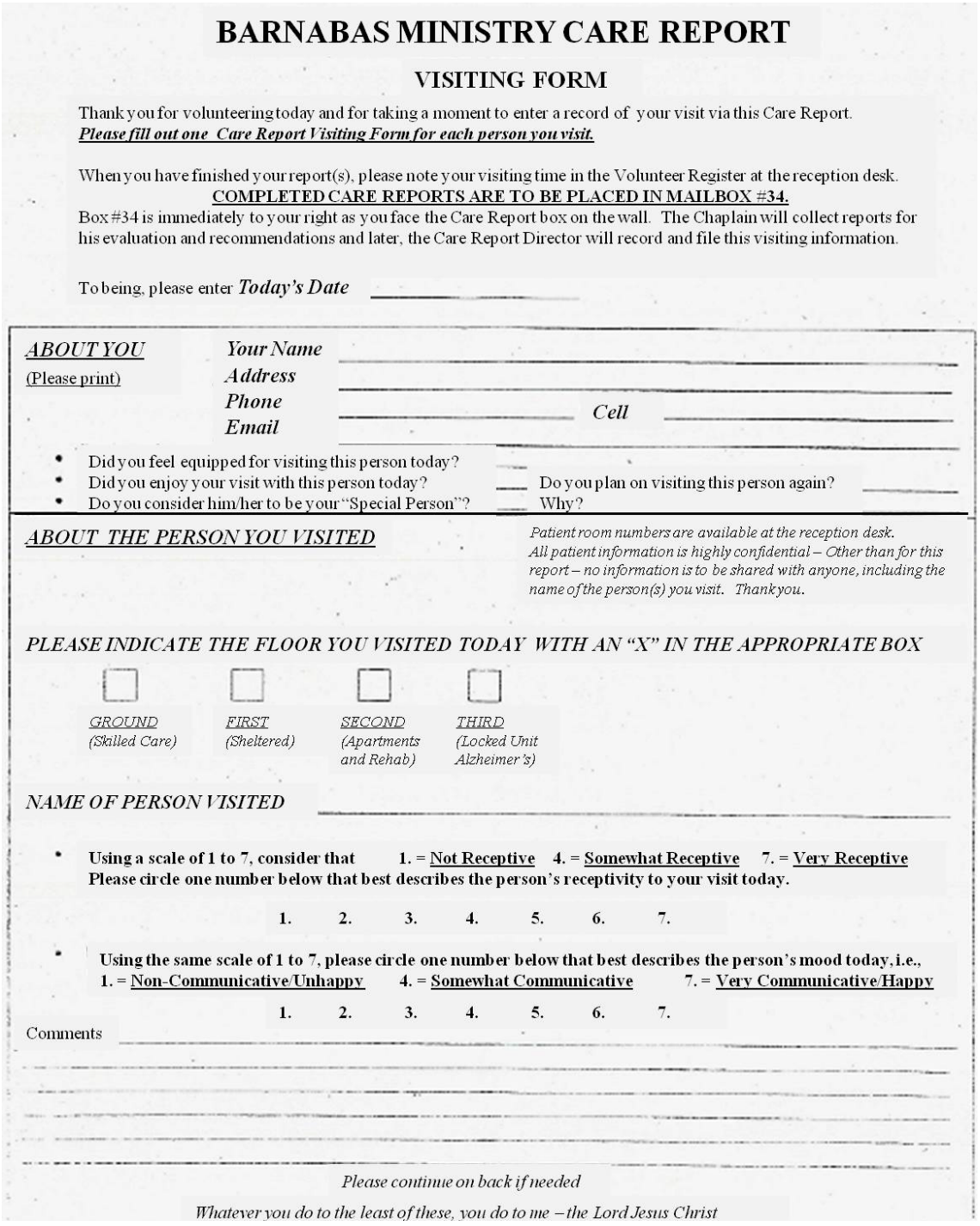
Cause and effect diagrams, also known as fishbone diagrams, use subgroups to collect related causes under headings (Martin, Hackett, & Machoski, 1993). The cause and effect diagram is used to further analyze the focus areas deemed a priority for prompt improvement, determine the root causes of the problem, and ensure that the improvements fully address these causes. A cause and effect diagram is used to more fully explore issues uncovered from the FMEA. Care Reports were determined to be the highest priority issue for the Barnabas Ministry, based upon the assignment of the Risk Priority Numbers (RPN) in the FMEA. The RPN accounts for the severity of the problem, the ability to detect the problem, and the likelihood of problem occurrence. Once action has been successfully taken on this highest priority issue uncovered in the FMEA, then additional cause and effect diagrams could be created to better understand the issues of the next highest priority level.

Improve

The “improve” phase of DMAIC takes the most critical action items uncovered from the “analyze” phase, and creates and implements plans to address these needs. A standard approach to process improvement is through reducing variation (Burton & Sams, 2004). In settings like the Barnabas Ministry, which align more closely with service organization than manufacturing ones, the reduction of variation is manifested in achieving volunteer compliance with processes, and thus process consistency.

There are various tools to achieve improvement. FMEA is one, as it spans both the Analysis and Improvement phases of DMAIC (George, 2003). Other tools used in this DMAIC phase include documentation, Poka Yoke mistake-proofing techniques, and the Five “S” system for improving workspace layouts (Burton & Sams, 2004; Crabtree, 2006; George, 2003).

For the Barnabas Ministry volunteer program, FMEA is used as a tool to structure improvement. The most impactful potential problems from the “analyze” portion of DMAIC are those that should be mitigated first, which for the Barnabas Ministry it is found to be addressing the Care Report process. The Care Report is used to collect feedback from the Barnabas Minister volunteers on their visits. The current Care Report is shown in Figure 2.



BARNABAS MINISTRY CARE REPORT

VISITING FORM

Thank you for volunteering today and for taking a moment to enter a record of your visit via this Care Report.
Please fill out one Care Report Visiting Form for each person you visit.

When you have finished your report(s), please note your visiting time in the Volunteer Register at the reception desk.
COMPLETED CARE REPORTS ARE TO BE PLACED IN MAILBOX #34.
Box #34 is immediately to your right as you face the Care Report box on the wall. The Chaplain will collect reports for his evaluation and recommendations and later, the Care Report Director will record and file this visiting information.

To being, please enter ***Today's Date*** _____

ABOUT YOU
(Please print)

Your Name _____
Address _____
Phone _____ ***Cell*** _____
Email _____

- Did you feel equipped for visiting this person today? ___
- Did you enjoy your visit with this person today? ___ Do you plan on visiting this person again? ___
- Do you consider him/her to be your "Special Person"? ___ Why?

ABOUT THE PERSON YOU VISITED

Patient room numbers are available at the reception desk.
All patient information is highly confidential – Other than for this report – no information is to be shared with anyone, including the name of the person(s) you visit. Thank you.

PLEASE INDICATE THE FLOOR YOU VISITED TODAY WITH AN "X" IN THE APPROPRIATE BOX

☐ *GROUND (Skilled Care)* ☐ *FIRST (Sheltered)* ☐ *SECOND (Apartments and Rehab)* ☐ *THIRD (Locked Unit Alzheimer's)*

NAME OF PERSON VISITED _____

- **Using a scale of 1 to 7, consider that 1. = Not Receptive 4. = Somewhat Receptive 7. = Very Receptive**
  Please circle one number below that best describes the person's receptivity to your visit today.

1. 2. 3. 4. 5. 6. 7.

- **Using the same scale of 1 to 7, please circle one number below that best describes the person's mood today, i.e.,**
  1. = Non-Communicative/Unhappy 4. = Somewhat Communicative 7. = Very Communicative/Happy

1. 2. 3. 4. 5. 6. 7.

Comments _____

Please continue on back if needed

Whatever you do to the least of these, you do to me – the Lord Jesus Christ

Figure 2. The current Care Report.

The Care Report process problems are detailed and organized in a cause and effect diagram. To address the underlying causes of these problems, Poka Yoke, the Five "S" philosophy, and usability techniques are applied. Poka Yoke techniques are used to mistake-proof the Care Report form. Through Poka Yoke, the form is redesigned to better guide the user towards understanding the questions and providing the data that the Midwest Center for Health seeks. The Five "S" philosophy is used to emphasize the concepts Sort, Straighten, Shine, Standardize, and Sustain. This philosophy is used to streamline the Care Report form, improve its appearance, and ensure that the form is clear and understandable to the volunteers.

Control

In the control phase of DMAIC, the corrective actions taken are evaluated to determine their effectiveness. Additional processes and improvements may then be implemented to further refine the results achieved. And, it is important to document, sustain, and communicate the results to ensure future success.

Evaluation of the effectiveness of the new Care Report form is done via using the FMEA. The FMEA that was initially used to evaluate the Barnabas Ministry identified several potential failures relating to Care Reports. These potential failures are reevaluated one month after the new Care Report processes are developed, to quantify the improvement in these areas.

The Plan, Do, Check, Act cycle, PDCA, is one tool used to help with the Control phase (George, 2003). PDCA guides an organization to revisit their processes, review feedback, and make any needed adjustments. The PDCA phases may be reviewed at the

bi-monthly meetings of the Barnabas Ministry Board of Directors. Over time, feedback from volunteers or data on the Care Reports may require additional adjustments of the form.

Documenting the benefits achieved is another a tool used in the control phase of DMAIC (Burton & Sams, 2004). Documentation of the new Care Report and its implementation may be maintained by the Barnabas Ministry's Secretary on the Board of Directors.

In the control phase for the Barnabas Ministry, it is also important to formally acknowledge and summarize the benefits that have been gained through DMAIC implementation (Burton & Sams, 2004). This may help to maintain the interest of the volunteer workforce in continuing to pursue quality efforts. Such communication may take place during the monthly volunteer meetings, and through the periodic volunteer newsletters.

The DMAIC approach allows for some flexibility; there are different tools that may be used at each stage of the process to best suit the needs of the organization (Pande & Holpp, 2001). The most appropriate tools for each phase are selected. These various tools used in each phase are summarized in Table 4.

Table 4

Summary of DMAIC Tools Used

Phase	**Tools**
Define	Program Objectives and Scope
	Stakeholder Analysis
	Process Mapping
Measure	Improvement Goals
	Data Collection
Analyze	Failure Mode and Effects Analysis (FMEA)
	Pareto Principle
	Cause and Effect Charts
Improve	Failure Mode and Effects Analysis (FMEA)
	Poka Yoke
	Five "S" system
Control	Plan, Do, Check, Act
	Summarize Benefits
	Document Actions and Processes

CHAPTER 4

RESULTS AND DISCUSSION

The results of analyzing the Barnabas Ministry volunteer program indicate that the most important issue for the organization to address was that of the Care Report. The Care Report is the primary way that the organization collects data from the volunteers on the wellbeing and needs of the residents at the Midwest Center for Health.

Adoption of the redesigned the Care Report is a multi-step process. It included a presentation of the Care Report to the Chaplain Leader and Board of Directors, to guide them through understanding the reason for the changes and the specific proposed changes. The presentation provided an opportunity to answer questions and to solicit any feedback and concerns. The initial presentation to the Board of Directors of the study and the revised Care Report occurred in the May 2011 Board of Directors meeting, and the proposed changes were approved at the July 2011 meeting. As the Board of Directors is in agreement that the new Care Report form is indeed an improvement, the revised form has been substituted to solicit volunteer feedback on resident visits.

The evaluation and improvement of the Care Report process is crucial to the basic objective of the Barnabas Ministry volunteer program, to ensure that resident needs are being met. The first month of Care Report data using the new form is evaluated to ensure that the form is indeed now better addressing the organization's needs. The Care Report/Book Manager and Chaplain Leader are normally responsible for reviewing the Care Reports and taking any actions needed based on the information they contain. With

the first month of the new Care Reports, close attention was given to the manner in which the forms were completed to ensure that the forms are understood by the users and that the information provided on the forms is useful.

Of the 87 Care Reports completed in the first month of use of the form, observations were made relating to feedback provided on the forms, errors made by volunteers when filling out the forms, and the completion rates of the Care Report forms. There was a limited response in terms of feedback provided about the Care Report; several volunteers made comments of support and no negative feedback was received. There were few errors in filling out the forms, indicating that the volunteers do understand and can successfully use the new form. And, the steady completion rate, similar to report completion rates in previous months, is another indicator of the new form's success. Additionally, the Chaplain Leader and Care Report/Book Manager are enthusiastic about the additional information that they now have, to use for gathering insight into the needs of the residents.

As the new Care Report forms are used, provided that the data they contain is saved to look at data trends over time, the new reports have the potential to yield even greater benefits. This may include ongoing confirmation that a Barnabas Minister's visits do adequately fulfill the needs of their Special Person. Or, for other residents, the more specific nature of the form may uncover instances where there are gaps between what the Special Person needs and what the Barnabas Minister volunteer is able to provide. With such gaps being identified, they may be addressed by the Chaplain Leader or the support of additional volunteers.

CHAPTER 5

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The Barnabas Ministry volunteer program is adopting quality practices to improve the effectiveness with which the volunteers provide services to the residents of the Midwest Center for Health. Quality frameworks considered for the Barnabas Ministry are Total Quality Management, ISO 9000, Baldrige, and Six Sigma. Given the Barnabas Ministry's needs of using a framework that is quick to implement, provides timely results, is straightforward, and is well adapted to small organizations, Six Sigma is the preferred framework.

Six Sigma is successfully implemented at the Barnabas Ministry using the DMAIC approach. The Barnabas Ministry's goals are analyzed to ensure adherence to being specific, measurable, attainable, realistic, and time-bound. These goals are then used as a basis for conducting the FMEA study. The FMEA uncovers that the Care Report process is most in need of improvements, and relevant improvements are identified. These improvements include usability considerations, mistake-proofing the forms, and incorporation of the five "S" philosophy for improved workspaces.

The revised Care Report addresses several of the most important issues uncovered in the FMEA study, and allows of the Barnabas Ministry to better address its goals of Quality Visits, and Frequent Visits and Yearly Visits. Though, it is important to recognize that the improvements made to the Care Reports are just the first step on the road to quality.

Using FMEA to further prioritize and guide focal points for improvement in the Barnabas Ministry may be pursued over the next several years. Provided the Barnabas Ministry continues to successfully utilize FMEA as part of a Six Sigma approach, the Midwest Center for Health may continue to follow Six Sigma methodology, or it could consider other quality tools. While Six Sigma, with DMAIC, was determined to be the best suited approach to the Barnabas Ministry at the time of its initial adoption of quality tools that is not to say that ISO 9000, TQM, Baldrige criteria, or even other quality frameworks are not applicable. As the Barnabas Ministry gains confidence and patience with pursuing longer-term or more over-arching quality approaches, or should the organization adopt other quality objectives, full or partial incorporation of other frameworks should be reconsidered.

The application of the Six Sigma quality framework to the Barnabas Ministry volunteer program is a practical study of how quality tools may be applied to a small nonprofit seeking to improve its processes. With the challenges that nonprofits face, it would be worthwhile to expand upon the results found here and determine how to best implement DMAIC at other nonprofits. A focus of this research should examine how small organizations and nonprofits collect and organize data, which as evidenced by the Care Report processes is a weakness of the Barnabas Ministry. Identifying how to tailor Six Sigma to best meet the needs of nonprofits has the potential to greatly benefit many organizations.

REFERENCES

REFERENCES

Armed Forces Retirement Home. (2011). *Be a volunteer at AFRH*. Retrieved from https://www.afrh.gov/afrh/team/vol/volunteer.htm

Aven, T. (2008). *Risk analysis: Assessing uncertainties beyond expected values and probabilities*. Retrieved from http://site.ebrary.com/lib/csudh/Doc?id=10297957&ppg=76

Beckford, J. (1998). *Quality: A critical introduction*. Retrieved from http://site.ebrary.com/lib/csudh/Doc?id=5002866&ppg=91

Begin, S. (2004). Donated Six Sigma technology gives nonprofit tools for change. *Crain's Detroit Business*. Retrieved from http://goliath.ecnext.com/coms2/gi_0199-578396/Donated-Six-Sigma-technology-gives.html

Bishop, B. (n.d.). Why ISO 9000 should be a company's guidepost, and not TQM. *Manufacturing and Technology News*. Retrieved from http://www.manufacturingnews.com/news/editorials/bishop.html

Boiral, O. (2003). ISO 9000: Outside the iron cage. *Organization Science, 14*(6), 720-737. Retrieved from http://www.jstor.org/stable/4135130

Buck, C. (1998). Health care through a Six Sigma lens. *The Milbank Quarterly, (76)*4, 749-753. Retrieved from http://0-www.jstor.org.torofind.csudh.edu/stable/3350521

Burton, T. (2003). Six Sigma for small and mid-sized organizations. *Breakthrough*. Retrieved from http://www.ceobreakthrough.com/pdf_files/Breakthrough-03Spring.pdf

Burton, T., & Sams, J. (2004). *Six Sigma for small and mid-sized organizations*. Retrieved from http://site.ebrary.com/lib/csudh/Doc?id=10124753&ppg=52

Cleary, B. (2010, August 18). FMEA: An investment you hope you'll never need. *Quality Digest.* Retrieved from http://www.qualitydigest.com/inside/quality-insider-article/fmea-investment-you-hope-you-ll-never-need.html

Coffman, S. (2009). Glass half full or half empty? Results of GuideStar's latest nonprofit economic survey. *GuideStar*. Retrieved from http://www2.guidestar.org/rxa/news/articles/2009/glass-half-full-or-half-empty.aspx

Community Healthcare Association of New York State. (2008) *City/state volunteer management programs*. Retrieved from http://www.chcanys.org/index.php?src=gendocs&ref=ep_Volunteer_Management_Programs&category=Emergency_Preparednesshttp://www.chcanys.org/index.php?src=gendocs&ref=ep_Volunteer_Management_Programs&category=Emergency_Preparedness

Crabtree, R. (2006). 5S as an integral part of Six Sigma. *Villanova University*. Retrieved from http://www.universityalliance.com/info1/whitepapers/villanova/pdfs/WP_VU_IsThereApayoff.pdf

Dansky, K., & Brannon, D. (1996). Using TQM to improve management of home health aides. *Journal of Nursing Administration. 26*(12). 43-59. Retrieved from http://journals.lww.com/jonajournal/Abstract/1996/12000/Using_TQM_to_Improve_Management_of_Home_Health.12.aspx

Eckes, G. (2001). *Making Six Sigma last: Managing the balance between cultural and technical change*. Retrieved from http://site.ebrary.com/lib/csudh/Doc?id=10026389&ppg=50

Eicher, L. (2000). Human resources management within an ISO 9000 quality management system. *Ahrmio Inaugural Conference*. Retrieved from http://www.google.com/url?sa=t&source=web&cd=4&ved=0CDgQFjAD&url=http%3A%2F%2Fwww.iso.org%2Fiso%2Flivelinkgetfile%3FllNodeId%3D71648%26llVolId%3D-2000&rct=j&q=iso%209000%20human%20resource&ei=yZ9tTZTrBsKAlAfLwMzpBA&usg=AFQjCNEafqCe33DoriHRzeFDNXxy24Uu1Q&sig2=CGv7W19tMmHvrpc2-mrOyQ&cad=rja

Eisner, D., Grimm, R., Maynard, S., & Washburn, S. (2009). The new volunteer workforce. *Stanford Social Innovation Review*. Retrieved from http://www.volunteeringinamerica.gov/assets/resources/TheNewVolunteerWorkforce.pdf

Evans, J., & Lindsay, W. (2008). *Managing for quality and performance excellence* (7th ed). Cincinnati, OH: Thomson South-Western.

Fiddick, D. (2005). *Six Sigma for non-profit organizations* (Master's thesis). The University of Kansas, Lawrence, Kansas. Retrieved from http://kuscholarworks.ku.edu/dspace/bitstream/1808/964/1/Fiddick%2c%20Diana%20L.%20EMGT%20Field%20Project.pdf

Gaucher, E., & Kratochwill, E. (1995). The Malcolm Baldrige National Quality Award: Implications and uses for healthcare organizations. *Infection Control and Hospital Epidemiology, 16*(5), 302-307. Retrieved from http://0-www.jstor.org.torofind.csudh.edu/stable/pdfplus/30143097.pdf?acceptTC=true

George, M. (2003). *Lean Six Sigma for service.* Retrieved from http://site.ebrary.com/lib/csudh/Doc?id=10152891&ppg=290

Ghobadian, A. & Gallear, D. (1997). TQM and organization size. *International Journal of Operations & Production Management, 17*(2), 121-163. doi: 10.1108/01443579710158023

Green, F., Long, I., Suddarth, J., Taylor, L., & Yang, W. (2005). Revisiting two Malcolm Baldrige National Quality Award winners: Eastman Chemical Company, Pal's Sudden Service. *International Journal of Quality and Productivity Management, 5*(1). Retrieved from http://isqpm.org/2005%20Journal/Revisiting%20two%20Malcolm%20Baldrige%20National%20Quality%20Award%20Winners%20%20by%20Green,%20Long,%20Suddarth,%20Taylor,%20and%20Yang.pdf

Hager, M., & Brudney, J. (2004). Volunteer management practices and retention of volunteers. *The Urban Institute.* Retrieved from http://www.nationalservice.gov/pdf/Management_Brief.pdf

Hallowell, D. (n.d.). With flexibility, DMAIC has long future ahead. *iSixSigma*. Retrieved from http://www.isixsigma.com/index.php?option=com_k2&view=item&id=764:with-flexibility-dmaic-has-long-future-ahead&Itemid=169&tmpl=component&print=1

Hawthorne, G. (2006). Measuring social isolation in older adults: Development and initial validation of the friendship. *Social Indicators Research, 77*(3), 521-548. Retrieved from http://www.jstor.org/stable/27522594

Healthcare Finance News. (2009). Non-profits see decrease in charitable giving in 2009, but vow to continue services. Retrieved from http://www.healthcarefinancenews.com/news/non-profits-see-decrease-charitable-giving-2009-vow-continue-services

Hendy, H. (1987). Effects of pet and/or people visits on nursing home residents. *The International Journal of Aging and Human Development, 25*(4), 279-291. Retrieved from http://baywood.metapress.com/link.asp?id=d3ddvb2nuqj88agn

Herman, D. (2005). *The Jossey-Bass handbook of nonprofit leadership and management* (2nd ed.). San Francisco, CA: John Wiley and Sons.

Hill, R. & Freedman, S. (1992). Managing the quality process: Lessons from a Baldrige Award winner a conversation with John W. Wallace, Chief Executive Officer of

the Wallace Company. *Academy of Management, 6*(1), 76-88. Retrieved from http://www.jstor.org/stable/4165053

Hilltop House Seattle. (2011). *Volunteering at Hilltop.* Retrieved from http://www.hilltophouse.info/volunteer.php?&Width=1024&Height=768&JavaScript=ON

Hoyle, D. (2005). *ISO 9000 quality systems handbook* (5th ed.). Burlington, MA: Butterworth-Heinemann.

International Organization for Standards. (2011). *Quality management principles.* Retrieved from http://www.iso.org/iso/iso_catalogue/management_and_leadership_standards/quality_management/qmp.htm

Iowa Easter Seals adopts Six Sigma. (2005). *Quality Digest*. Retrieved from http://www.qualitydigest.com/inside/quality-insider-news/iowarsquos-easter-seals-adopts-six-sigma 2/10/2011

ISO 9000: More than just a pretty trend. (2008). *Department of Economic Development*. Retrieved from http://www.neded.org/content/view/476/739/

ISO 9001 seen as framework for accountability in North American non-profit sector. (2002, February). *ISO Management Systems*. Retrieved from http://jobfunctions.bnet.com/abstract.aspx?docid=59320

Jensen, J. (1997). Employee evaluation: It's a dirty job but somebody's got to do it. *The Grantsman Center*. Retrieved from http://www.tgci.com/magazine/Employee%20Evaluation.pdf

Juran, M., & Godfrey, A. (2001). *Quality in Research and Development*. Retrieved from http://0-site.ebrary.com.torofind.csudh.edu/lib/csudh/docDetail.action?docID=5002836&p00=juran+godfrey

Jurow, S., & Barnard, S. (1993). *Integrating total quality management in a library setting*. New York, NY: Haworth Press.

Kaluzny, A., McLaughlin, C., & Simpson, K. (1992). Applying Total Quality Management concepts to public health organizations. *Public Health Reports*. *107*(3). 257-264. Retrieved from http://0-www.jstor.org.torofind.csudh.edu/stable/pdfplus/4597140.pdf?acceptTC=true

Kearns, K., Krasman, R., & Meyer, W. (1994). Why nonprofit organizations are ripe for total quality management. *Nonprofit Management and Leadership*, *4*(4), 447-460. Retrieved from http://www.mackcenter.org/swj_db/articles/423

Keller, P. & Pyzdek, T. (2004). *Six Sigma demystified : A self-teaching guide*. New York, NY: McGraw-Hill.

Kumar, S., Strandlund, E., & Thomas, D.. (2008). Improved service system design using Six Sigma DMAIC for a major US consumer electronics and appliance retailer. *International Journal of Retail & Distribution Management, 36*(12), 970-994. Retrieved from www.emeraldinsight.com/0959-0552.htm

Landskroner, R. (2002). *The nonprofit manager's resource directory* (2nd ed.). New York, NY: John Wiley and Sons.

Larson, A. (2003). *Demystifying Six Sigma: A Company-wide approach to continuous improvement.* New York, NY: Amacom publishing.

Light, P. (2000). *Making nonprofits work: A report on the tides of nonprofit management reform.* Retrieved from http://site.ebrary.com/lib/csudh/Doc?id=10063898&ppg=98

Martin, C., Hackett, D., & Machoski, B. (1993). *Facilitation skills for team leaders: Leading organized teams to greater productivity*. Retrieved from: http://site.ebrary.com/lib/csudh/Doc?id=10058904&ppg=85

McCain, C. (2006). Using an FMEA In a service setting. *Quality Progress*, *39*(9), 24-29. Retrieved from http://0-proquest.umi.com.torofind.csudh.edu/pqdlink?vinst=PROD&fmt=6&startpage=-1&clientid=17844&ver=1&vname=PQD&RQT=309&did=1157821561&exp=02-03-2016&scaling=FULL&vtype=PQD&rqt=309&TS=1296822744&clientId=17844

McKeon, K., Roccisano, J., & Calisto, G. (2010). A helping hand. *Six Sigma Forum Magazine*. Retrieved from http://www.uwbec.org/documents/helpinghand.pdf

McLean, C., & Brouwer, C. (2009). The effect of the economy on the nonprofit sector, March-May 2009. *Guidestar*. Retrieved from http://www2.guidestar.org/ViewCmsFile.aspx?ContentID=2934

Medline Industries, Inc. (2010). *New survey process will drive quality improvements in nursing homes.* Retrieved from http://www.marketwire.com/press-release/New-

Survey-Process-Will-Drive-Quality-Improvements-Nursing-Homes-Kansas-Governor-New-1327028.htm

Meyerstein, I. (2005). Sustaining our spirits: Spiritual study/discussion groups for coping with medical illness. *Journal of Religion and Health*, *44*(2), 207-225. Retrieved from http://0-www.jstor.org.torofind.csudh.edu/stable/pdfplus/27512853.pdf

Miller, B. (2005). *Keeping employees accountable for results: Quick tips for busy managers*. Retrieved from http://site.ebrary.com/lib/csudh/Doc?id=10120192&ppg=31

Minnesota Department of Health. (2008). *Annual quality improvement report on the nursing home survey process*. Retrieved from http://www.health.state.mn.us/divs/fpc/2007QINHreport.pdf

Munro, R. (n.d.). Six Sigma for small organizations. *Ram Q Universe Inc*. Retrieved from http://www.ramquniverse.com/images/Six%20Sigma%20for%20Small%20Organizations.pdf

National Center for Charitable Statistics. (2010). *Number of nonprofit organizations in the United States, 1999 – 2009*. Retrieved from http://nccsdataweb.urban.org/PubApps/profile1.php

Pande, P. & Holpp, L. (2001). *What is Six Sigma?* Retrieved from http://site.ebrary.com/lib/csudh/Doc?id=10014635&ppg=43

Pande, P., Neuman, R., & Cavanagh, R. (2001). *Six Sigma way team fieldbook: An implementation guide for project improvement teams.* Retrieved from http://site.ebrary.com/lib/csudh/Doc?id=10045485&ppg=96

Pappalardi, J. (2010, July 9). *Dear nursing home administrator letter: Quality Indicator Survey (QIS).* Retrieved from http://www.health.state.ny.us/professionals/nursing_home_administrator/dal_2010-07_09_quality_indicator_survey.htm

Paton, R., & Foot, J. (2000). Nonprofit's use of awards to improve and demonstrate performance: Valuable discipline or burdensome formalities?. *International Journal of Voluntary and Nonprofit Organizations, 11*(4), 329-353**.** Retrieved from http://www.springerlink.com/content/h3809v4760277778/

Paton, R., & Mordaunt, J. (2001). Nonprofit management education: International trends and issues. *Public Performance & Management Review, 25*(1), 57-73. Retrieved from http://www.jstor.org/stable/3381169

Pinar, M., Pinar, M., & Crouch, H. (n.d.). Do all companies achieve their expectations from ISO 9000 certification? An empirical study in Turkey. Retrieved from www.pittstate.edu/mgmkt/Musa/ISO9000Achievers.doc

Port, C., Gruber-Baldini, A., Burton, L., Baumgarten, M., Hebel, J., Zimmerman, S., & Magaziner, J. (2001). Resident contact with family and friends following nursing home admission. *The Gerontologist, 41*(5), 589-596. Retrieved from http://gerontologist.oxfordjournals.org/content/41/5/589.full.pdf

Powell, W., & Steinberg, R. (2006). *Nonprofit sector: A research handbook.* Retrieved from http://site.ebrary.com/lib/csudh/Doc?id=10210281&ppg=14

Quadagno, J. & Stahl, S. (2003). Challenges in nursing home care: A research agenda. *The Gerontologist, 43*(2), 4-6. Retrieved from http://www.geroservices.com/downloads/pdf/Challenges_in_Nursing_Home_Care.pdf

Rath and Strong Staff (Contributor), Federico, M. & Beaty, R. (2003). *Rath and Strong's Six Sigma team pocket guide.* Retrieved from http://site.ebrary.com/lib/csudh/Doc?id=10152997&ppg=96

Rehnquist, J. (2003). Nursing home deficiency trends and survey and certification process consistency. *Department of Health and Human Services*. Retrieved from http://oig.hhs.gov/oei/reports/oei-02-01-00600.pdf

Reid, R. & Sanders, N. (2011). *Operations management* (4th ed.). Retrieved from http://www.wiley.com/college/sc/reid/text.html

Salamon, L. (2002). *State of Nonprofit America*. Retrieved from http://site.ebrary.com/lib/csudh/Doc?id=10063872&ppg=484

Seaver, M. (2001). *Implementing ISO 9000:2000.* Retrieved from http://site.ebrary.com/lib/csudh/Doc?id=10047167&ppg=27

Seymour, D. (1994). The Baldrige cometh. *Change*, 26(1), 16-27. Retrieved from http://www.jstor.org/stable/40165104

Shea, C. (2005). NGO accreditation and certification: The way forward?: An evaluation of the development community's experience. *International Center for Not-for-Profit Law*. Retrieved from http://pdf.usaid.gov/pdf_docs/PNADB766.pdf

Sinha, M. (1997). Helping those who help others. *Quality Progress, 30*(7), 37-41. Retrieved from http://asq.org/qic/display-item/index.pl?item=13254

Snee, R. (2007). Use DMAIC to make improvement part of 'the way we work'. *Quality Progress*. Retrieved from http://asq.org/quality-progress/2007/09/process-managementment/use-dmaic-to-make-improvement-part-of-the-way-we-work.html

State of Delaware, Department of Health and Social Services, Division of Public Health. (2008). *Volunteer management standard operating guideline.* Retrieved from http://dhss.delaware.gov/dph/php/files/volmgmtplan.txt

St. Martin, E. (1996). Community health centers and quality of care: A goal to provide effective health care to the community. *Journal of Community Health Nursing, 13*(2), 83-92. Retrieved from http://0-www.jstor.org.torofind.csudh.edu/stable/pdfplus/3427872.pdf?acceptTC=true

Sweatt, M. (2008, May 1). Why ISO should be on your radar. *GovPro*. Retrieved from http://govpro.com/resource_center/gov_imp_80251/

Talha, M. (2005). Total Quality Management (TQM): An overview. *Implementing effective TQM*. Retrieved from http://site.ebrary.com/lib/csudh/Doc?id=10149900&ppg=61.

Temkin-Greener, H., Bajorska, A., Peterson, D., Kunitz, S., Gross, D., Williams, F., & Mukamel, D. (2004). Social support and risk-adjusted mortality in a frail older population. *Medical Care, 42*(8), 779-788. Retrieved from http://0-www.jstor.org.torofind.csudh.edu/stable/4640817

Texas Nonprofit Management Assistance Network. (2010). Retrieved from http://www.txnetwork.org/

Thomas, A. (2007). First DoD organization to win Baldrige Award. *Army News*. Retrieved from http://www.army.mil/-news/2007/12/20/6692-first-dod-organization-to-win-baldrige-award/

Tucci, R. (n.d.). Reducing Cycle Time for Six Sigma Projects, *iSixSigma*. Retrieved from http://www.isixsigma.com/index.php?option=com_k2&view=item&id=1408:reducing-cycle-time-for-six-sigma-projects&Itemid=156

Tumulak, D. (2010, May). Challenges and trends in nursing for the 21st century. *Chicago Hospital News*. Retrieved from http://chicagohospitalnews.com/pdf/CHN_05_10.pdf

United Nations. (2003). Handbook on non-profit institutions in the system of natural accounts. *Handbook of National Accounting.* Retrieved from http://www.ccss.jhu.edu/pdfs/UN_Handbook/UN_NPI_Handbook_English.pdf

United Way of Buffalo & Erie County. (2010). *Six Sigma quality improvements in nonprofits*. Retrieved from http://www.slideshare.net/Sixsigmacentral/six-sigma-quality-improvement-in-nonprofits-3750548

Urban Institute. (2004). *Volunteer management capacity in America's charities and congregations:A briefing report*. Retrieved from http://www.nationalservice.gov/pdf/vol_capacity_brief.pdf

U.S. Department of Commerce, National Institute for Standards and Technology. (2010). *Baldrige performance excellence program.* Retrieved from http://www.nist.gov/baldrige/

U.S. Department of Health and Human Services, Administration on Aging. (2009). *A profile of older Americans: 2009.* Retrieved from http://www.aoa.gov/aoaroot/aging_statistics/Profile/2009/4.aspx

U.S. Department of Health and Human Services, Agency for Healthcare Research and Quality. (2010). *AHRQ Profile.* Retrieved from http://www.ahrq.gov/about/profile.htm

U.S. Department of Health and Human Services, Center for Disease Control and Prevention. (2006). *Nursing home care.* Retrieved from http://www.cdc.gov/nchs/data/nnhsd/nursinghomefacilities2006.pdf

U.S. Department of Health and Human Services, Centers for Medicare and Medicaid Services. (2011). *Nursing Homes.* Retrieved from https://www.cms.gov/CertificationandComplianc/12_NHs.asp

U.S. Department of Labor, Bureau of Labor Statistics. (2010a). *Occupational outlook handbook, 2010-11 edition.* Retrieved from http://www.bls.gov/oco/ocos083.htm

U.S. Department of Labor, Bureau of Labor Statistics. (2010b). *Volunteers by annual hours of volunteer activities and selected characteristics.* Retrieved from http://www.bls.gov/news.release/volun.t02.htm

U.S. Department of the Treasury, Internal Revenue Service. (2010, November 15). *Exemption requirements – 501(c)(3) organizations*. Retrieved from http://www.irs.gov/charities/charitable/article/0,,id=96099,00.html

U.S. National Archives and Records Administration (2011). *Title 42 - public health*. Retrieved from http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&tpl=/ecfrbrowse/Title42/42cfr483_main_02.tpl

Van den Berghe, W. (1997). Application of ISO 9000 standards to education and training. *European Journal*. Retrieved from http://www.ilo.org/public/english/region/ampro/cinterfor/temas/calidad/doc/wouter1.pdf

Vinson Hall Retirement Community. (2010). *Volunteer program.* Retrieved from http://media.vinsonhall.org/volunteer-program

Walsh, E., & Lenihan, H. (2006). Accountability and effectiveness of NGOs: Adapting business tools successfully. *Development in Practice, 16*(5), 412-424. Retrieved from http://0-www.jstor.org.torofind.csudh.edu/stable/pdfplus/4030037.pdf?acceptTC=true

Wethington, E. (2000). *Social integration in the second half of life.* Retrieved from http://site.ebrary.com/lib/csudh/Doc?id=10021532&ppg=41

Why HR needs Baldrige. (2009). Baldrige: Information you need to build the organization you want. Retrieved from http://www.baldrige.com/criteria_workforce/why-hr-needs-baldrige/

Wong, P. (2010, February 2). Baldrige ... for nonprofits! [Web log post]. Retrieved from http://nist.typepad.com/baldrige_program/2010/02/baldrige-for-nonprofits-1.html

Yang, K. & El-Haik, B. (2008). *Design for Six Sigma.* Retrieved from http://site.ebrary.com/lib/csudh/Doc?id=10251607&ppg=412

APPENDIX

QUALITY PROCESSES IN THE BARNABAS PROGRAM

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A. OBJECTIVES AND SCOPE

The purpose of implementing DMAIC at the Barnabas Ministry Volunteer Program is to enable the program to most effectively provide its services. As a nonprofit, the Barnabas Ministry is a charitable organization that attempts to make the stay of residents at the retirement home the Midwest Center for Health as enjoyable as possible, through providing emotional support and friendship during volunteer visits. With up to a couple hundred residents at any given time, there is a large population to serve. Furthermore, with the volunteer-base of the organization the workforce has limited time resources during which to deliver these services. An analysis of the organization and identification of necessary improvements will benefit the Midwest Center for Health residents, the volunteers, and the Barnabas organization.

B. DEFINITION: THE ORGANIZATION AND ITS STAKEHOLDERS

The Barnabas Ministry program organizes volunteer visits to elderly residents of the Midwest Center for Health, making sure that the social needs of the residents are met, and that the volunteers are prepared and equipped to provide support to them.

The Barnabas program contains a Chaplain Leader, Board of Directors, shepherds, volunteers, and residents. The Board of Directors consists of positions for: Director, Associate Director, Secretary, Treasurer, Coordinator/Record keeper, Assistant Coordinator, Shepherd Guide, Care Report/Book Manager, Corresponding Secretary, Newsletter Editor, Program Director, Outreach Minister, Web Communication Director, and Compliance Director.

Board of Directors – The Board of Directors is a group of dedicated volunteers who serve in leadership roles within the Barnabas Ministry.

Board of Directors, Care Report/Book Manager - The Care Report/Book Manager's tasks are two-fold. The Care Reports are evaluations completed by the volunteers after each visit, and these are reviewed and managed by the individual serving in this position. Also, the Barnabas Ministry has a number of reference books and pamphlets that are shared among the volunteers, and the Care Report/Book Manager keeps track of these.

Board of Directors, Compliance Director – The Compliance Director ensures that background checks of volunteers have been completed, and that paperwork and forms required prior to volunteering are on file.

Board of Directors, Coordinator/Record Keeper - The Coordinator/Record keeper assesses the needs of new residents, matches volunteers to residents, and keeps records of the volunteers. Additionally, with help from the Assistant Coordinator, he or she contributes to the coordination of functions.

Board of Directors, Corresponding Secretary - The Corresponding Secretary is responsible for sending personal correspondence greetings to residents and ministers, to keep open and friendly communication throughout the organization.

Board of Directors, Director - The Director, with the assistance of the Associate Director, guides the ministry, chairs meetings, and communicates with the Board of Directors as needed via phone calls and emails.

Board of Directors, Newsletter Editor – The Newsletter Editor puts together a formal newsletter each month for the Barnabas Ministry community, available both in paper and email form. The content of the newsletter is developed by several members of the Barnabas organization.

Board of Directors, Outreach Minister – The Outreach Minister promotes awareness of the Barnabas Ministry organization throughout the community, to bolster support and attract new volunteers. This position often entails creating and sending flyers to local churches, among other techniques for reaching out.

Board of Directors, Program Director – The Program Director organizes reunion meetings for the ministers, and develops programs for the group.

Board of Directors, Secretary - The Secretary takes minutes during the meetings, and keeps a permanent record of all minutes, reports from the Treasurer, and other paperwork or reports generated.

Board of Directors, Shepherd Guide - The Shepherd Guide is the leader of the shepherds. The shepherds help to guide the volunteer ministers by providing them with resources and support during their ministry visits to the residents. The Shepherd Guide communicates with the shepherds, organizes meetings, and keeps track of the prayer request list for anyone in the community seeking additional support.

Board of Directors, Treasurer - The Treasurer is responsible for keeping permanent financial records, paying bills incurred by the program, and receiving deposits.

Board of Directors, Web Communication Director - The Web Communication Director keeps the organization's website and email notification group up-to-date.

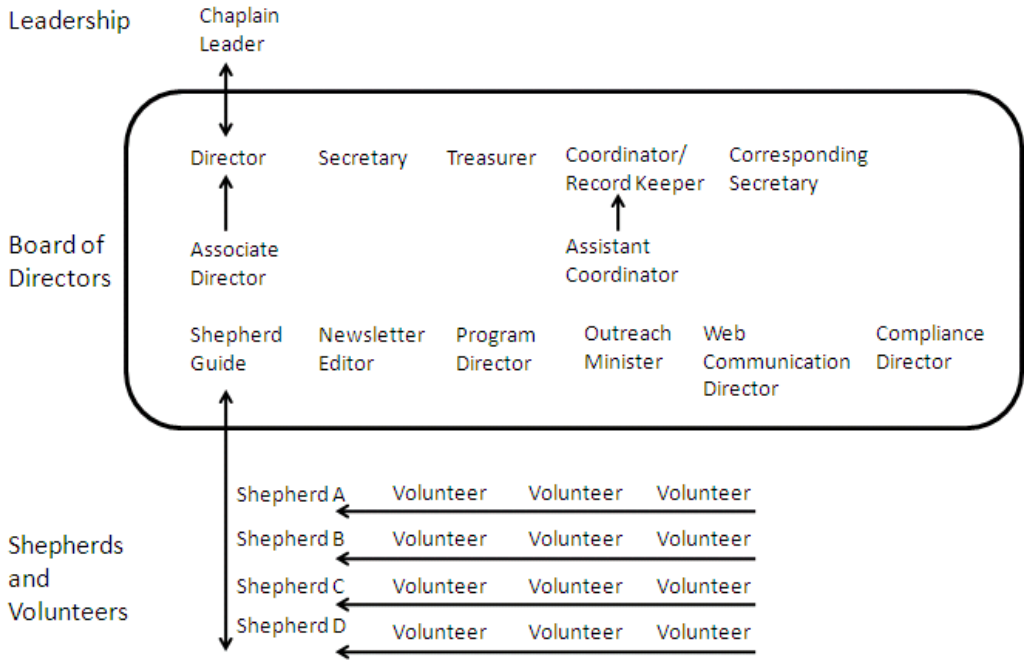
Chaplain Leader – The Chaplain Leader is a full time position at the Midwest Center for Health retirement home. The chaplain provides for the spiritual needs of the residents, organizing religious services of all denominations, and holding prayer and hymn worship sessions. He also visits with residents to share in their good times, and comfort them through challenges. The chaplain is the head of the Barnabas Ministry program, through which he guides to serve the needs of the residents. As leader of the Barnabas Ministry, he has several roles. The chaplain assists with recruiting of new volunteers, and provides training sessions for volunteers. He organizes monthly volunteer meetings, and participates in bi-monthly meetings of the Board of Directors.

Residents – While not technically part of the Barnabas Ministry volunteer program, the residents are the fundamental reason for the program's existence. A resident matched with a volunteer is known as that volunteer's "Special Person." The residents' best interests are at the heart of all decisions made and actions taken by the organization.

Shepherds – Shepherds are leaders among the volunteers in the organization. They work with the volunteers and guide them towards better helping the residents. The Shepherds and their volunteers are grouped together in small teams that work with each other and interact on a frequent basis. The Shepherd Guide leads, directs, and supports the activities of the Shepherds.

Volunteers – There are about one hundred active volunteers. Several dozen of these volunteers may be very active, meeting with their resident at least once a week.

Overview of the Barnabas Ministry Volunteer Program organizational structure



With the way that these primary players in the Midwest Center for Health interact, the Barnabas Ministry can be described loosely as having dedicated teams (Gray & Larson, 2008). Most of the volunteers are part of a Shepherd's group, so that the group can make progress together with getting to know and befriend their matched residents. However, as there are also volunteers that do not interact with Shepherds, not all Barnabas volunteers would fit into the dedicated team organizational structure. Also, each of the Shepherds' groups work towards essentially the same goal of serving the residents, not different objectives as would often be the case of dedicated teams in many other organizations.

Within the Midwest Center for Health structure, there are several activities that frequently take place for volunteers, to include monthly meetings, yearly reunion meetings, resident visits, and board meetings.

Monthly meetings – The monthly meetings give the volunteers an opportunity to interact and share their ideas and stories. These are held at the Midwest Center for Health, also giving the volunteers an opportunity to stop by and visit their Special Person.

Yearly reunion meeting – Yearly reunion meetings are a time for volunteers to get together and celebrate the work they have done over the past year. It is a time to recognize the efforts put forth, and the successes achieved.

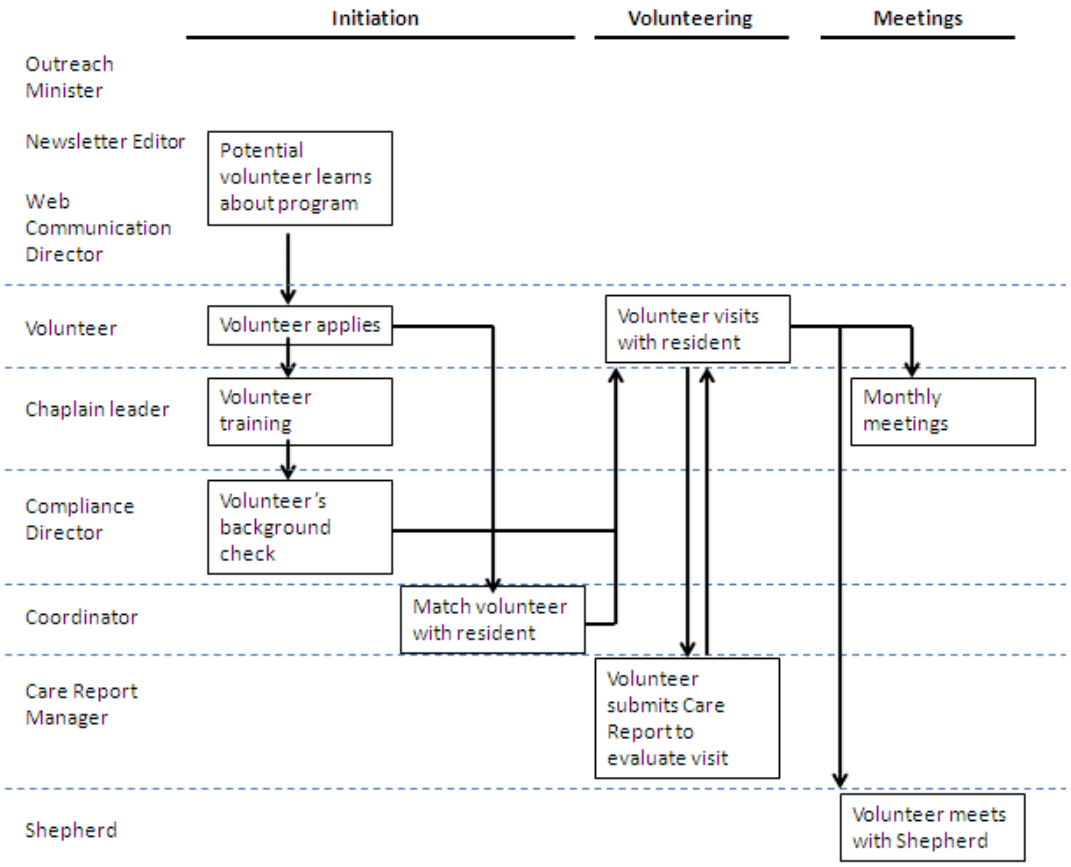
Resident visits and Care Reports – Volunteers make regular visits to their assigned resident. These generally occur on at least a monthly, if not weekly basis. After each visit of a volunteer to their Special Person, a Care Report should be completed to inform the Chaplain Leader of any good news or concerns.

Board meetings – Board meetings are a time to visit the health of the program, revisit procedures, address any new concerns that have arisen, and provide an opportunity for the leadership to ensure that the objectives of the program are being reached. Board meetings occur on a bi-monthly basis, and occur prior to the monthly reunion meetings if it is a month in which a Board meeting is being held.

Many of these activities are part of the typical interactions of a volunteer with the Barnabas program. The interactions of the volunteer with Barnabas may be divided into the stages of initiation, when the volunteer becomes affiliated with the program;

volunteering, when the volunteer is up and running with their activities; and meetings. These interactions of a typical volunteer are shown in the swimming lane diagram.

Typical volunteer interactions with Barnabas: Initiation, Volunteering, and Meetings



During the volunteer initiation phase, once the volunteer is aware of the Barnabas Ministry volunteer program he or she then must fill out an application form. These are provided by the Chaplain Leader or front desk attendant. The application is to collect basic information about the candidate, contact information, and to obtain an understanding of the reason there is an interest in volunteering.

Upon review of the form by the Chaplain Leader, if the candidate seems like a good match for the Barnabas Ministry volunteer program then the potential volunteer goes through a training process. There are generally two training sessions during the year that are delivered during the course of three segments, each about two hours in length. The topics of these sessions include understanding Alzheimer's and dementia, ways to start or sustain a conversation, and when a resident may need additional support beyond what the volunteer can provide. While it is preferable to attend the six hours of training, if a candidate's schedule does not allow for this then they may take an alternate training path that consists of listening to recorded training sessions and discussing these with the Chaplain Leader. In addition to the training, a basic background check is performed on the candidate.

After successful completion of the training and background check, the volunteer is matched with a resident whom they will visit. The motivation for this arrangement is so that the volunteer gets to know a specific resident, known as their Special Person, and their rapport may grow over time. Each time that the volunteer visits their Special Person, he or she is asked to sign in and sign out of the visitor log at the Midwest Center for Health. Additionally, the volunteer is asked to submit a Care Report, documenting how the visit went and if he or she has any concerns that the Chaplain Leader may wish to follow-up on.

C. DEFINITION: THE ORGANIZATION AND ITS GOALS

A fundamental part to understanding an organization is examining what the organization hopes to achieve. Goals provide the organization with direction, volunteers with clear objectives, and help communicate the mission of the nonprofit organization to the community. The Barnabas Ministry volunteer program has six primary goals. The goals of the Barnabas Ministry volunteer program are:

1. *Frequent visits*. It is the hope that each Barnabas Minister will visit their Special Person at least one time each month.

   More frequent visits, ideally on a weekly basis or more, are preferable to monthly visits. Also, should the volunteer wish to be assigned to more than one Special Person, or visit additional residents, this is also supported. These above-and-beyond activities are welcomed, but the Barnabas Minister volunteer is not asked commit to this level of participation.

2. *High quality visits*. The volunteers should try to make the visits best suit the resident whom they are visiting, so that the visit is a positive experience.

   The criteria that constitute a high-quality visit are left undefined and are entirely up to the Barnabas Minister volunteer that is visiting their Special Person. The characteristics of a high-quality visit may vary for each volunteer and resident pairing.

3. *Total yearly visits*. The Barnabas Ministry volunteer program strives to achieve a total of one thousand visits each year, from all of the Barnabas Ministers at the Midwest Center for Health.

For the monthly volunteer meetings near the end of the calendar year, the total yearly visits up until that point is announced, in an effort to encourage volunteers to come a few more times to reach this goal. Barnabas Minister volunteers who significantly contributed to this goal through high numbers of visits are honored at a yearly recognition dinner.

4. *Monthly volunteer meetings*. The Barnabas Ministry holds monthly meetings for the Barnabas Minister volunteers, to provide an opportunity for ministers to keep in touch and share their thoughts.

Monthly volunteer meetings provide an opportunity for Barnabas Minister volunteers to come to the Midwest Center for Health and visit their Special Persons. The meetings are a time to share announcements and any other information that may help the volunteers better serve the residents. Additionally, the meetings often include some activity, musical presentation, local performing arts group, or other entertainment.

5. *Track volunteer activity*. The Barnabas Ministry strives to maintain an up-to-date list of active volunteers, the hours they work, and their contact information.

Maintaining an accurate list of volunteers and their contact information is important so that those volunteers wishing to receive communication from the organization are accounted for and efforts are not spent on those who are no longer able to serve with the organization. Keeping accurate records of volunteer hours is important so that the organization is aware of the individual and collective volunteer contributions to the program.

6. *Spread the word*. The Barnabas Ministry endeavors to share the experiences of Barnabas with others.

Engaging the community helps the Barnabas Ministry by introducing potential volunteers to the organization, raising awareness of the organization's mission, and aiding fundraising efforts.

That an organization has goals is important for its success, but it is just as important that the goals are fitting and appropriate, and that the organization is able to determine how well their goals are being met.

Well-chosen goals generally share certain favorable characteristics. One approach to selecting appropriate goals is using the SMART goals guideline. SMART goals are those that are sufficiently specific, measurable, achievable, realistic, and time-bound (Nelson & Economy, 2005). Such characteristics ensure that the goals are targeted enough that they are meaningful, and that the organization and volunteers are able to determine how well they are meeting their objectives. The Barnabas Ministry volunteer program's current goals are evaluated based upon their conformity to the SMART criteria.

Barnabas Ministry's goals evaluated with SMART goal criteria

Goal		Specific	Measurable	Achievable, Realistic	Timely
1	Frequent visits	Yes	Volunteer log and Care Reports	Many volunteers currently achieve	Evaluated monthly
2	High quality visits	No	Care Reports	Yes	Evaluated with each volunteer visit
3	Total yearly visits	Yes	Volunteer log and Care Reports	Yes; current yearly numbers are close to goal	Evaluated yearly
4	Monthly volunteer meetings	Somewhat	Yearly schedule and meeting minutes document volunteer meetings	Yes; monthly meetings are currently achieved	Evaluated monthly
5	Track volunteer activity	No	Volunteer log and Care Reports	Somewhat; currently there are problems with responsiveness	Somewhat
6	Spread the word	No	This may be measured, once goal is more specific	Probably achievable, but a more specific goal is needed first	No; should identify how to make timely

Frequent Visits

Looking at the first goal of frequent visits, this aligns with the criterion of a SMART goal to be specific. It is measurable, given that it identifies that at least one visit per month is desirable and this may be recorded in Care Reports and the Midwest Center for Health visitor records. Concerning this goal being achievable and realistic, this goal is likewise already well-formulated; during the fourth quarter of 2010 dozens of active volunteers attained this. And, since the goal is defined in terms of visits per month, the timely aspect of the SMART goal is addressed. The goal of frequent visits of Barnabas

Minister volunteers with their assigned Special Persons is a goal that meets SMART criteria.

High Quality Visits

For the second goal, that of high-quality visits, there are several gaps between the definition of the goal, and the criteria of a SMART goal. A high-quality visit is not something that is specifically defined or measurable at present. The characteristics of a high-quality visit vary for each resident and it is up to the initiative of individual Barnabas Ministers to attempt to understand how to best fulfill their Special Person's needs. No formal processes are in place to guide the Barnabas Minister to understanding the specific needs of their Special Person, and thus these needs are not specifically considered when the Barnabas Minister volunteer fills out their evaluative Care Report at the end of a visit. The problem of a high quality visit being ill-defined is one potential failure to include in the FMEA analysis of the organization. Although the goal is vague in terms of specificity and measurability, it is realistic and achievable for a volunteer to have a high-quality visit with a resident when the visit does align with their specific needs. The timely aspect of this goal is achieved as after each visit feedback is promptly solicited by means of the Care Report form.

Total Yearly Visits

The third goal of achieving a total of one thousand visits by the volunteers each year complements the first goal of having the Barnabas Minister volunteers provide frequent visits to their Special Persons. As volunteers make their visits, the Barnabas Ministry organization progresses closer to reaching the goal of one thousand visits

overall. As the first goal of frequent visits is specific, measurable, and time-based, so is this goal of total yearly visits. And, this goal is also achievable and realistic as in 2010 there were over 900 Care Reports submitted. This goal could, however, still be improved. It is preferable to not put an upper-limit on goals, to avoid the tendency of individuals to stop working towards a goal once it has been reached (Spitzer, 2007). Setting and communicating additional goals during years when it looks like the one thousand visit target will be surpassed will help to keep volunteers motivated to visit. Monitoring of this goal could also be improved by retaining Care Reports. At this time, Care Reports are read in case any prompt action is needed, and the reports are counted. The Care Reports may be maintained for several weeks or at most a couple months, but a longer history of volunteer visits to residents is not well maintained.

Monthly Volunteer Meetings

The Barnabas Ministry program holds monthly volunteer meetings to share information, and provide an opportunity for the Barnabas Ministers and residents to spend time together. This goal may be considered specific, measureable and timely in that the meetings do indeed take place monthly. And, as the goal is attained, it is achievable and realistic. While the goal of holding monthly volunteer meetings does conform to SMART goal criteria, there is still room for improvement. Other measurements of success for holding volunteer meetings could be considered, such as taking volunteer attendance at these meetings.

Track Volunteer Activity

Tracking the status of volunteers, the fifth goal, is a goal that could be better developed to meet SMART goal criteria. While it has the potential to be a specific and measurable goal, volunteer activity is not consistently or logically tracked. The visitors' log as well as the post-visit Care Report evaluations may be used to help with this purpose, but volunteers do not consistently use these at present. And, even for volunteers who do properly make use of the visitors' log and Care Reports, the Barnabas Ministry only keeps track of the number of Care Reports, not the number of hours logged or the number of visits for which a Care Report was not submitted. Furthermore, Care Reports are only available for up to the most recent couple of months, in an effort to maintain the residents' confidentiality with any comments the volunteer made in the report, so even retroactively tracking volunteer activity could only happen to a very limited capacity.

With some refinement and increased communication about the expectations for tracking volunteer work, this goal may then be achievable and realistic. The goal also may be time-bound, provided it is clarified so that volunteers understand the importance of using the visitor log and filling out a Care Report at the time of their visit, and if the organization keeps more detailed records of volunteered hours. Consideration of a secure way to keep Care Reports for a longer period of time may also help track volunteer activities, and allow for understanding of trends in volunteer involvement. To preserve history while protecting the residents' privacy, the Chaplain Leader could maintain old Care Reports in his secure file cabinet.

Spread the Word

The sixth goal, of spreading the word about Barnabas Ministry and recruiting additional volunteers is realistic and achievable as there are more volunteers joining each year and participating in the bi-yearly training sessions. However, the goal is vague in terms of specificity, measurability and timeliness; it should be considered if there are target numbers for how many new volunteers begin participating in the program each year.

These goals are all being met to some level of success at present. Though, refining them so that they all meet each of the aspects of the SMART goal criteria shall enable the Barnabas Ministry to better monitor the level of success being achieved.

D. MEASUREMENT

With having achieved an understanding of the organization, its objectives, and its stakeholders, the next step in the DMAIC process is to review how the organization measures its success with its goals and process.

The Barnabas Ministry uses several approaches to help them measure and track their successes:

1. *Sign-in log.* The Sign-in log is located at the reception desk at the front entrance of the Midwest Center for Health. All volunteers are asked to provide the date of the visit, the day of the week, their full name, the nature of their volunteer activity, and the time of arrival and departure from the center.

It is believed that most volunteers make use of the sign-in log, though it is likely that some forget to sign in and out occasionally. Many volunteers have indicated that at some point or another they have neglected to complete this step.

2. *Care Reports.* Care Report forms should be completed after each visit of a Barnabas Minister volunteer to a resident, to record the date of the visit, the volunteer's contact information, information about the visit, and any other open-ended feedback that the volunteer deems appropriate.

There are fewer Care Reports turned in than what would be expected based on the sign-in log, and of those that are turned in the reports are not necessarily complete or insightful.

Care Reports are kept for a short period of time after they are turned in. The Care Report/Book Manager and Chaplain Leader review the Care Reports for significant content and updates. Then, after several weeks or months, the pile of retained Care Reports is purged. This is the current practice for helping to protect any potentially sensitive information a visitor disclosed about their Special Person, but the lack of Care Report history makes it difficult to look at trends in a Special Person's needs, or in a visitor's feedback.

3. *Monthly meeting attendance sign-in sheets.* At most meetings there is an attendance sheet that collects the name, address, phone number, and email address of those in attendance.

While the attendance sheets from the meetings should be used at all meetings, there are some meetings where this sign-in sheet is forgotten.

Furthermore, even when the sign-in sheet is used, it often does not contain all of the volunteers who actually attended if the form does not get passed around the entire meeting hall. Some information is collected in this way, but this information is not reliably or consistently gathered.

4. *Monthly meeting programs.* The programs and agendas from the monthly meetings are kept to maintain a record of activities that took place and speakers that shared their ideas with the volunteers.

The records from these monthly meetings are kept with Barnabas Secretary's documentation so that they may be referred to later, as needed.

5. *Board meeting agendas and records.* Every other month the Barnabas Board meets to discuss current issues that impact the organization. The data collected from these meetings includes members in attendance, the Treasurer's report, the Secretary's minutes from the previous meeting, the current meeting's agenda, and any other handouts or paperwork that members have created to document or describe current issues.

The paperwork from Board meetings is all maintained in a three-ring binder by the Secretary, in reverse chronological order. The Secretary generally maintains possession of this binder. This information is accessible to other Board members upon request, and this documentation is complete and organized.

6. *Volunteer contact information.* A listing of all volunteers and their address, phone, and email contact information is maintained in a spreadsheet by the Shepherd Guide.

This information may be updated if the volunteer indicates their contact information has changed, though any differences in phone, address, or email from the Care Report or monthly meeting attendance records are not necessarily transferred to this spreadsheet. While this spreadsheet is organized in a useful fashion, the out-of-date contact information and inactive volunteers on it limits its usefulness.

7. *Training materials.* Training materials for new volunteers are maintained by the Chaplain Leader. There is a packet of information that the volunteer follows during the training lectures, and the volunteer is permitted to keep this, take notes on it, and may refer to it to guide them through their future volunteer work.

The training materials are readily available to the Barnabas Minister volunteers. Additionally, other related books and reference materials on understanding the needs of the residents are also available.

8. *Record of trained individuals.* As the Chaplain Leader performs the Barnabas Minister new volunteer training, he is responsible for keeping a record of the trained individuals. This record includes a list of all of the training classes, the year of the class, and the volunteers that participated.

This record of trained individuals is important for record keeping purposes. It helps provide information about how long a specific volunteer has served with the organization. Though, on a day-to-day basis these records are infrequently used.

While the Barnabas Ministry collects various pieces of information, this information does not always help the organization accurately determine how well its goals are being met.

Some of the information that should be collected does not always get incorporated into the program's records. For example, at the monthly volunteer meetings and occasionally even at the Board meetings, the meeting sign-in sheet and copies of the program, agenda, and other paperwork are not always kept. For activities for which the volunteers are responsible there are similarly suboptimal completion rates for filling out the sign-in log and Care Reports at the time of visits. Most of the information being collected would provide reasonable indications of if the goals are being met, but the information must be regularly and consistently collected. To allow for more accurate measurement of goals, all information to be collected should have a designated individual responsible for ensuring that the information is accurately and reliably collected. When the designated individual is unavailable to attend a certain monthly meeting or Board meeting, an alternate individual should be made responsible for the data collection. And, data collected should be stored in a central location, such as the Barnabas office at the Midwest Center for Health, so that it is readily available when it is needed.

Although there are weaknesses with the process of data collection, from the data that has been collected and also from direct experience with the program's training, volunteering, monthly meetings, and Board meetings, it is possible to identify potential failures in the program. Likewise, this background makes it possible to determine the

severity, likelihood, and detection ratings for these potential failures. These weaknesses and their ratings are reviewed in the "analyze" portion of DMAIC, in the FMEA study.

E. ANALYSIS OF ORGANIZATION

With an understanding of the Barnabas Ministry organization's structure, its key players, and its goals, there is sufficient background information to analyze the problems within the organization and identify areas for improvement.

To understand where there are weaknesses to be resolved, Failure Mode and Effect Analysis (FMEA) is used. FMEA may be effectively used to systematically analyze an organization by looking at its components, the areas of potential failures, and the relative priorities of these potential failures (Aven, 2008; Yang & EI-Haik, 2008). The FMEA is used to consider the Barnabas Ministry program on an enterprise-wide scale, which is reasonably-scoped given the small size or the organization (Burton, 2004).

For the FMEA, each major function in the organization is considered in terms of problems that may arise, effects of these problems, and causes. Each of these potential modes of failure is rated according to the severity of the problem, the likelihood of the problem occurring, and the probability that the problem may be detected. These are represented in the FMEA chart in the columns severity, abbreviated "S"; occurrence, abbreviated "O"; and detection, abbreviated with "D". For the severity, occurrence, and detection ratings, scales of one to ten are used, with a rating of one having the least potential impact and a rating of ten having the greatest potential impact.

Severity scale in FMEA analysis

Rating	**Meaning**
1	No effect
2	Very minor impact
3	Minor impact
4-6	Moderate impact
7-8	High impact
9-10	Severe, possibly hazardous impact

Occurrence scale in FMEA analysis

Rating	**Meaning**
1	Almost no possible occurrence
2-3	Few occurrences
4-6	Moderate occurrences
7-8	High, repeated occurrences
9-10	Occurrence inevitable

Detection scale in FMEA analysis

Rating	**Meaning**
1	Very apparent
2-3	Highly detectable
4-6	Moderately detectable
7-8	Difficult to detect
9	Nearly impossible to detect
10	Impossible to detect

Once a given potential failure has been assigned a severity, occurrence, and detection value, these values are used to calculate the risk priority number (RPN). The RPN is found by multiplying together the values of the severity rating, occurrence rating, and detection rating.

The potential failures in the FMEA are grouped according to the organizational goal to which that the potential failure relates. These groups are shown separately for readability.

An FMEA should include columns for corrective actions taken and the resulting, improved levels of severity, occurrence, and detection. These columns are omitted here, as they are not pertinent during the first analysis of the organization prior to implementing changes. After adoption of the suggested changes, the Barnabas Ministry volunteer program examined the impact of the corrective actions. These results are contained in the "Control" section.

FMEA for Resident Visits

Failure	**Effect**	**S**	**Cause**	**O**	**Controls**	**D**	**RPN**	**Actions**
Insufficient number of visits	Unhappy residents		Volunteers do not visit	6	None	7	336	Follow up with them
			Care Reports not submitted	8	None	7	448	Improve visibility, incentives
		8	Expected visit frequency unknown	4	Included in training	7	224	Remind semi-active volunteers
Insufficient number of yearly visits	Yearly visit goal unmet		Goal progress unknown	5	None	3	30	Visibly track goal
		2	Not enough volunteers	5	Recruiting	2	20	Need target numbers
Decreased visits after yearly total goal met	Unhappy residents	4	No stretch goal after 1000 visits	3	None	2	24	Create stretch goal

The FMEA for Resident Visits relates to the first and third goals: Frequent Visits, and Total Yearly visits. From the FMEA, the effect that has the greatest potential for causing problems is "Unhappy residents." The primary objectives of the Frequent Visits and Total Yearly Visit goals are to ensure that the residents are receiving visitors and that their spirits are high, so it follows that "Unhappy residents" is the effect with the greatest potential impact, as demonstrated by the high RPN values.

From this portion of the FMEA, based upon the RPNs, the highest causes should be considered for prompt mitigation. The highest RPN value is associated with "Care Reports not submitted", which indicates that the volunteer has visited, but has neglected to give feedback about the resident and their needs, so the resident's needs may not be met. The second highest RPN value is that "Volunteers do not visit." To ensure that the goals of Frequent Visits and Total Yearly visits are met, the Barnabas Ministry should seek to achieve a higher Care Report submittal rate, and have more volunteers visit their Special People.

FMEA for Quality of Visits

Failure	Effect	S	Cause	O	Controls	D	RPN	Actions
Visits are rated as low-quality	Unhappy residents	5	Timing of visit	4	None	6	120	Determine best visit time
	Unhappy volunteer loses interest		Volunteer not well matched with resident	6	Matching process	8	288	Re-evaluate this process
			Quality of visit not well-defined	5	None	5	150	Better define this in Care Report
		6	Need of resident are unknown	6	None	4	144	Meet with resident prior to matching
Quality of visits is not known	Unhappy residents		Care Reports not submitted	7	None	7	245	Improve visibility, incentives
		5	Care Reports not insightful	5	None	2	50	Review Care Report
Dissatisfied resident	Facility given low ratings; resident moves		Resident feedback not solicited	5	None	2	70	Review resident satisfaction
		7	Special Person not given sufficient attention	4	None	4	112	Review resident satisfaction

The FMEA for Quality of Visits relates to the second goal, that of High Quality Visits. This goal indicates that it is not only important for the volunteers to visit the residents; it is also important that the residents and volunteers feel that the visit has been warm, friendly, and generally of a good quality. From this portion of the FMEA that considers the Quality of Visits, the two effects that result in the highest RPN values are

"Unhappy volunteers lose interest" and "Unhappy residents." For both the volunteers and residents, it is important that the relationship be mutually enjoyable so that the visitation process is sustained. For the effect of "Unhappy volunteers lose interest", the contributing cause that may have the most impact is "Volunteer not well matched with resident." And, for the effect of "Unhappy residents", the contributing cause that may be the most impactful is "Care Reports not submitted." With consideration of the goal of High Quality Visits, the Barnabas Ministry program should seek to improve the matching process between volunteers and residents, and also attempt to improve the submittal rate of Care Reports.

FMEA for Meetings

Failure	**Effect**	**S**	**Cause**	**O**	**Controls**	**D**	**RPN**	**Actions**
Low attendance of meetings	Meeting info not known	6	Schedule and time of meeting not compatible with volunteers	5	None	5	150	Ask inactive volunteers if meeting time not compatible
	Volunteers not engaged		Content of meetings not of interest to volunteers	4	None	4	80	Solicit volunteer input on meeting content
			Communication about times of meetings lacking	3	Weekly and monthly email & letters	7	105	Verify contact info is current
		5	Volunteer is no longer active with program	6		8	240	Maintain current contact info, volunteer records

The FMEA for Meetings relates to the fourth goal, holding Monthly Volunteer Meetings. The FMEA study indicates that the potentially most impactful effect is that "Volunteers are not engaged", and that the cause associated with this that has the highest risk priority is "Volunteer is no longer active with the program." As indicated in the recommended actions, in order for the Barnabas Ministry to fulfill their goal of holding successful monthly volunteer meetings, it is important to proactively maintain records of active and inactive volunteers, and to tailor these meetings to the needs of the volunteers. This may be facilitated via regular communication with volunteers about their interests with the program.

FMEA for Tracking Volunteer Activity

Failure	Effect	S	Cause	O	Controls	D	RPN	Actions
Volunteers not assigned to Shepherd	Volunteer lacks guidance		New volunteers not well-managed	4	None	3	48	Give feedback to Shepherds
			Shepherds not proactive in keeping contact	4	None	5	80	Give feedback to Shepherds
		4	Communication lacking for Shepherd Guide, Shepherds	4	None	7	112	Up-to-date contact list needed
Inactive volunteers not identified	Wasted money on mailings	5	New contact info not solicited	5	Solicit contact info at meetings	6	150	Contact volunteers that regularly miss meetings
	Active volunteers unknown	5	Volunteer logs inadequate	7	None	2	70	Adjust logs to meet needs
	Cause of inactivity unknown	6	Volunteer feedback not solicited	5	None	5	150	Contact inactive volunteers
Volunteer do not meet compliance standards		9	Inadequate tracking of new volunteer info	3	None	1	27	Standardize new volunteer info collection
Volunteer hours unknown	Individual reporting lacking		Inadequate volunteer log design	5	None	3	75	Adjust logs to meet needs
			Volunteers do not sign in/out	8	None	8	320	Improve visibility, incentives
		5	Volunteered hours not compiled	6	None	3	90	Adjust logs to meet needs

The FMEA for Track Volunteer Activity relates to the fifth goal. The potential failures that contribute the highest RPNs are "Volunteer hours unknown" and "Inactive volunteers not identified." Without knowledge of volunteer hours, it is difficult to keep track of which volunteers are inactive, if any volunteers need additional support, or to recognize and encourage above-and-beyond efforts. The cause of this potential failure with the highest RPN is that volunteers are not signing in and out of the visitation log. For the potential failure of "Inactive volunteers not identified," there are two impactful potential results. Without having identified inactive volunteers, money and efforts are wasted attempting to contact those who are no longer engaged in the organization. And, without recognizing and identifying the cause of inactivity, there is no way to take corrective actions that may help sustain long-term volunteer interest.

FMEA for Recruitment

Failure	**Effect**	**S**	**Cause**	**O**	**Controls**	**D**	**RPN**	**Actions**
Insufficient recruitment	Resident needs not met		Timing of training is not workable for potential volunteers	4		3	60	Solicit timing preferences from potential volunteers
		5	Interested potential volunteers are not being reached	2		7	70	Periodically revisit recruiting methods

The FMEA for Recruitment address the sixth goal: Spread the Word. The primary potential failure for this area of the Barnabas Ministry volunteer program is

"Insufficient recruitment." The cause most in need of being addressed for this is that potential volunteers who might be interested in the program simply have not been contacted or are unaware of the Barnabas Ministry.

Considering the FMEA as a whole, there are some recurring themes. The effects of the less than ideal Care Report has potential for failure related to the goals of Frequent Visits and Total Yearly Visits, as well of Quality of Visits. Maintaining volunteer contact logs is also an area that surfaces multiple times in the FMEA, including for multiple failures that could occur related to Meetings and Tracking Volunteer Activity. Other additional potential failure causes may also be investigated, but this should be considered at a later time. Applying the Pareto Principle (Juran, 1998), the potential problems with the highest impact or that address the greatest breadth of problems should be addressed first. In this way, all initial efforts put forth will yield the greatest benefits.

F. IMPROVEMENT: CARE REPORTS

From the FMEA study it was determined that Care Reports are a potential failure area of the Barnabas Ministry program that should be addressed promptly. Considering that Care Reports are a concern that relates to the goals of Frequent Visits, Total Yearly Visits, High Quality Visits, and Tracking Volunteer Activity, they are important to several aspects of the volunteer program. Volunteers are introduced to Care Reports during their training, and are asked to complete one after each visit with their Special Person to provide feedback.

The Care Report contains several sections. The first section, “About You”, solicits information about the date visited, and the volunteer’s name and contact information. The second section, “About the Person You Visited,” collects the name of the person visited, their receptivity to the visit, and their communication. Space is also provided on the form to leave additional comments. The Care Reports are located in a wall-mounted folder near the receptionist desk at the front entrance of the Midwest Center for Health, and may be placed in the Chaplain Leader’s mailbox for him to later review.

The Care Report image displayed is a scanned copy of a Barnabas Ministry Care Report. For readability, the text was retyped over the scanned image as in the original image the text was very faint and hard to read. Also, one change in the text was made: the Chaplain Leader’s name was used in the original report, which was substituted with “The Chaplain” for privacy purposes.

Current Care Report

BARNABAS MINISTRY CARE REPORT

VISITING FORM

Thank you for volunteering today and for taking a moment to enter a record of your visit via this Care Report.
Please fill out one Care Report Visiting Form for each person you visit.

When you have finished your report(s), please note your visiting time in the Volunteer Register at the reception desk.
COMPLETED CARE REPORTS ARE TO BE PLACED IN MAILBOX #34.
Box #34 is immediately to your right as you face the Care Report box on the wall. The Chaplain will collect reports for his evaluation and recommendations and later, the Care Report Director will record and file this visiting information.

To being, please enter ***Today's Date*** _____

ABOUT YOU
(Please print)

Your Name _____
Address _____
Phone _____ ***Cell*** _____
Email _____

- Did you feel equipped for visiting this person today? ___
- Did you enjoy your visit with this person today? ___ Do you plan on visiting this person again? ___
- Do you consider him/her to be your "Special Person"? ___ Why?

ABOUT THE PERSON YOU VISITED

Patient room numbers are available at the reception desk. All patient information is highly confidential – Other than for this report – no information is to be shared with anyone, including the name of the person(s) you visit. Thank you.

PLEASE INDICATE THE FLOOR YOU VISITED TODAY WITH AN "X" IN THE APPROPRIATE BOX

☐	☐	☐	☐
GROUND (Skilled Care)	*FIRST (Sheltered)*	*SECOND (Apartments and Rehab)*	*THIRD (Locked Unit Alzheimer's)*

NAME OF PERSON VISITED _____

- **Using a scale of 1 to 7, consider that 1. = Not Receptive 4. = Somewhat Receptive 7. = Very Receptive**
  Please circle one number below that best describes the person's receptivity to your visit today.

1. 2. 3. 4. 5. 6. 7.

- **Using the same scale of 1 to 7, please circle one number below that best describes the person's mood today, i.e.,**
  1. = Non-Communicative/Unhappy 4. = Somewhat Communicative 7. = Very Communicative/Happy

1. 2. 3. 4. 5. 6. 7.

Comments _____

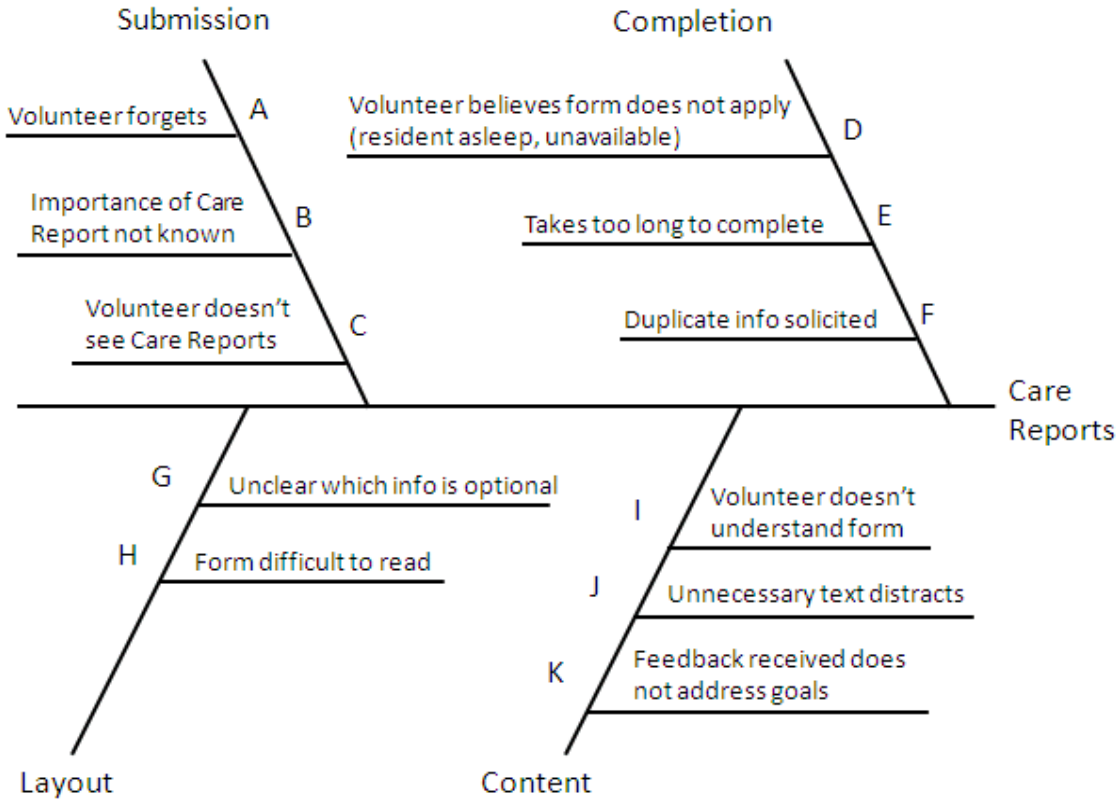
Please continue on back if needed

Whatever you do to the least of these, you do to me – the Lord Jesus Christ

There are several potential problems surrounding the Care Report processes. Care Reports are frequently neglected; the visitor sign in log oftentimes reflects more visits to the residents than would be suggested by the number of submitted Care Reports. The content and layout of the Care Report could also be improved to streamline the completion process, reduce solicitation of duplicate information, and guide the volunteers to more accurately express the quality of their visit. Care Reports may not be completed in their entirety, and even when they are they do not always provide the right information about the resident.

The issues involving Care Reports may be summarized in a fishbone diagram. There are four main branches to the diagram which show the high-level areas in need of improvement: Submission, Completion, Layout and Content. The causes for these categories of Care Report problems are then shown, and are labeled with letters A through K, to assist with identifying these points in later discussions.

Care Report Cause-and-Effect Diagram



Submission

A Care Report may not be submitted for several reasons. The volunteer may take a copy of the Care Report form intending to complete it later when they have more time. But, the volunteer may not remember to complete it at some later time or even if they do, by the time they next return to Barnabas they do not have the completed form with them to submit (A). Alternatively, the volunteer may not complete and submit a Care Report if the volunteer does not understand the importance of the Care Report to the Chaplain Leader, who tries to maintain an awareness of residents in need of extra support or residents who are infrequently visited (B). Or, it is also possible that a Care Report is not

submitted since the volunteer either does not notice where the Care Reports are located, or where the mailbox is to turn in the completed report (C).

Completion

Completion problems with the Care Reports may also be attributed to several causes. A common cause for failure to complete a Care Report is when the volunteer arrives to the Midwest Center for Health and finds that their Special Person is not able to visit them. This may occur if the Special Person is asleep, receiving medical care, or not at the facility while they are visiting with their family members. Although the visit does not occur, it is still valuable to know that a volunteer attempted to visit their Special Person and a Care Report should still be completed, though in such situations it rarely is (D). When the volunteer is able to visit their Special Person, they may choose to not complete the form as some volunteers perceive that it takes too long to complete (E). Other volunteers may not complete the form because they are frustrated by the duplicate info solicited on the form, to include their Special Person's name and the volunteer's contact information (F).

Layout

Difficulties with interpreting the layout may be other issues that contribute to Care Reports not being completed properly. Volunteers may not realize that some information may be optional (G). For example, if a visit does not occur when the volunteer arrives because their Special Person is not available, it is not clear that some sections of the Care Report need not be completed. Volunteers may also be challenged to

complete the Care Report due to usability issues; the layout of the form could be improved (H).

Content

The content of the Care Report may also be improved. The volunteer may not understand what information the Care Report seeks (I). The scales for the resident's level of communication and happiness do not have labels for all of the values. And, the volunteer may not realize that the Chaplain Leader wants to know if the resident is in need of additional support. The volunteer may also find the Care Report challenging as he or she attempts to navigate the form and determine what content on it is important (J). The content of the Care Report could be aligned to more directly relate to the Barnabas Ministry's goals (K); at present the quality of the visit may not be communicated in the report.

To address the issues with Care Report submission, completion, layout, and content, there are several solutions that should be pursued, including:

1. Completion reminders for Care Reports.
2. Placement and visibility of Care Reports.
3. Adjust form for easy completion for instances where visit does not occur.
4. Volunteer contact information section of Care Report should be made optional.
5. Adjust fonts and layout on form to be more user-friendly.
6. Directly address the quality of the visit in Care Report.

Completion Reminders for Care Reports

As the Barnabas Ministry incorporates reminders for volunteers to complete their Care Reports, this will help to address several issues from the Cause-and-Effect diagram: *Volunteer forgets* (A), *Importance of Care Report not known* (B), and *Volunteer believes form does not apply* (D).

To ensure that the volunteer knows that the Care Report is expected to be turned in after a visit, this is a theme discussed in the new volunteer training process. The prospective volunteers are informed of the nature of the Care Report, and are informed of how it helps the Chaplain Leader maintain awareness of the individual needs of the residents. Through the Care Reports, the Chaplain Leader knows which residents may be in need of additional support so he may take appropriate actions. Conveying this message during the training program is a helpful measure currently being implemented to encourage report completion, but it is inadequate.

Volunteers that have been participating with the Barnabas Ministry over a longer duration may perhaps habitually complete the Care Reports, or may over time begin to neglect filling out the reports. It is important to remind volunteers after their initial training of expected duties like Care Reports. Such reminders may include general communications during the monthly volunteer meetings and in the periodic newsletters. Or, in cases where the Care Report Director or Chaplain Leader has identified specific volunteers who do not complete the reports, then the individual volunteers may be contacted.

Placement and Visibility of Care Reports

Improving the placement and visibility of the Care Reports may help to mitigate the issue identified in the Cause-and-Effect diagram that *Volunteers do not see Care Reports* (C).

The Care Reports are located in the vicinity of the sign-in log, but their location could be improved. The sign-in log is centrally located on the receptionist desk at the entrance to the Midwest Center for Health, but the Care Reports are stored separately, in a wall-mounted box near to the mail boxes.

The wall-mounted box with the Care Reports is located approximately 66 inches high. For a volunteer standing in front of the sign-in log, the box with the reports is also located approximately 100 degrees to their right. The reception desk may be considered a work area for the volunteers, and generally workstations should be set up such that the viewing angle is slightly below the horizontal angle of the eyes, and so that the side-to-side expanse of the working area is no more than 35 degrees (Teicholz, 2001; U.S. Department of Labor, n.d.). This desk is only a short-term work space for volunteers signing in and out and completing Care Reports and thus the awkward positioning of the reports does not cause long-term contorted positions that could result in discomfort. However, the separation of the Care Reports from the sign-in logs contributes to volunteers not noticing the forms. Adjusting the location of the Care Reports to be visible from the sign-in log may help remind volunteers to fill out the report. Ideally, the Care Reports could even be made available in an up-right folder on this desk. This will

help this workspace conform to the Five "S" principles of "Sort" and "Straighten," with the forms available in a logical, noticeable, and useful location (Crabtree, 2006**)**.

Color could also be used to make the Care Reports more visible. The Care Reports could be printed on a lightly colored paper, and the box in which the blank forms are made available could also be colored. There are other visitors, nurses, and guests that need to access various forms at the reception desk, and the paperwork associated with all of these, as well as with the Barnabas Ministry, is all white. The use of a standard color for forms and paperwork associated with the Barnabas Ministry may help volunteers notice applicable materials. The color chosen should be a light, pastel color to ensure the forms are readable (Kroemer, Kroemer, & Kroemer-Elbert, 2003), with sufficient color contrast between the text and background (Crocoll, 2001).

Easy Form Completion if No Visit Occurs

This change will help the Barnabas Ministry address the issues *Volunteer believes form does not apply* (D), and *Care Report takes too long to complete* (E).

There will be times when a Barnabas Minister volunteer arrives to visit their Special Person, but they are unable to meet. The Special Person may be receiving medical care, or may be away from the Midwest Center for Health on an outing with their family, or the Special Person may be napping.

In such instances the Chaplain Leader still likes to know that the volunteer has stopped by to check on the well-being of their Special Person, so a Care Report should still be completed. However, the Care Report is not designed to accommodate these situations so most volunteers who encounter this situation do not complete the form. To

guide volunteers in this situation, the Care Report form should be adapted to include a checkbox to allow the volunteer to easily indicate this. Such mistake-proofing of the form is a Poke Yoke technique. A potential addition to the form to mistake-proof the form may be a simple checkbox indicating if a visit did not occur and the reason for this:

[ ] I attempted to visit my Special Person but was unable to because he or she was
Circle one: (Asleep) (Receiving Medical Care) (Not at the Midwest Center for Health)

Make Contact Information Optional

Adjusting the form so that it is clear that volunteers do not need to continue to provide their unchanged contact information on each submitted form will help to address the issues of *Duplicate Information Solicited* (F), and *Unclear which information is optional* (G).

Volunteer contact information is maintained by the Compliance and Program Directors in a spreadsheet. This is so that monthly newsletters, weekly emails, and any other communication needs that arise related to the program or to the volunteer's Special Person may be addressed. It is important to maintain up-to-date contact information and to solicit updated information. However, the frequency with which a volunteer has their phone number, email, or mailing address change is much lower than the frequency with which the volunteer completes a Care Report.

The "About You" section of the Care Report should be modified so that the volunteer's name is asked for, but so that their contact information is only asked for in the event that it has been recently updated. This will save the volunteer time as he or she completes the Care Report. This also will save the Care Report/Book Manager time too.

As the Care Report/Book Manager is compiling data, rather than checking each Care Report to see if the contact information of the volunteer needs to be updated in the spreadsheet, the Care Report/Book Manager knows that volunteer contact information only needs to be updated when the volunteer has indicated this.

Adjust Fonts and Layout to be User-Friendly

Formatting changes made to improve the usability of the Care Report will help address several issues: *Takes too long to complete* (E), *Unclear which information is optional* (G), *Form difficult to read* (H), *Volunteer does not understand form* (I), and *Unnecessary text is distracting* (J).

A major problem with the format of the Care Report is that the blank forms are copies of copies, not made from the original. Over time, this has degraded the quality of the text, making it difficult to read and interpret. This is especially problematic given that most of the Barnabas Ministry volunteers are in their sixties or older, and may have some eyesight limitations.

Another formatting issue with the Care Report is the small font size that is used, with 9 point font. A larger font size, 10 point or larger, will also make the form more readable. Likewise, using bold and italic fonts more judiciously and keeping more text in plain font will also aid readability.

The format of the Care Report may also be improved if large spaces are dedicated only to areas where a response is requested. For example, in the section "About the Person You Visited" there is a large blank space that follows. Volunteers may question what information is supposed to be filled in here – it seems like a logical place to note the

name of the person visited, but this information is asked for later. Use of space to show where information is expected, and avoiding unnecessary spacing when no information is asked, will make the form easier and quicker for the volunteer to correctly complete.

Directly Address the Quality of the Visit

The purpose of the Care Report is to solicit information about the quality of the visit that the Barnabas Minister volunteer has with their Special Person. This information may be conveyed if the volunteer provides insightful comments, but with the current form it is also possible that this information is not obtained. Adjusting the Care Report to more directly ask the volunteer about the quality of the visit will address *Feedback received does not address goals* (K).

The makings of a quality visit may differ for each volunteer and Special Person pairing. For some, a quality visit may be one that includes the volunteer bringing their pet along for the visit, or even bringing their children and grandchildren. Or, the volunteer and Special Person may have a common favorite topic or shared activity of interest, like reading the comics or putting together puzzles. For another resident, the timing of the visit may matter much more than the content of the visit. Some residents find the time after their family leaves from a visit very difficult. For example, one resident may appreciate a volunteer keeping them company during a Saturday afternoon just after their family leaves, to comfort that resident. Or for other residents, they may prefer that their volunteer comes between visits from their family members to better space the visits they receive. For each resident that receives visits from a Barnabas Minister volunteer, it is important that any special considerations be made known.

While each Special Person has particular needs and preferences about what makes a quality visit, the scale used to rate the quality of the visit is the same for each person. And, the scale is vague – it does not address specific visit characteristics that contribute to high-quality visits. To rectify this deficiency with the Care Report, volunteers should be asked about these specific characteristics. The form may be modified as follows:

Certain factors may contribute to your Special Person's satisfaction with your visit. Please indicate for each quality that is applicable, if you were able to meet your Special Person's needs.

Day of week of visit	*Great*	*OK*	*Not ideal*	*Not Applicable*
Time of day of visit	*Great*	*OK*	*Not ideal*	*Not Applicable*
Topics discussed during visit	*Great*	*OK*	*Not ideal*	*Not Applicable*
Activity (specify):_____	*Great*	*OK*	*Not ideal*	*Not Applicable*
Other (specify): _____	*Great*	*OK*	*Not ideal*	*Not Applicable*

The suggested modification not only more directly addresses the factors that make a visit high-quality for the Special Person, the modification also removes the vagueness of the one through seven ratings on the current form. Different volunteers may interpret the current scales in different ways (Brace, 2008; Neal & Biberman, 2004). Especially for those residents who receive visits from multiple volunteers, the vague scales may cause inconsistent results, which are difficult for the Chaplain Leader and Care Report/Book Manager to properly interpret.

Since through this revised questionnaire the volunteer may be acknowledging that he or she has not fully met the needs of what constitutes a high-quality visit for the resident, it is important to provide opportunities for the volunteer to still leave a favorable

impression of the visit. The "other" category of satisfaction and the open-ended comments section allow for this, and should be maintained. Without these sections, it is possible that the volunteer would be less inclined to provide less than satisfactory feedback as it could reflect negatively upon them (Lusthaus, 2002). It should be regularly communicated that the purpose of the form is to ensure that the residents' needs are met. Barnabas Minister volunteers who are unable to fulfill the qualities of a high quality visit will not suffer repercussions. Rather, if certain qualities are not present in the visit by a current Barnabas Minister, then an additional Barnabas Minster volunteer may be assigned to supplement the needs of the resident.

Revised Care Report

BARNABAS MINISTRY CARE REPORT

ABOUT YOU

Name_____

Date of visit _____

Please circle your response:

I felt equipped to visit today. Y / N

I enjoyed my visit today. Y / N

I plan to visit this person again. Y / N

New contact info? If so, please provide:

Address_____

Phone _____

Email _____

If you tried to visit but could not, we still want to know!

My Special Person could not visit with me because he or she was…

[ ] Asleep
[ ] Receiving medical care
[ ] Not currently at the Midwest Center
[ ] Other (specify): _____

ABOUT THE PERSON YOU VISITED

Name of person(s) visited _____

Is this your special person? Y / N

Floor visited: **[Ground - Skilled] [1 – Sheltered] [2 -Apartments] [3 – Alzheimer's]**

Certain factors may contribute to your Special Person's satisfaction with your visit. Please indicate for each quality that is applicable, if you were able to meet your Special Person's needs.

Day of week of visit	Great	OK	Not ideal	Not Applicable
Time of day of visit	Great	OK	Not ideal	Not Applicable
Topics discussed during visit	Great	OK	Not ideal	Not Applicable
Activity (specify):_____	Great	OK	Not ideal	Not Applicable
Other (specify): _____	Great	OK	Not ideal	Not Applicable
Overall rating of visit	Great	OK	Not ideal	

COMMENTS **Any additional information or feedback is appreciated! Continue on the back if needed.**

TURN IN FORM and SIGN OUT!

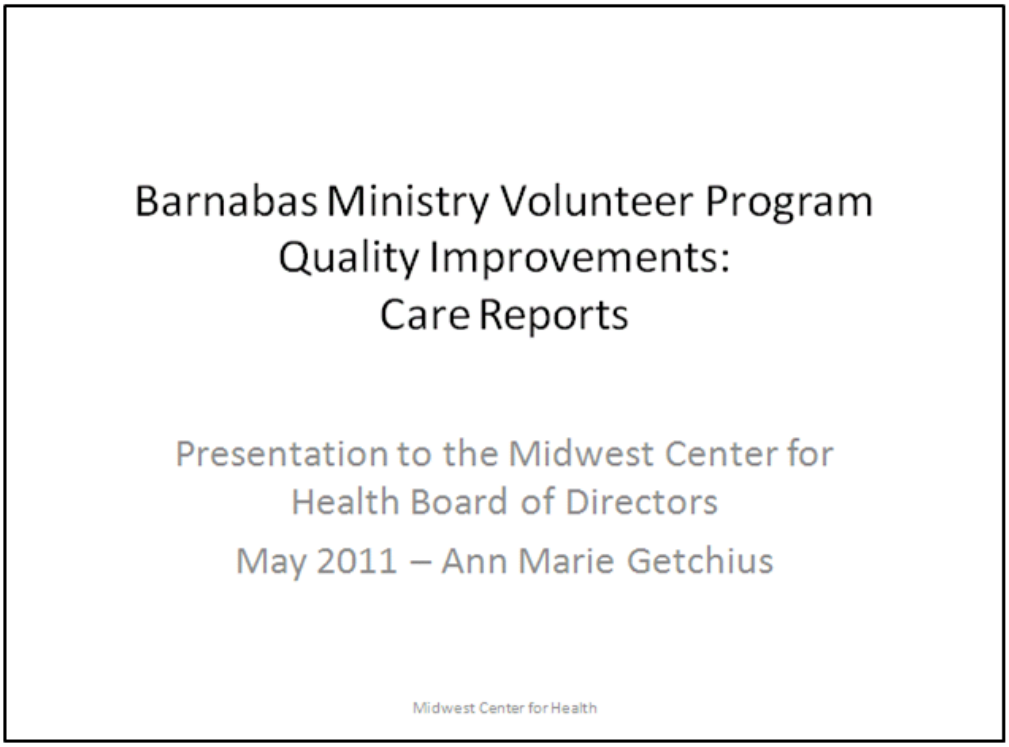
Thank you for volunteering today! Please remember to (1) Place this Care Report in Mailbox #34 for the Chaplain to review and (2) Sign out of the Volunteer Register at the reception desk.

Whatever you do to the least of these, you do to me – the Lord Jesus Christ

Approval for Adoption of Care Report

With the creation of the revised Care Report, the Board of Directors was approached to review the proposed changes and approve of their adoption. Once the FMEA study was completed and the revised Care Report was designed, the next meeting of the Board of Directors took place in May 2011. At this meeting, a presentation was given to explain the study's findings. The presentation explains that revision of the Care Report process is a top-priority area for improvement, and details the specific changes proposed. The presentation provided members of the Board of Directors enough background knowledge to vote to accept or decline the suggestions in the subsequent meeting: July 2011.

May 2011, Midwest Center for Health Presentation to Board of Directors



Benefits of Quality Improvements

- Maximize use of volunteer workforce
- Efficiency, effectiveness of achieving mission
- Reduce errors, inconsistencies, misunderstandings
- Best meet residents' needs
- Make decisions based on data

Midwest Center for Health

Quality Framework: Six Sigma

An approach to quality that meets the needs of the Barnabas Ministry

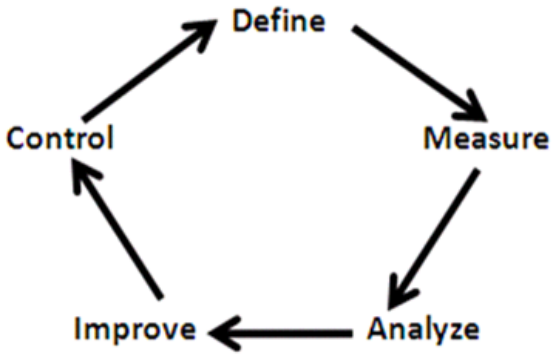
1. ***Quick implementation.*** The process must be able to be seamlessly introduced to the Barnabas Ministry in two months or less.
2. ***Timely results.*** Improvements in effectiveness must be recognizable to volunteers almost immediately.
3. ***Straightforward.*** The framework must be able to be readily understood by volunteers with little or no background in quality.
4. ***Small organization compatible.*** The framework must be effective in a small organization.

Midwest Center for Health

What is Six Sigma?

- Quality process to identify & remove problems
- Created by Motorola in the 1980s
- Based on Deming's Plan-Do-Check-Act cycle
- Widely used: General Electric, Home Depot, Boeing, and many other companies and not-for-profits

Six Sigma via DMAIC



DMAIC: Define

Barnabas Ministry's organizational goals:

1. Frequent visits.
2. High quality visits.
3. Total yearly visits.
4. Monthly volunteer meetings.
5. Track volunteer activity.
6. Spread the word.

Midwest Center for Health

D**M**AIC: Measure

Information available to measure goals:

1. Sign-in log.
2. Care Reports.
3. Monthly meeting attendance sign-in sheets.
4. Monthly meeting programs.
5. Board meeting agendas and records.
6. Volunteer contact information.
7. Training materials.

Midwest Center for Health

DM**A**IC: Analyze

- Failure Mode and Effect Analysis (FMEA)
- Identify potential failures of goals
- Rate failures by severity, detection, occurrence
- Results in "**Care Reports**" as the top-priority, as these impacts:
  - Frequent Visits
  - Total Yearly Visits
  - Quality of Visits

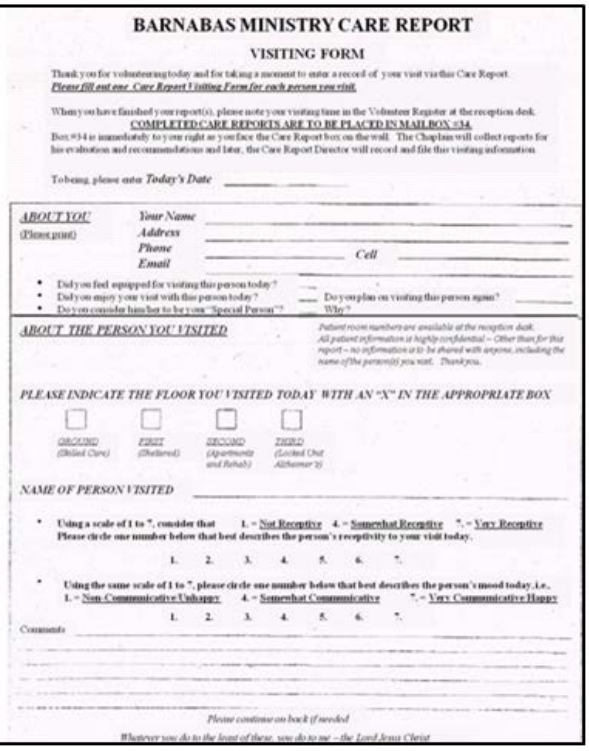
Midwest Center for Health

DMA**I**C: Improve

1. Completion reminders for Care Reports.
2. Placement and visibility of Care Reports.
3. Adjust form for easy completion for instances where visit does not occur.
4. Volunteer contact information section of Care Report should be made optional, as-needed.
5. Adjust fonts and layout on form to be more user-friendly.
6. Directly address the quality of the visit in Care Report.

Midwest Center for Health

Current Care Report



BARNABAS MINISTRY CARE REPORT

VISITING FORM

Thank you for volunteering today and for taking a moment to enter a record of your visit via this Care Report.
Please fill out one Care Report Visiting Form for each person you visit.

When you have finished your report(s), please note your visiting time in the Volunteer Register at the reception desk.
COMPLETED CARE REPORTS ARE TO BE PLACED IN MAILBOX #34.
Box #34 is immediately to your right as you face the Care Report box on the wall. The Chaplain will collect reports for his evaluation and recommendations and later, the Care Report Director will record and file this visiting information.

To begin, please enter *Today's Date* _____

ABOUT YOU (Please print)
Your Name _____
Address _____
Phone _____ *Cell* _____
Email _____

- Did you feel equipped for visiting this person today? ___
- Did you enjoy your visit with this person today? ___ Do you plan on visiting this person again? _____
- Do you consider him/her to be your "Special Person"? ___ Why?

ABOUT THE PERSON YOU VISITED

Patient room numbers are available at the reception desk. All patient information is highly confidential – Other than for this report – no information is to be shared with anyone, including the name of the person(s) you visit. Thank you.

PLEASE INDICATE THE FLOOR YOU VISITED TODAY WITH AN "X" IN THE APPROPRIATE BOX

☐ *GROUND (Skilled Care)* ☐ *FIRST (Sheltered)* ☐ *SECOND (Apartments and Rehab)* ☐ *THIRD (Locked Unit Alzheimer's)*

NAME OF PERSON VISITED _____

- **Using a scale of 1 to *, consider that 1. = Not Receptive 4. = Somewhat Receptive *. = Very Receptive**
  Please circle one number below that best describes the person's receptivity to your visit today.
  1. 2. 3. 4. 5. 6. *.
- **Using the same scale of 1 to *, please circle one number below that best describes the person's mood today, i.e.,**
  1. = Non Communicative Unhappy 4. = Somewhat Communicative *. = Very Communicative Happy
  1. 2. 3. 4. 5. 6. *.

Comments _____

Please continue on back if needed

Whatever you do to the least of these, you do to me – the Lord Jesus Christ

Proposed Revised Care Report

BARNABAS MINISTRY CARE REPORT

ABOUT YOU

Name _____
Date of visit _____

Please circle your response:
I felt equipped to visit today Y / N
I enjoyed my visit today Y / N
I plan to visit this person again Y / N

New contact info? If so, please provide:
Address _____
Phone _____
Email _____

If you tried to visit but could not, we still want to know!
My Special Person could not visit with me because he or she was…
[ ] Asleep
[ ] Receiving medical care
[ ] Not currently at the Midwest Center
[ ] Other (specify): _____

ABOUT THE PERSON YOU VISITED

Name of person(s) visited _____
Is this your special person? Y / N
Floor visited: **[Ground - Skilled] [1 – Sheltered] [2 -Apartments] [3 – Alzheimer's]**

Certain factors may contribute to your Special Person's satisfaction with your visit. Please indicate for each quality that is applicable, if you were able to meet your Special Person's needs.

Day of week of visit	Great	OK	Not ideal	Not Applicable
Time of day of visit	Great	OK	Not ideal	Not Applicable
Topics discussed during visit	Great	OK	Not ideal	Not Applicable
Activity (specify) _____	Great	OK	Not ideal	Not Applicable
Other (specify) _____	Great	OK	Not ideal	Not Applicable
Overall rating of visit	Great	OK	Not ideal	

COMMENTS Any additional information or feedback is appreciated! Continue on the back if needed.

TURN IN FORM and SIGN OUT!
Thank you for volunteering today! Please remember to (1) Place this Care Report in Mailbox #34 for the Chaplain to review and (2) Sign out of the Volunteer Register at the reception desk.

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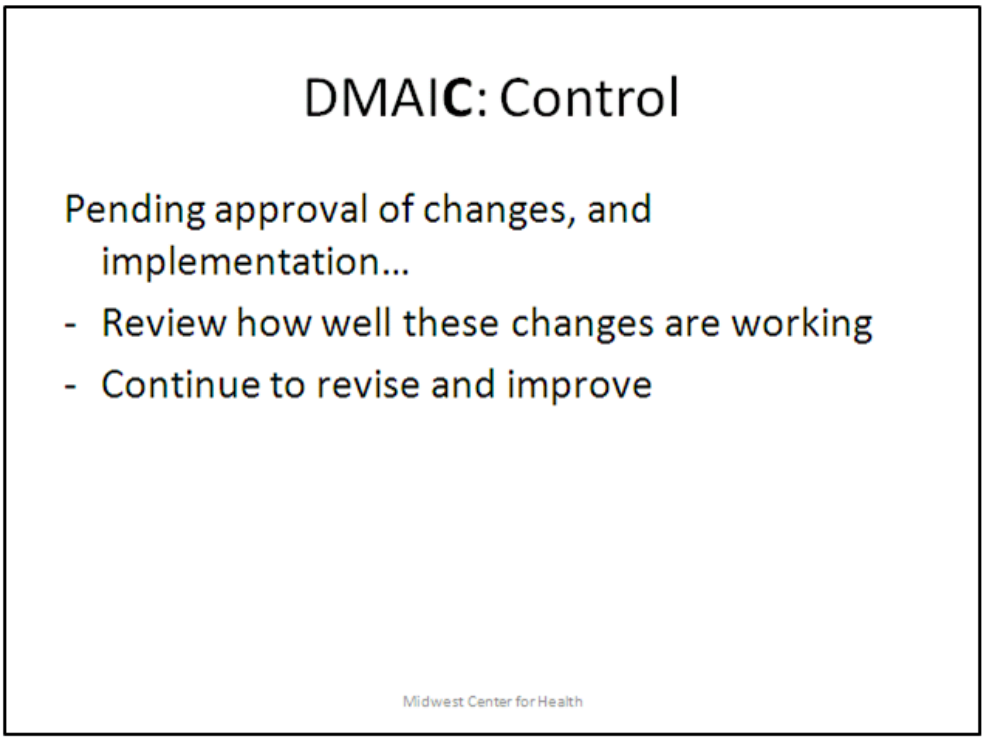


The members of the Board of Directors in the May 2011 meeting were, in addition to this presentation, given a packet of information to take home. This allows for them to reread the recommended changes, and take time to fully consider the proposal. This background material served as a reference for the members of the Board until the July 2011 meeting, at which time the proposal was voted on.

This packet of information gave the members of the Board of Directors sufficient information to consider; there were very few additional questions prior to the July 2011 meeting. At the July 2011 meeting, this proposal was voted upon and accepted. The Board unanimously agreed that adoption of these changes had the potential to benefit the organization. Overall, the members of the Board of Directors were also eager to receive further information about how successfully the new form is being adopted. At the July

2011 meeting it was agreed that there would be a presentation at the next meeting, in September 2011, presenting initial findings from the Care Report changes. As it was agreed that the new form should be adopted as soon as possible, in the July 2011 monthly meeting the adoption of the new Care Report was communicated to volunteers.

May 2011, Midwest Center for Health Informational Packet to Board of Directors

Barnabas Ministry Volunteer Program
Quality Improvements:
Care Reports

Presentation to the Midwest Center for Health Board of Directors

May 2011 – Ann Marie Getchius

Overview

As presented in the May 2011 meeting of the Barnabas Ministry Board of Directors, I have analyzed the goals of the ministry and identified and prioritized areas in need of improvement. The most impactful improvement that the Barnabas Ministry can make at this time is better solicitation of information via Care Reports. Adoption of a new Care Report, with better placement and visibility of the report are proposed.

Kindly consider the information in this packet, and feel free to contact me with any questions prior to the July 2011 board meeting, in which this proposal will be voted on.

Motivation

There are several motivations for the study that was conducted. Quality practices are becoming increasingly important in many industries, to streamline processes and achieve better results. The Barnabas Ministry, with its volunteer-based workforce, needs to ensure that the efforts of volunteers are best utilized and that the residents visited have their needs met as much as possible.

Any number of changes and improvements can contribute to the Barnabas Ministry more successfully reaching its goals. But, given the limited time and resources of the organization, to maximize the benefit of the changes the highest priority improvements should be the addressed first. Thus, this project was conducted to identify the top-priority issue, and determine the appropriate steps to address it.

Methodology

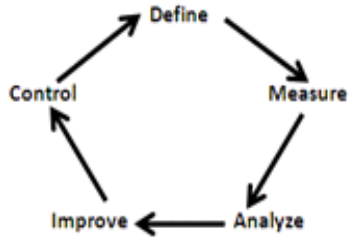
There are many approaches to quality that an organization may use. It is important to select a quality framework that fits the needs of the organization. For the Barnabas Ministry, the quality framework needed to fit this criteria:

1. ***Quick implementation.*** The process must be able to be seamlessly introduced to the Barnabas Ministry in two months or less.
2. ***Timely results.*** Improvements in effectiveness must be recognizable to volunteers almost immediately.
3. ***Straightforward.*** The framework must be able to be readily understood by volunteers with little or no background in quality.
4. ***Small organization compatible.*** The framework must be effective in a small organization.

The methodologies considered were Baldrige, ISO 9000, and Six Sigma, with Six Sigma being the quality approach best suited to these needs.

Six Sigma

There are many tools in the Six Sigma toolbox. Once this quality framework was selected, it was important to approach Six Sigma in a way that would be compatible with the Barnabas Ministry. The DMAIC method – define, measure, analyze, improve, and control – was selected.



DMAIC provides a guideline for how to approach the task of introducing quality, it allows for flexibility, and it is straightforward.

DMAIC: Define

First, basic information about the organization and its objective must be defined. This helps to focus and guide the analysis of the organization; the focus is on the Barnabas Ministry's organizational goals:

1. Frequent visits.
2. High quality visits.
3. Total yearly visits.
4. Monthly volunteer meetings.
5. Track volunteer activity.
6. Spread the word.

DMAIC: Measure

It is important to consider the measurements that may be used to determine if the Barnabas Ministry is successful with its goals. For the Barnabas Ministry, the information available to measure the success of goals includes:

1. Sign-in log.
2. Care Reports.
3. Monthly meeting attendance sign-in sheets.
4. Monthly meeting programs.
5. Board meeting agendas and records.
6. Volunteer contact information.
7. Training materials.

DMAIC: Analyze

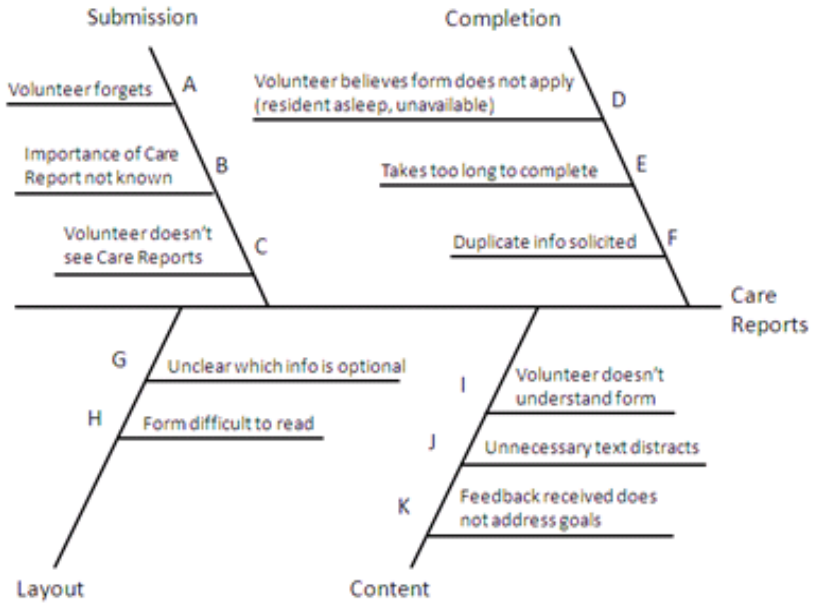
To analyze the Barnabas Ministry's ability to meet their goals, the Failure Mode and Effect Analysis (FMEA) tool was used. First, for each of the goals potential failure modes were identified. For example, for the goal of achieving quality visits, one way that we might fail to meet this goal is simply if the quality of the visits is unknown because the volunteers are not providing any feedback on their time with the residents.

All identified potential failures are rated in three ways: severity, occurrence, and detection of the problem. Severity refers to the severity of the problem. Occurrence corresponds to the likelihood that the problem will occur. Detection is to consider how easily detectable the problem is; issues that are more difficult to detect pose higher risk. These three values contribute to the overall risk priority number for an issue. The potential issues that have the highest value are those that would have the greatest impact, and should be addressed first.

For the Barnabas Ministry, this analysis indicates that "Care Reports" are a top-priority, as these impact the goals of: Frequent Visits, Total Yearly Visits, and Quality of Visits.

DMAIC: Improve

To improve the workflow around Care Reports, it is important to address the submission, completion, layout, and content of the reports. These issues are the underlying causes of many problems and potential problems concerning these reports.



To address these weaknesses in the Care Report process, there are several recommended steps:

1. Completion reminders for Care Reports.
2. Placement and visibility of Care Reports.
3. Adjust form for easy completion for instances where visit does not occur.
4. Volunteer contact information section of Care Report should be made optional.
5. Adjust fonts and layout on form to be more user-friendly.
6. Directly address the quality of the visit in Care Report.

These modifications are reflected in the proposed new version of the Care Report, also contained with this informational packet.

DMAIC: Control

Pending the approval of these actions at the July 2011 Board of Directors meeting, these changes will be implemented.

Upon implementation of the new Care Report form process, it will be important to monitor if the change is indeed an improvement. This shall include consideration of:

- Number of Care Reports submitted
- Errors made with filling out the Care Report
- Usefulness of data collected
- Feedback from Board of Directors, residents, volunteers, and staff

As needed, with this information the Care Report form process may again be adjusted to best suit the needs of the organization, and support the residents.

Moving forward

Thank you for taking the time to consider these modifications to the Care Report process. This informational packet reflects a consolidated version of several months of research on the quality tools best suited towards small non-profits, and actually using these tools to consider the needs of the Barnabas Ministry. I hope that you will find this useful, and welcome any questions or concerns that you may have with the proposed changes. I believe that with these changes to the Care Report that we will have a streamlined form that volunteers will appreciate, and that we may better solicit feedback on the needs of the residents.

Respectfully submitted,
Ann Marie Getchius

Implementation of New Care Report

Having been given the approval of the Midwest Center for Health Board of Directors in the July 2011 meeting to proceed with the recommendations for Care Reports, several steps are taken.

1. *New Care Report*. At the reception desk, the old blank Care Report copies are removed and recycled, and copies of the revised Care Report are made available in their place. These new copies are made on light yellow colored paper, distinguishing them from the several other forms located on the reception desk.

2. *Care Report placement*. The new Care Report is made available next to the sign-in log, so that it is more readily visible to volunteers who are signing out from having visited their Special Person.

The box to turn-in Care Reports is also made available directly adjacent to the pile of Care Reports, and is colored in a similar shade of yellow for continuity. The box is clearly labeled "Care Report Turn-In Box."

3. *Care Report completion reminders*. At the July 2011 monthly meeting for Barnabas ministers, the new Care Report is discussed. Volunteers are made aware of the new report, and are also reminded of the importance of completing the reports. The July 2011 newsletter also included a brief introduction to the Care Report changes, and the importance of continuing to submit Care Reports, to provide this information to volunteers who were unable to attend the meeting.

4. *Feedback solicited on new Care Reports*. In the July 2011 volunteer meeting, and in the July 2011 electronic newsletter, volunteers were encouraged to provide

any feedback they have on the new process for Care Reports. A similar note was placed on the Care Report turn-in box, to provide Barnabas Ministers easy opportunities to express any delights or concerns with the changes. It is important to have the volunteers know that their feedback is welcome, to be sure that the Care Reports allow for the volunteers to adequately express all relevant information about their visits with their Special Person.

G. CONTROL

Through the FMEA study the issues that are most important and impactful for the Barnabas Ministry volunteer program are determined. The highest priority issues are addressed in the "improve" phase of DMAIC. For the Barnabas Ministry, improvement of the Care Report form is the highest priority issue. Upon implementation of the identified improvements, the "control" phase is needed to track changes, confirm that the changes are having the desired effects, and to continue striving to achieve even better processes.

Adoption of the new Care Report began with the Barnabas Ministry in July 2011. The review of the first month of data with the new Care Report is being presented at the September 2011 meeting of the Board of Directors. The success of the new report may be determined by feedback received, any errors made on the new form, completion rates of the form, and the quality of data provided. These factors all indicate that the new Care Report is successful.

Feedback on the New Care Report

For the first month of the new Care Reports being used, feedback was solicited in the monthly newsletter, and via a notice located on the front of Care Report turn-in box. There were eight brief, supportive comments in the Care Report turn-in box. Verbal feedback has also indicated a warm reception to the forms by the Barnabas Minister community. No negative comments were submitted.

Errors Made with New Care Report

The errors made on Care Reports can be a telling way to determine if the Barnabas Minister volunteers have been able to successfully interpret the new form. There were several types of minor errors made on the 87 forms completed.

1. *New Contact Information*. The section of the revised Care Report entitled "New Contact Info? If so, please provide…" is intended to solicit address and phone information from the Barnabas Ministers only if they need to update their contact information on file.

On two of the 87 Care Reports this section was filled in, although the Barnabas Ministers did not have updated contact information. It is likely that the Barnabas Ministers are accustomed to always filling out this section on the previous version of the Care Reports, and continue to do so without paying attention to the instructions on the form. If in future months the same two volunteers continue to fill in this contact information, the Care Report/Book Manager plans to follow up with them, just to let them know that this information is optional, in an effort to save them time.

2. *About the person you visited.* The section of the revised Care Report entitled "About the person you visited" is intended to solicit information about the volunteer's experience with their Special Person, usually a single resident.

On seven of the 87 submitted forms, a single Care Report was used to provide information about multiple residents visited. The redesigned Care Report form is intended to allow for a volunteer to more easily indicate, on a single form, if he or she visited multiple residents. For most of these instances of a single Care Report pertaining to multiple residents, the Barnabas Minister appears to have inadequate space to comment on the "Activity" performed during the visit(s). A future, revised Care Report will benefit from extra space in this section of the form. However, making this change is not urgent, as the volunteers freely used the margins of the form or the back of it to continue to provide information outside of the designated space. The Care Report/Book Manager had no difficulties interpreting these comments.

3. *If you tried to visit but could not, we still want to know.* The section of the revised Care Report entitled "If you tried to visit but could not, we still want to know" is intended to solicit information when the volunteer attempts to visit their Special Person, but for whatever reason the resident is unable to receive a visitor at that time.

Information of this nature was not previously solicited, and was rarely provided. Ten Care Reports submitted in July 2011 indicate attempted visits by Barnabas Ministers that were unable to be completed due to the availability of the

resident. This is valuable information for tracking that these Barnabas Ministers are actively attempting to meet with their Special People. If, over time, there is a trend in Barnabas Ministers who are unable to meet with their Special People, this may indicate the resident may need to be matched with a minister whose schedule is more compatible with theirs.

Of the ten Care Reports that indicated an attempted visit, 4 of these reports did not include the name of the Special Person being visited. In all 4 of these cases, the Barnabas Ministers is assigned to a single Special Person so it was easily deduced which resident the volunteer was attempting to visit. Because these ministers are assigned to a single resident, the Care Report/Book Manager did not find it to be problematic that the resident's name was not specified on the form. However, it is important to consider that there are Barnabas Ministers with multiple Special Persons. Should one of these volunteers attempt a visit but cannot connect with their Special Person, it will be important for these ministers to specify the name of the resident whom he or she tried to visit. If this anticipated problem occurs in the future, then it is recommended that the Care Report be modified to solicit the name of the resident with whom the visit was attempted, in this section of the form.

Completion Rates of New Care Report

In July 2011, there were 87 Care Reports submitted. This is a slight increase from the 74 Care Report completed in June 2011, and nearly equal to the 85 Care Reports submitted in May 2011. That approximately the same number of Care Reports is being

completed as in the past months indicates that volunteers are not frustrated or confused by the forms.

Comparing the total number of Care Reports this month to the volunteer sign-in log, there may be several more visits that are unaccounted for. In the sign-in log for July 2011, there are seven instances of Barnabas Ministers signing in without completing a corresponding Care Report. It is possible that the Barnabas Minister was at the Midwest Center for Health for a reason other than to visit a resident, in which case it is appropriate that there is no submitted Care Report corresponding with their visit. If, over time there is a trend in the individuals who sign-in but do not submit a Care Report, the Care Report/Book Manager intends to contact the individuals to determine if a Care Report should have been completed with their visit.

In addition to the seven cases of Barnabas ministers who used the sign-in log but did not submit a Care Report, there may be still more ministers who visited their Special People without even using the sign-in log. These cases, if they exist, would be completely undocumented visits. It is important to continue to communicate with volunteers about the importance of logging their activities. This provides Barnabas with a record of active volunteers, the Midwest Center for Health a record of individuals who have visited the healthcare center, and allows for better overall tracking of volunteer visits to show the impact the community and the Midwest Center for Health have on each other. It is recommended that communication with the receptionists be undertaken, so that they too might help encourage the better volunteer practices of using the sign-in log and completing Care Reports.

Quality of Data from New Care Report

The Chaplain Leader and Care Report/Book Manager normally review the submitted Care Reports, and continue to do so with the revised Care Reports to understand if the residents' needs are being met.

Data collected from the revised Care Report has uncovered residents in need of supplemental support. For two residents, there were indications in the "About the person you visited" section that the time of week was not optimal for the resident. In both cases, the resident only received visits from family members on a specific day, and Barnabas ministers were also only available that same day of the week. For these cases, the Chaplain Leader is working with the Coordinator/Record Keeper to identify another Barnabas Minister who may provide additional support, so that the residents may benefit from better spaced visits. With time, it is expected that the revised Care Report may uncover other resident and volunteers whose schedules or interests are not well compatible, so additional volunteers may make supplemental visits to such residents.

The Chaplain Leader is pleased with the quality of the data as there is now a way for the volunteer to indicate on the revised Care Report the topics they discussed during their visit. By having this field on the form, it constantly reminds the volunteer to be considering the needs and interests of the resident. And, while reading the Care Reports the Chaplain Leader is also reminded of specific interests that the residents have, so he too may make efforts to engage the residents during his visits with them.

Another indicator of success in the quality of the data in the revised Care Report is that the Coordinator/Record Keeper may directly determine if the Barnabas Minister

volunteer has updated contact information. With the original Care Report the volunteer contact information was always solicited. The Care Report/Book Manager and Coordinator/Record Keeper would need to review each form and the information provided, and compare it to the spreadsheet of volunteer contact information. Most of the time the Barnabas Minister volunteers do not have new contact information to report, so constantly checking this data is not an efficient use of time. The time saved by the new Care Report allows the Care Report/Book Manager and Coordinator/Record Keeper to devote more time to their other duties, and to the residents.

Resolution of FMEA Problems

Considering the feedback, errors made, submission rates, and quality of the data of the revised Care Reports, there has been progress made towards addressing the issues uncovered in the FMEA study.

Issues from the FMEA study that required the most improvement related to three goals: Quality of Visits, Frequent Visits, and Total Yearly Visits.

For the Quality of Visits, the initial FMEA revealed the two effects with the highest RPN values were “Unhappy volunteers lose interest” and “Unhappy residents.” The revised Care Report takes steps to allow for Barnabas Ministers to indicate their level of success in achieving a quality visit with their Special Person. This provides valuable data to the Care Report/Book Manager and the Chaplain leader as they review the Care Reports, to ensure that resident and volunteer pairings are well matched, providing satisfaction to both the resident and the volunteer.

Concerning the FMEA issues of Frequent Visits and Total Yearly Visits, again the greatest potential for failure is “Unhappy residents,” but in this case from an insufficient number of visits. The revised Care Report partially addresses this issue. This is addressed through the collection of data indicating if the time of week and time of day of the visit are suitable for the resident. Some of this data collected has uncovered instances of residents receiving visitation from volunteers at times that are not ideal; additional visits for these residents may address this. In addition to the changes on the form, the Barnabas Ministry is also strongly encouraged to begin maintaining historical Care Report records. This will allow visits to a resident to be monitored over time, which will be another important component in further addressing this potential risk from the FMEA.

These changes to address issues from the FMEA may be summarized and the risk priority numbers associated may be reevaluated as a way to measure this improvement. Only the issues that have been mitigated are shown here; other outstanding issues from the FMEA should be reconsidered later as areas of future work for the Barnabas Ministry, when improvements in other areas of the organization are undertaken.

FMEA for Quality of Visits, after adoption of revised Care Report

Failure	Effect	S	Cause	O	Controls	D	RPN	Actions	S	O	D	RPN
Quality of visits is not known	Unhappy residents	5	Care Reports not submitted	7	None	7	245	Improve visibility, incentives	5	4	7	140
			Care Reports not insightful	5	None	2	50	Review Care Report	4	2	3	24
Dissatisfied resident	Facility given low ratings; resident moves	7	Special Person not given sufficient attention	4	None	4	112	Review resident satisfaction	7	2	3	42

FMEA for Frequent Visit and Total Visits, after adoption of revised Care Report

Failure	Effect	S	Cause	O	Controls	D	RPN	Actions	S	O	D	RPN
Insufficient number of visits	Unhappy residents	8	Care Reports not submitted	8	None	7	448	Improve visibility, incentives	8	6	7	336
			Expected visit frequency unknown	4	Included in training	7	224	Remind semi-active volunteers	8	2	5	80
Insufficient number of yearly visits	Yearly visit goal unmet	2	Goal progress unknown	5	None	3	30	Visibly track goal	2	4	3	24

Some of the major areas of weakness identified in the FMEA have been mitigated, indicating the success of the revised Care Report process as an initial step towards the adoption of quality processes at the Barnabas Ministry.

Continued Care Report Improvements

It is important to document the changes made to the Care Reports. The Barnabas Ministry program does not have the benefit of significant time and labor resources, given its volunteer-based workforce. Thus, detailed documentation of all processes considered and any changes made is impractical for this organization. However, as the workforce is volunteer-based and is thus somewhat dynamic, it is still important to record and preserve sufficient information about the improvements made for the benefit of future volunteers. The Secretary of the Board of Directors maintains a notebook of official proceedings, which has been expanded to include documentation on changes made and the full text of this study. And, the modified Care Report is maintained in paper and electronic versions by the Care Report/Book Manager and the Chaplain Leader.

The completed Care Reports from previous years are no longer available to determine if on a per-volunteer basis there is increased Care Report submission for the month of August. Thus, the impact of the new Care Report on the quantity of reports submitted is only somewhat accurate, given the ever-changing nature of the group of active volunteers. This does not diminish the positive impact of the improved quality of data obtained. The new data has exposed opportunities to improve the quality of the residents' visits, and facilitates the efficient collection of volunteer contact information. But, in the future it would be helpful to retain Care Reports and number of visits per volunteer, so that assessments on a per-volunteer, per-month basis may be possible. Such assessment will allow for better tracking and managing of volunteer activity.

It is important to present the success of the Care Report improvements to the Barnabas Minister volunteers. The dedicated group of Barnabas Ministers needs affirmation that efforts put forth to adopt quality processes are indeed worthwhile. Sharing the improved information attained from Care Reports and other changes as they are implemented, by means of newsletters and meetings, keeps volunteers interested and engaged in this work. The initial successes of the new Care Report will be reviewed in detail with the Board of Directors in the September 2011 Board meeting, and will also be presented in a summarized fashion at the monthly volunteer in September 2011.

It is also crucial to continuing studying the results achieved by the Care Reports, so that further improvements may be made as needed. This may be done with the guidance of the Plan Do Check Act cycle. The improvements to address the FMEA results are only a first-pass at making changes, and over time it may be realized that additional changes could be desirable. For the PDCA cycle for Care Reports, it is recommended that Care Reports continue to be evaluated at the bi-monthly Board of Directors meetings for a period of one year. And, if additional changes or improvements are made to the Care Report, then it may be beneficial to continue evaluating the report with this bi-monthly frequency for a longer duration. The Care Report/Book Manager member of the Board should continue to provide information on the number of Care Reports being turned in, and if the reports are being completed to entirety. The Chaplain Leader should likewise continue to determine if the modified forms are providing him with more valuable information as he reviews the volunteers' responses on the forms. The feedback of the Care Report/Book Manager and Chaplain Leader may be used to

make any additional changes needed to the Care Report form. And, with the progression of time as there is less feedback on the form and other issues of higher priority become the group's focus, then the Care Report may be reevaluated less frequently.

With the revised Care Report achieving favorable results, the Barnabas Ministry may consider beginning to address the next highest priority issues, as determined by the FMEA study. With a methodical quality framework to guide the Midwest Center for Health's Barnabas Ministry, a willingness follow the DMAIC cycle, and a focus on the ultimate objective of serving the needs of the residents, future quality efforts are likely to also be successful.

H. REFERENCES

Aven, T. (2008). *Risk analysis: Assessing uncertainties beyond expected values and probabilities*. Retrieved from http://site.ebrary.com/lib/csudh/Doc?id=10297957&ppg=76

Brace, I. (2008). *Questionnaire design: How to plan, structure and write survey material for effective market research.* Retrieved from http://site.ebrary.com/lib/csudh/Doc?id=10250416&ppg=25

Burton, T. (2003). Six Sigma for small and mid-sized organizations. *Breakthrough*. Retrieved from http://www.ceobreakthrough.com/pdf_files/Breakthrough-03Spring.pdf

Crabtree, R. (2006). 5S as an integral part of Six Sigma. *Villanova University*. Retrieved from http://www.universityalliance.com/info1/whitepapers/villanova/pdfs/WP_VU_IsThereApayoff.pdf

Crocoll, C. (2001). Inspiring volunteer development: A resource book for training senior volunteers in intergenerational programs. *Corporation for National Service*. Retrieved from http://nationalserviceresources.org/files/legacy/filemanager/download/455/crocoll.pdf

Gray, C. & Larson, E. (2008). *Project management: The managerial process (4th ed)*. Boston, MA: McGraw-Hill.

Juran, J. (1998). *Quality improvement process*. Retrieved from http://site.ebrary.com/lib/csudh/Doc?id=5003487&ppg=3

Kroemer, K., Kroemer, H., & Kroemer-Elbert, K. (2003). *Ergonomics: How to design for ease and efficiency* (2nd ed). Upper Saddle River, NJ: Prentice Hall.

Lusthaus, C. (2002). In M. Adrien & G. Anderson (Eds.), *Organizational assessment: A framework for improving performance*. Retrieved from http://site.ebrary.com/lib/csudh/Doc?id=10137750&ppg=161

Neal, J. & Biberman, J. (2004). *Research that matters: Helping organization integrate spiritual values and practices*. Retrieved from: http://site.ebrary.com/lib/csudh/Doc?id=10058635&ppg=13

Nelson, B. & Economy, P. (2005). *Management bible*. Retrieved from http://site.ebrary.com/lib/csudh/Doc?id=10114163&ppg=122

Spitzer, D. R. (2007). *Transforming performance measurement: Rethinking the way we measure and drive organizational success*. Retrieved from http://site.ebrary.com/lib/csudh/Doc?id=10196166&ppg=43

Teicholz, E. (2001). *Facility design and management handbook*. Retrieved from http://site.ebrary.com/lib/csudh/Doc?id=10180074&ppg=330

U.S. Department of Labor, Occupational Safety & Health Administration. (n.d.). *Workstation Components.* Retrieved from http://www.osha.gov/SLTC/etools/computerworkstations/components_monitors.html#Angle

Yang, K. & El-Haik, B. (2008). *Design for Six Sigma.* Retrieved from

http://site.ebrary.com/lib/csudh/Doc?id=10251607&ppg=412