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## THE UTILIZATION OF MODELS OF CARE TRANSITION TO REDUCE MEDICARE BENEFICIARIES' HOSPITAL READMISSION RATES IN KENTUCKY: A CASE STUDY

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Sarah Wackerbarth, PhD, Committee Chair

Corrine Williams, ScD, MS, Director of Graduate Studies

**THE UTILIZATION OF MODELS OF CARE  
TRANSITION TO REDUCE MEDICARE  
BENEFICIARIES' HOSPITAL READMISSION RATES  
IN KENTUCKY: A CASE STUDY**

**CAPSTONE PROJECT PAPER**

A paper submitted in partial fulfillment  
of the Requirements for the degree of  
Master of Public Health  
in the  
University of Kentucky College of Public Health

By

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April 18, 2016

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## Abstract

*Problem:* Unsuccessful care transitions for Medicare beneficiaries have resulted in high health expenditures and a diminished quality of care as the 30-day hospital readmission rate has increased. This has prompted the Centers for Medicare and Medicaid Services to require hospitals with high readmission rates to pay penalties. As a result, the Community-based Care Transitions Program was established under Section 3026 of the Affordable Care Act to provide health organizations funding to utilize models of care transition to improve the care transition process. The purpose of this capstone project was to identify whether two community-based organization programs, the Kentucky Appalachian Transition Services and Bluegrass “TLC” Transitional Care Program, had accomplished the goals set forth by the national Community-based Care Transitions Program.

*Methods:* This capstone used a case study approach. The analysis was based on a triangulation of data collected during interviews with that of existing agency and government documents. Interview questions to assess whether the programs had achieved the goals set forth by the Community-based Care Transitions Program and the model of transitional care they were following were based on Avedis Donabedian’s three domains of quality (structure, process, and outcome) as a conceptual and analytic framework.

*Results:* The Bluegrass “TLC” Transitional Care Program has had success accomplishing some of the goals set forth by the Community-Based Care Transitions Program. By following the model established under the National Transitions of Care Coalition, 50 percent lower readmission rates were found among high-risk participants enrolled in the program at Baptist Health Lexington compared to those who were qualified for the program but chose not to enroll. Kentucky Appalachian Transition Services utilization of the Coleman Care Transitions Program

and the Transitional Care Model has led Medicare beneficiaries enrolled in the program to receive quality care and successful accomplishment of many of the goals set forth by the Community-based Care Transitions Program. Kentucky Appalachian Transition Services reduced the 30-day, all-cause readmission rate for Medicare beneficiaries by an average of 12.3 percent across the four hospitals they collaborated with; the readmission rate is now approximately 19 percent.

*Conclusion:* Interviews conducted with stakeholders at the community-based organizations provided insight into the extensive development, implementation, and evaluation process of care transition programs and the positive impact they can have on hospital readmissions in years to come. However, the sustainability and development of new transition programs will depend on the recruitment of other payers. The utilization of Avedis Donabedian's three domains of quality would be a beneficial model for future transition programs to utilize in order to evaluate the progress of their program in accomplishing its goals.

## Introduction

As the population of the United States continues to age, approximately 14.1 percent of the country's citizens are considered to be "older Americans" (Administration on Aging, 2015). By 2060 the number of individuals who are 65 years of age or older is expected to be 98 million; a two-fold increase from 44.7 million in 2013 (Administration on Aging, 2015). Over 44 million individuals are Medicare beneficiaries and this number is expected to increase to 79 million individuals by 2030 (Umans & Nonnemaker, 2009).

Medicare beneficiaries often experience illness and suffer from disabilities that require treatment from medical providers in several different care environments (Brock et al., 2013). Unfortunately, ineffective and uncoordinated care transitions that occur between hospitals and other care environments can result in unnecessary costs to the health care system estimated at \$12-\$44 billion each year (Center for Healthcare Research & Transformation, 2014). A care transition refers to the situation in which a patient relocates from one care environment to another in the health care system (Centers for Medicare and Medicaid Services, 2015). Poorly organized and mismanaged transitions of care result from the vast, complicated, and fragmented health care system in the United States (Burton, 2012; Li, Young, & Williams, 2014). Thus, it becomes difficult to have an effective system of coordinating care among several care environments and clinical professionals for patients who have diverse health needs, levels of health literacy, and socioeconomic statuses (Li et al., 2014). During a one year period, it is estimated that Medicare beneficiaries who suffer from chronic illnesses could visit 16 different physicians (Li et al., 2014). An individual can be at risk of receiving lower quality care during an unorganized care transition due to infection, mismanagement of medication, and falls (Center for Healthcare Research & Transformation, 2014). According to the literature, successful care



transitions are often not achieved due to several factors including: A lack of training and education for patients and caregivers, decreased communication between medical providers, a lack of follow-up with primary care physicians, diminished support from the community that is conducive to health, and chronic conditions not being addressed during the original care episode (Li et al., 2014).

- A lack of training and education for patients and caregivers- Before discharge from a hospital, many patients and their caregivers are not included in the transition planning and are not prepared for the tasks that will be expected of them upon returning home, such as medication management (Li et al., 2014). A lack of training also prevents patients from understanding the information they should share with their primary care physician during their appointments after hospital discharge (National Transitions of Care Coalition, 2008).
- Decreased communication among medical providers- According to several research studies, negative health issues often arise following hospital discharges due to a lack of communication between hospitalists and medical providers in an outpatient setting (Li et al., 2014). This is often attributed to primary care physicians in the community not receiving information about the patient's diagnostic tests and results, or their discharge plan (Arora et al., 2010). There are few incentives for hospitals to ensure they are forwarding patients' records to their primary care physicians (Burton, 2012). It is estimated that during patients' transitions from a hospitalist to an outpatient provider, the lack of communication that occurs contributes to 80 percent of "serious medical errors" (Li et al., 2014).

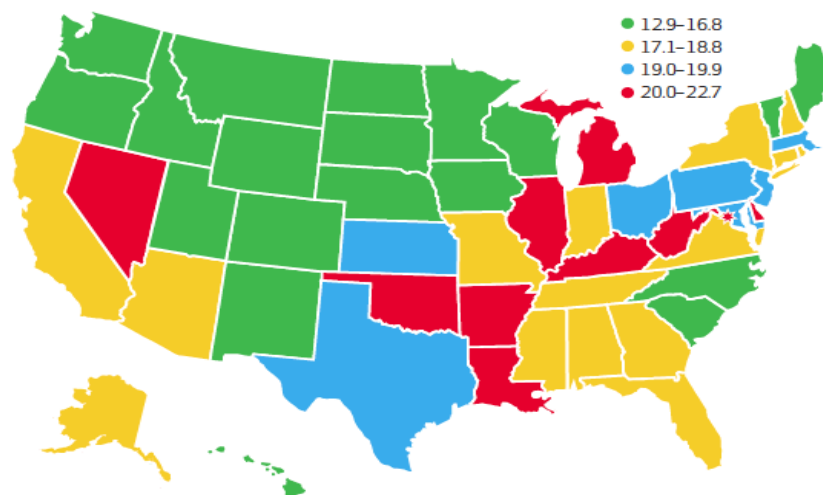
- A lack of follow-up with a primary care physician- It has been found that 50 percent of Medicare beneficiaries readmitted within 30 days of their original discharge do not meet with a primary care physician in an outpatient setting (Burton, 2012). Individuals who suffer from heart failure or chronic obstructive pulmonary disease but have contact with a primary care physician within a week of discharge have a decreased risk of hospital readmission (Li et al., 2014).
- Diminished support from the community that is conducive to health- Although there is a great benefit to individuals who have access to an outpatient physician in the community after being discharged from the hospital, there are several factors that prevent this from occurring. These include a lack of transportation and low health literacy (Li et al., 2014; National Transitions of Care Coalition, 2008). Unfortunately, these factors that prevent an individual from acquiring support and resources from their environment contribute to 40-50 percent of readmissions (Li et al., 2014).
- Chronic conditions not being addressed during the original care episode- Greater than 25 percent of hospital readmissions within 30 days of initial discharge are due to a condition not treated during the original hospital admission, according to the Center for Studying Health Systems Change (Li et al., 2014). Patients often receive information from several physicians that is inconsistent, and this can lead to confusing instructions for how a chronic condition should be managed (E. A. Coleman, Parry, Chambers, & Min, 2006).

Furthermore, approximately 20 percent of Medicare beneficiaries are readmitted within 30 days of their hospital discharge (Centers for Medicare and Medicaid Services, 2015). The 30-day unplanned readmission rate is a measure utilized by CMS to identify an, “unplanned readmission for any cause to any acute care hospital within 30 days of discharge from a

hospitalization” (Medicare.gov, 2016). A 30 day time period is chosen for this measure because time periods that extend beyond this would allow greater opportunity for other influences to cause readmissions (such as patients’ choices) that are out of the control of the hospital and medical professionals providing care there (Medicare.gov, 2016). A hospital readmission that occurs within 30 days of discharge can be an indication of poor quality of care provided at a hospital, the patient’s medical condition not being properly managed after discharge, or a lack of access to medical services in the community (Silow-Carroll, Edwards, & Lashbrook, 2011).

As shown in Figure 1, the state of Kentucky has some of the highest 30-day readmission rates among Medicare beneficiaries in the United States (Burton, 2012).

**Figure 1: Medicare 30-Day Hospital Readmissions as a Percentage of Admissions, 2009**



SOURCE Commonwealth Fund, "Medicare 30-Day Hospital Readmissions as a Percent of Admissions: National Metrics," October 2009.

(Burton, 2012)

Many acute care hospitals and community-based organizations have been prompted to review the experience of patients throughout the care transition process as the Centers for Medicare and Medicaid Services (CMS) established financial penalties for hospitals with high 30-day readmission rates for heart failure, pneumonia, and myocardial infarctions beginning in October

2012 (Center for Healthcare Research & Transformation, 2014). These penalties can result in a decrease up to one percent in annual Medicare reimbursement funds for hospitals (Center for Healthcare Research & Transformation, 2014). In 2013, over 2,200 hospitals were expected to lose \$280 million in Medicare reimbursement funds due to these penalties (Burton, 2012).

Kentucky is one of eight states that have the highest penalties in the country (Kentucky Hospital Association, 2015).

#### Community-based Care Transitions Program

Recognizing the struggles that acute care hospitals face in coordinating care transitions and reducing Medicare beneficiaries' hospital readmission rates, The Affordable Care Act (ACA) established the Community-based Care Transitions Program (CCTP) under section 3026 (Kocher & Adashi, 2011). The five year program officially began in 2012 with the intention of providing accepted organizations with funding under two year agreements; these could be extended during the five years depending on the success of the organization and their project (Centers for Medicare & Medicaid Services, 2016). With oversight from CMS, the CCTP aimed to provide support and funding to community-based organizations or acute care hospitals collaborating with a community-based organization to utilize models of care transition to better the care transition process for Medicare beneficiaries considered high risk (Centers for Medicare and Medicaid Services, 2015). Community-based organizations had to be located in the region in which the population they plan to serve resides (Centers for Medicare & Medicaid Services, 2012). Examples of these include Area Agencies on Aging and Federally Qualified Health Centers (Centers for Medicare & Medicaid Services, 2012). The CCTP also collaborated with the public-private initiative Partnership for Patients that works to improve the quality of care received by patients and reduce readmission rates (Centers for Medicare and Medicaid Services, 2015). Over \$500 million was provided to community-based organizations and acute care

hospitals through the CCTP and was distributed based on a monthly “per-eligible discharge basis” established by the organizations’ agreements (Centers for Medicare & Medicaid Services, 2012; Kocher & Adashi, 2011). Services reimbursed by the CCTP had to be directly related to the care transition process (Centers for Medicare & Medicaid Services, 2011). The reimbursement rate was based on such factors as the number of beneficiaries expected to participate, the intervention model to be implemented, and the anticipated rate of decrease in Medicare readmissions (Centers for Medicare & Medicaid Services, 2012). Community-based organizations were to, “Only be paid once per eligible discharge in a 180-day period for any given beneficiary” (Centers for Medicare & Medicaid Services, 2016). However, organizations could not be reimbursed for discharge procedures mandated by the CMS Conditions of Participation and Social Security Act (Centers for Medicare & Medicaid Services, 2012). The CCTP is no longer accepting applications and ended in 2015 (Centers for Medicare & Medicaid Services, 2016).

The organizations and hospitals accepted into the CCTP were expected to utilize outcome and process measures as they collected and examined the findings of their program (Centers for Medicare and Medicaid Services, 2015). They were also responsible for ensuring that quality care occurred throughout the continuum of care transition and included such provisions as discharge education that is considerate of patients’ cultures, regular and timely interactions between patients and outpatient medical providers, and care transition services that begin at least one day before patients are discharged from the hospital (Centers for Medicare and Medicaid Services, 2015). The CCTP strived to uphold the triple aim of, “making health care safer, more reliable, and less costly” (Centers for Medicare and Medicaid Services, 2015). Goals of the CCTP also consisted of reducing readmissions among high-risk Medicare beneficiaries, reducing

costs associated with the Medicare program, enhancing the quality of care received by patients, and improving the transition process for Medicare beneficiaries as they move from a hospital to an outpatient setting (Centers for Medicare & Medicaid Services, 2012).

To be eligible to apply for funding through the CCTP, applicants had to provide CMS with a budget proposal, an implementation plan, root cause analysis, and information about their organizational structure (Centers for Medicare & Medicaid Services, 2012). Implementation plans were required to contain detailed information regarding how an organization would evaluate their program and report those results to CMS, along with discussing how care transition programs could work in accordance with other “payers” in the region (Brown & Swinford, 2014; Centers for Medicare & Medicaid Services, 2012). The root cause analysis was intended to provide community-based organizations and hospitals with the tool to identify what contributed to Medicare beneficiaries 30-day readmission rates and how the new transition program could support the discharge process (Centers for Medicare & Medicaid Services, 2012).

#### [Kentucky Appalachian Transition Services](#)

Hospice of the Bluegrass in Lexington, KY established the case management company Kentucky Appalachian Transition Services (KATS) that is responsible for the implementation of their transition program sponsored by the CCTP (Brown & Swinford, 2014). In 2013, KATS became one of 101 projects in the United States to receive the funding award from CMS (Econometrica Inc., 2014). KATS is also the only community-based organization to implement and follow the Transitional Care Model (TCM) for their program and the Coleman Care Transitions Program (Brown & Swinford, 2014). KATS serves a 21 county region with 16 counties in Eastern Kentucky and five in Western West Virginia (Brown & Swinford, 2014; Quality Improvement Organizations, 2012) (Appendix). With the implementation of its transition program, it collaborated with four hospitals part of the Appalachian Regional Healthcare System

that had high 30-day readmission rates among Medicare beneficiaries including Harlan ARH Hospital, Hazard Regional Medical Center, Whitesburg ARH Hospital, and Williamson ARH Hospital (Brown & Swinford, 2014). Collaborating partners with this program also include the Kentucky River Area Development District's Area Agency on Aging and Cumberland Valley Area Development District's Area Agency on Aging (Brown & Swinford, 2014).

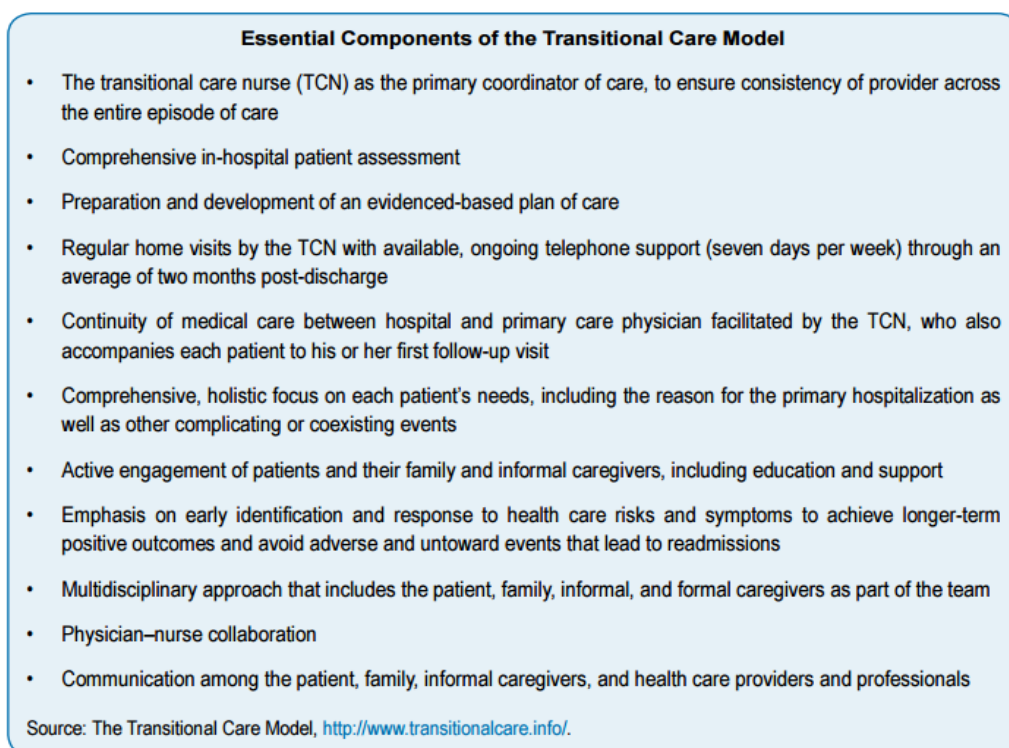
#### Transitional Care Model (TCM)

After 20 years of clinical trials sponsored by the National Institutes of Health and research studies at the University of Pennsylvania with Dr. Mary Naylor, the TCM was developed. It is considered best practice for care transition models according to the Center for Health Research and Transformation (Brown & Swinford, 2014; Center for Healthcare Research & Transformation, 2014; Naylor & Sochalski, 2010). Transitional care refers to, “a range of time-limited services that complement primary care and are designed to ensure health care continuity and avoid preventable poor outcomes among at-risk populations as they move from one level of care to another, among multiple providers and across settings” (Naylor & Sochalski, 2010). The model focuses on extensive hospital planning and the goals of transitional care which include eliminating negative health outcomes for the chronically ill while emphasizing the importance of follow-up appointments when a patient returns home (Naylor, Aiken, Kurtzman, Olds, & Hirschman, 2011; Naylor & Sochalski, 2010). The TCM's primary focus is on preventing readmissions to hospitals that could be avoided (Naylor & Sochalski, 2010). Patients receiving care based on this model include older individuals who are considered high-risk, are of sound mind, have a variety of medical issues, and plan to transition from a hospital to their home after discharge (Naylor & Keating, 2008).

Advanced practice registered nurses (APRN) are the clinical professionals responsible for overseeing that patients enrolled in the TCM receive the necessary medical services (Naylor &

Keating, 2008). The APRNs working with the TCM undergo training to gain the specific skills and knowledge necessary to work with aging adults and educate the caregivers that are responsible for attending to the needs of these individuals (Naylor & Sochalski, 2010). They are also responsible for ensuring that the essential components of the TCM (as evident in Figure 2) are being properly carried out (Naylor & Sochalski, 2010). For approximately six weeks after discharge, an APRN will visit the patient at their home (Center for Healthcare Research & Transformation, 2014).

**Figure 2: Transitional Care Model**



(Naylor & Sochalski, 2010)

Research has found that the TCM has been successful at decreasing costs related to medical care while at the same time enhancing the quality of care and the quality of life for a patient (Naylor & Sochalski, 2010). The main outcomes the TCM strives to achieve are preventing individuals from being readmitted to emergency rooms at hospitals, improving the overall health of individuals after discharge, enhancing the care experience of patients and their



caregivers, and reducing costs associated with health care (Naylor & Sochalski, 2010). Clinical trials have found that for every older adult, the implementation of the model results in \$5,000 in health care savings (Naylor & Keating, 2008).

#### Coleman Care Transitions Program

The main goal of the Coleman Care Transitions Program (also known as the Care Transitions Program) is to provide resources that support patients and their caregivers in taking a prominent role during the transition from a hospital to a home environment in order to decrease the risk of hospital readmissions (Rosalynn Carter Institute for Caregiving, 2012). Through this program, health care providers and patients are encouraged to share health information across several areas of the health continuum (Rosalynn Carter Institute for Caregiving, 2012). The program model also supports that additional knowledge and training should be offered to medical professionals so they can provide medical services that promote safety and quality (Rosalynn Carter Institute for Caregiving, 2012). The intervention generally focuses on older adults who have co-morbidities, such as diabetes mellitus and congestive heart failure, that would increase their risk of needing skilled nursing care after discharge from a hospital (E. Coleman, 2015). The Care Transitions Program was developed by Dr. Eric Coleman at the University of Colorado at Denver.

Throughout the four week program, patients and their caregivers are provided training by a transition coach that teaches them how to achieve self-management techniques for maintaining health and stability when they transition from the hospital to their home (E. Coleman, 2015; Li et al., 2014). The transition coach meets with the patient before discharge from the hospital and then conducts one home visit (E. Coleman, 2015). During the four week period the transition coach will also contact them three times via telephone (E. Coleman, 2015). The four areas of focus in this program model consist of self-management of medication, utilization of a patient-

centered medical record, follow-up visits with community medical professionals, and patient education on how to handle any additional medical concerns that arise (Rosallynn Carter Institute for Caregiving, 2012). Research has found that institutions who have implemented the model have seen a 20-50 percent decrease in hospital readmission rates (E. Coleman, 2015). Over 52 percent of individuals enrolled in the program have also been found to have a greater ability to accomplish their goals for managing symptoms and health functional capability (E. Coleman, 2015; Rosallynn Carter Institute for Caregiving, 2012).

#### [Bluegrass “TLC” Transitional Care Program](#)

Beginning in 2014, the Bluegrass Area Agency on Aging and Independent Living (BGAAAIL) located in Lexington, KY developed the Bluegrass “TLC” Transitional Care Program. Although this project does not receive funding from the CCTP or follow the CMS guidelines for such a program, the agency felt strongly after talking with several community care organizations that there was a need in the community to improve the care transition experience of patients since readmission penalties were going to be enforced by CMS; the Bluegrass Region had a 30-day hospital readmission rate of approximately 17 percent (Cooper & Altpeter, 2016). The program currently partners with Baptist Health Lexington and is available on three floors of the hospital (Cooper & Altpeter, 2016). The goal of the program is to, “provide the necessary tools to help patients better manage their own health care” (McLean, 2014).

The program follows the National Transitions of Care Coalition’s seven evidence-based elements of care transition that include the following: medication management, establishing a personal health record, follow-up with medical care, patient education of warning signs, transitions planning, caregiver support, and long-term services and supports assistance (Cooper & Altpeter, 2016). The Bluegrass “TLC” Program relies on a transition coach who works in collaboration with the hospital’s case management and quality improvement teams to ensure the

patient enrolled in the program is receiving the care, information, and support that they require (McLean, 2014). As in the Coleman Care Transitions Program, once patients are enrolled in the program, they meet with the transition coach once in the hospital to discuss their discharge and care instructions and then again at their home (McLean, 2014). This is followed by a minimum of three phone calls from the coach during the 30 days after discharge (McLean, 2014).

In summary, ineffective and uncoordinated care transitions for Medicare beneficiaries have resulted in health expenditures of up to \$44 billion each year (Center for Healthcare Research & Transformation, 2014). This problem is exacerbated by a fragmented health care system and ineffective delivery of health care services (Burton, 2012). In regard to Medicare beneficiaries, 20 percent are readmitted within 30 days of their hospital discharge (Centers for Medicare and Medicaid Services, 2015). As a result, the federal government recognized that acute hospitals face challenges in coordinating care transitions and reducing Medicare beneficiaries' hospital readmission rates (Kocher & Adashi, 2011). The CCTP was established to provide organizations accepted into the program with funding to utilize models of care transition to improve the transition process for Medicare beneficiaries (Centers for Medicare & Medicaid Services, 2016). The purpose of this capstone paper is to identify whether two community-based organizations, KATS and the Bluegrass "TLC" Program, have accomplished the goals set forth by the CCTP. These goals include improving the quality of care received by high-risk Medicare beneficiaries transitioning from a hospital to another care environment, reducing 30-day, all-cause readmission rates for Medicare beneficiaries, and reducing costs. It will further be discussed whether the two community-based organizations are providing services and care as outlined in the model of care transition they are following. High readmission rates continue to be a problem for hospitals and can negatively impact the reimbursement they receive from

Medicare. Thus, this is an essential topic to review as the population of the United States continues to age.

## Methods

This investigation used a case study approach because it allows for the investigation of a, “contemporary phenomenon within its real-life context,” and several types of data and evidence can be collected throughout the study process (Yin, 1989). A case study is useful when the behaviors and actions of individuals in the contemporary event cannot be changed and as a result, the collection of data involves direct observation and systematic interviewing (Yin, 1989). The case study model is reflected in the research collection method of this study as key stakeholders employed with the Bluegrass “TLC” Program and KATS were asked questions during in-depth interviews about their involvement and knowledge of the programs. The community-based organizations selected for this case study were chosen because they were among the few programs in Kentucky that had been accepted into the CCTP or implementing a transitional care program.

The analysis was based on merging data collected during interviews, existing agency documents, and CMS documents containing program information and results. Interview questions to assess whether the programs were achieving the goals set forth by the CCTP and the model of care transition they were following were based on Avedis Donabedian’s three domains of quality (structure, process, and outcome) as a conceptual and analytic framework. Similar question sets were utilized for interviews at both agencies (Appendix). Before the interviews were conducted, the questions were categorized according to the quality domain they pertained to in order to ensure that all measures were being assessed during the interviews. They were then

further reviewed for clarification and content by a professor from the University of Kentucky's College of Public Health with knowledge of case study research. This study was deemed exempt by the University of Kentucky's Institutional Review Board.

### Avedis Donabedian's Domains of Quality

It is essential to recognize that before quality of health care services can be assessed, the researcher should be able to identify that there are connections between structure, process, and outcome measures (Donabedian, 1988).

- Structure- This domain refers to the environment and setting where care actually takes place (Donabedian, 2005). Structure takes into consideration such factors as the equipment and supplies used to provide care, the education and qualifications of the professionals and agency administering care, and the financial and administrative means by which the agency is able offer care (Donabedian, 1988, 2005).
- Process- The process domain examines whether proper or "good" care has been carried out (Donabedian, 2005). In order to evaluate whether the process of care has been successful, the factors that are examined include, "evidence of preventive management in health and illness; coordination and continuity of care; acceptability of care to the recipient and so on" (Donabedian, 2005). Process also focuses on the patient's actions in accepting care and the medical professionals role in prescribing a treatment (Donabedian, 1988).
- Outcome- The outcome domain refers to the impact that care has on the health of an individual (Donabedian, 1988). The outcomes that are of interest when measuring quality often include survival, level of function, and increased knowledge for the patient regarding their health (Donabedian, 1988, 2005).

The first interview was conducted at the BGAAAIL on February 25, 2016 with the community-based organization's Transition Coordinator. The transition coordinator has been responsible for overseeing the Bluegrass "TLC" Program since its official implementation in May 2014. The second interview was conducted at the Hospice of Bluegrass on March 9, 2016 with the Vice President of Administration. This individual has overseen the implementation of KATS beginning with its pilot program in 2011. After completion of the interviews, information collected was cataloged in relation to the quality domains of structure, process, and outcome.

## Results

The information analyzed and described throughout this section of the paper, which was collected from stakeholder interviews, provides insight into whether both community-based organizations have provided quality care based on Avedis Donabedian's domains of quality and their program's goals.

### Bluegrass "TLC" Program

#### Structure

As mentioned previously, the Bluegrass "TLC" Program is available on three floors at Baptist Health Lexington. The program was expanded to a floor at Baptist Health Richmond for a few months in 2015 but is no longer being conducted there. The Bluegrass "TLC" Program is free to the patient enrolled and considered a benefit provided by the hospital. Baptist Health Lexington reimburses the BGAAAIL with a per-member, per-month fee. Hospital departments that collaborate with the BGAAAIL include Baptist Health Lexington's quality assurance, case management, social work, and pharmacy departments. The focus of this collaborative program is on individuals who are identified as being high-risk for readmission to the hospital within 30

days of discharge. Approximately 33 percent of patients enrolled in the Bluegrass “TLC” Program have insurance coverage under Medicare and an additional 33 percent of patients are covered under Medicaid. The program is considered to be “all inclusive” since individuals of all ages and different co-morbidities are eligible for the program as long as they are considered high-risk for readmission within 30 days of discharge. Baptist Health Lexington utilizes the LACE index tool to identify these individuals (Cooper & Altpeter, 2016). Patients that have a higher score than seven on the LACE index are considered high-risk (Cooper & Altpeter, 2016).

### Process

The BGAAAIL’s decision to follow the National Transitions of Care Coalition’s seven evidence-based elements for their care transition program was based on discussions between the agency and the community coalition they established (in 2012) with various Kentucky care organizations. The coalition was originally assembled to review the problem of hospital readmissions in Kentucky since CMS financial penalties under the ACA were of great concern to hospitals in the Bluegrass Region (Cooper & Altpeter, 2016). There was a consensus among the organizations that social factors have great influence on hospital readmissions and utilizing a model that takes into consideration these factors and a medical model would have great success in reducing hospital readmissions in the Bluegrass Region. The Bluegrass “TLC” Program has also received guidance about program development from the Administration for Community Living and CMS (Cooper & Altpeter, 2016). It seemed to be a natural fit for the BGAAAIL to oversee the Bluegrass “TLC” Program since the agency provides many community-based services that support an individual living independently in the community.

Patients identified as high-risk who accept admission into the program are assigned to one of the three transition coaches employed by the BGAAAIL. These transition coaches have met state standards for being a case manager and have undergone training specific to the

National Transitions of Care Coalition program and working at the hospital. Each transition coach is responsible for about 35 patients and meets regularly with the quality and case management teams at the hospital to discuss the progress of patients in the program (Cooper & Altpeter, 2016).

The Bluegrass “TLC” Program is a 30 day program. Three days after the patient has returned home and met with the transition coach at the hospital, the transition coach visits the patient’s home and evaluates them according to the seven elements of the National Transitions Care Coalition Program. This determines what services they may need to decrease their chance of readmission. The services provided to the patient are classified according to two groups. Transitional care services refer to the support that patients receive in ensuring they have the proper resources to move from the hospital to their home (Cooper & Altpeter, 2016). Community choice services refer to resources that help patients achieve maximum functional potential (Cooper & Altpeter, 2016). These include information packets about community services, caregiver support groups, and education programs for caregivers (Cooper & Altpeter, 2016). The transition coach can also refer a patient to in-home and community-based support services available through the BGAAAIL including the Nutrition Services Program and the Medicaid Consumer Directed Option. Those services would be funded separately by the patient outside of the program. The Transition Coordinator at the BGAAAIL refers to the program services as “person-centered” because they benefit the specific needs of each patient throughout the continuum of care (Cooper & Altpeter, 2016). Throughout the course of the program the transition coach will either call or visit the patient to check on their progress on the 7<sup>th</sup>, 14<sup>th</sup>, and 30<sup>th</sup> day. After the 30<sup>th</sup> day, the patient is discharged from the program.



## Outcome

From May 1, 2014 to October 31, 2015, 1,200 patients were referred to the Bluegrass “TLC” Program (Cooper & Altpeter, 2016). The BGAAAIL evaluated the success of the program by comparing the readmissions of an intervention and non-intervention group. The intervention group refers to individuals who were eligible for the program and accepted admission. The non-intervention group refers to individuals who were eligible for the program, did not accept admission, but continued to be tracked by the hospital for a readmission within 30 days of discharge. When the 597 intervention group members were examined in relation to the 603 non-intervention group members, the intervention group had a 50 percent greater decrease in 30-day, all-cause readmissions than the other group (Cooper & Altpeter, 2016). The non-intervention group had 87 readmissions within 30 days of discharge (14.43 percent) compared to the intervention group which had 47 readmissions (7.87 percent) (Cooper & Altpeter, 2016). Information was not available in the interview regarding the exact amount the program has saved Baptist Health Lexington in CMS penalties. However, the Transition Coordinator shared that the Bluegrass “TLC” Program has improved the continuity of care across areas of the health care system, decreased how much is spent by Medicare per beneficiary, and increased the satisfaction patients have for the care they receive (Cooper & Altpeter, 2016).

## [Kentucky Appalachian Transition Services](#)

### Structure

KATS was one of 101 programs in the United States that was accepted into the CCTP in February 2013 and received funding through CMS. The decision to collaborate with the four hospitals in the Appalachian Regional Health Care System was based on the fact that CMS had identified these hospitals during the solicitation phase of the CCTP as having some of the highest

Medicare 30-day readmission rates in the country for congestive heart failure, heart attacks, and pneumonia. Specifically, Hazard Regional Medical Center was identified as having some of the highest readmission rates in the United States for these conditions. KATS also desired to collaborate with hospitals where they would be able to make a large enough “footprint” in reducing fee-for-service (FFS) Medicare beneficiaries’ 30-day, all-cause readmission rates. About 750-800 FFS Medicare beneficiaries are admitted every month to the four hospitals and the program predicted that about 300 individuals would be eligible and targeted for the program. Unlike the Bluegrass “TLC” Program, the original eligibility requirements for KATS participants included that they must be enrolled in Medicare FFS programs, be 65 years of age or older, cognitively alert, plan on returning home after discharge (or a skilled nursing facility for no more than three weeks), and do not suffer from end-stage renal disease (Hospice of the Bluegrass, 2014).

As KATS began the CMS application process to apply for funding through the CCTP, they conducted a root cause analysis in collaboration with the Kentucky Quality Improvement Organization and local hospitals and Area Agencies on Aging. They examined data from hospital admissions and discharges, medical records, and focus groups with medical providers and patients to determine what factors led to high 30-day hospital readmission rates among Medicare beneficiaries (Brown & Swinford, 2014). It was concluded that contributing factors were: low levels of health literacy, a lack of community medical services and support in surrounding environments, not following discharge care protocols and medication, low socioeconomic status, utilization of emergency rooms, and not receiving appropriate information and instructions before hospital discharge (Brown & Swinford, 2014). 10 counties within the service area of KATS CCTP, “have a per capita income in the lowest 100 in the entire United States”(Quality

Improvement Organizations, 2012). The TCM and a modified version of the Coleman Care Transitions Program were chosen from the list of transitional care programs suggested by CMS since they address several of the issues identified in the root cause analysis.

KATS relies on APRNs (also referred to as hospital coaches) located at all four hospitals to lead the coordination of transition services for Medicare beneficiaries (Brown & Swinford, 2014). KATS is reimbursed for their services on a, “per visit all-inclusive rate,” of \$385 (Brown & Swinford, 2014). The APRNs are also paid an all-inclusive rate for every patient visit. Three APRNs working with KATS have received certified training under the University of Pennsylvania School of Nursing’s Evidence Based Transitional Care for Chronically Ill Older Adults and are responsible for providing training to the other medical professionals involved with the implementation of the evidence-based program models. There is no cost to the Medicare beneficiary enrolled in the program. The KATS CCTP budget is \$2,919,050 (Centers for Medicare & Medicaid Services, 2015). A project officer from CMS has also worked closely with KATS throughout the implementation of the program, providing support and guidance as the community-based organization has strived to achieve its program goals.

### Process

After a medical professional at the hospital refers a patient to KATS, the TCM evidenced-based risk assessment tool is utilized to identify FFS Medicare beneficiaries that are high-risk for readmission within 30 days of their discharge (Appendix). If a Medicare beneficiary is classified as having four or more risk factors for readmission as identified by the TCM risk assessment tool, they will be enrolled in the TCM program. This six week program is for individuals who are identified as needing high levels of assistance and care from the APRNs and are likely to benefit from a longer program. If a beneficiary is classified as having three or fewer risk factors they will be enrolled in the modified Care Transitions Program since it is a four week

program and the beneficiary would require fewer in-person visits from the APRN. The services and support that a Medicare beneficiary receives from KATS include training on medication management and assistance with setting up appointments with a community medical provider within seven days of hospital discharge.

For the TCM and Care Transitions Program an APRN meets with the accepted patient daily in the hospital and within 24 hours after discharge to explain the program model they are enrolled in. The APRN located at the hospital and the professional who will work with the Medicare beneficiary and their family at home (also referred to as a home coach) will utilize several clinical assessment instruments to determine the overall health score of an individual; these include the geriatric depression scale and the generalized anxiety scale (Brown & Swinford, 2014). These clinical professionals are also responsible for setting up follow-up appointments and phone calls with the Medicare beneficiary throughout the course of the program. Each Medicare beneficiary in the program is provided a packet of information with forms in which they can track their medical history, medication usage, and appointments. This material is meant to be taken with them to their appointments with medical professionals. After discharge from the program, CMS will not pay for the patient to be readmitted to the program within 180 days of program completion (Centers for Medicare & Medicaid Services, 2011).

In order to track the progress of the program in fulfillment of CCTP requirements and goals, KATS reports their monthly results directly to CMS. The data reported consists of the number of patients offered enrollment in the program, the number of patients that accept enrollment, the number of patients that have completed the program during the last three months, and the number of patients enrolled in the program and were readmitted over the past three months within 30 days of their discharge. CMS is also responsible for tracking the financial

savings from the program and provides a summary of this information along with program readmission rates, program expenditures, and program goal achievement in a CCTP Quarterly Monitoring Report. KATS tracks the care transition experience of enrollees and their appointments with an APRN in an electronic database.

### Outcome

KATS achieved 69 percent enrollment for Medicare FFS, allowing them to enroll enough beneficiaries to have a positive effect on reducing 30-day, all-cause readmission rates (Fowler & Swinford, 2016). 5,031 Medicare beneficiaries have been enrolled in KATS (Fowler & Swinford, 2016). Although the CCTP and Partnership for Patient's goal is to reduce Medicare 30-day, all-cause readmission rates by 20 percent, the Vice President of Administration at Hospice of the Bluegrass shared that this goal is extremely difficult for hospitals and community-based organizations to achieve. As of October 1, 2015, KATS had reduced the 30-day, all-cause readmission rate for Medicare beneficiaries by an average of 12.3 percent across the four hospitals and is currently at an approximate readmission rate of 19 percent; Whitesburg ARH Hospital has seen the greatest decrease at 21.5 percent (Fowler & Swinford, 2016). It was calculated that for one quarter CMS saves \$210,211 as a result of reduced readmissions from the program (Fowler & Swinford, 2016). Overall, savings to the Medicare program has been \$6,141,3330 (Fowler & Swinford, 2016). After CMS reimbursed KATS for services, the net Medicare savings has been \$4,154,085 (Fowler & Swinford, 2016). Some 472 readmissions have been avoided due to this program (Fowler & Swinford, 2016). CMS has identified KATS as one of the top performing transition programs of the CCTP and will be one of 16 programs to receive extended funding through the end of 2016.

## Discussion

Although the Bluegrass “TLC” Program did not apply to receive funding through the CCTP, they have had success at accomplishing some of the goals set forth by the CCTP that include improving the quality of care received by high-risk Medicare beneficiaries transitioning from a hospital to another care environment, reducing 30-day, all cause hospital readmission rates for Medicare beneficiaries, and reducing costs. The Bluegrass “TLC” Program’s effort to improve the quality of care received by program enrollees extends not just to Medicare beneficiaries but to all individuals who would be considered high-risk for hospital readmissions. By following the standards of the National Transitions of Care Coalition’s seven evidence-based elements, the program is able to ensure that enrollees receive quality care that is based on an evidence-based program. In this manner, the program has been designed to be “patient centered” in that the transition coach evaluates and meets with an enrollee throughout the course of the program to ensure that the services they receive are specific to their situation and health status. Each enrollee, and their family, have the benefit of working with a transition coach that strives to examine the determinants that could impact an individual’s readmission and develop a care plan to address them.

Although the Bluegrass “TLC” Program has not reduced readmissions by the CCTP’s goal of 20 percent, it has still had success in reducing readmissions on the three floors of Baptist Health Lexington. A comparison of the non-intervention group’s 87 readmissions within 30 days of discharge (14.43 percent) with the intervention group’s 47 readmissions (7.87 percent) demonstrates that the program has had a positive impact on reducing hospital readmissions. It is recognized that individuals who decided to accept admittance into the Bluegrass “TLC” Program could have had a greater interest in their health than those who did not and had a more supportive home environment and caregiver network. However, it cannot be overlooked that social issues

have a significant impact on health. “Safe, effective, and efficient care transitions require thoughtful collaboration among health care providers, hospitals, social service providers, patient caregivers, and patients themselves” (Cooper & Altpeter, 2016).

Nevertheless, The Bluegrass “TLC” Program has shown success in its collaboration with Baptist Health Lexington at increasing quality of care and reducing costs. At this time the program plans to expand to additional floors at Baptist Health Lexington and work with other divisions of the health system including primary care providers, the stroke clinic, and community accountable care organizations. The BGAAAIL plans to continue talking with other Kentucky hospitals who may have an interest in the program. However, as mentioned by the Transition Coordinator, the expansion of such a program into rural areas of the state could be difficult. When such a program reduces readmissions for individuals under different types of insurance, smaller rural hospitals will also be at a risk for decreased revenue due to their beds not being filled. Thus, the balance between financial penalties, reducing readmissions, and maintaining a profit will be a challenge for smaller hospitals. Although the Bluegrass “TLC” Program is much smaller than KATS and the CCTP, its success demonstrates that smaller transition programs provide a positive step toward encouraging hospitals and community-based organizations to collaborate and share resources that can reduce readmissions.

Further review of the Avedis Donabedian’s three domains of quality in relation to KATS has found that the program has provided quality care to the Medicare beneficiaries enrolled in the program and accomplished many of the goals set forth by the CCTP. With the decision to utilize the best practice transition models of the TCM and Care Transitions Program, KATS has strived to follow evidence-based models that provide support to various kinds of patients and address the factors that have great influence on 30-day, all-cause hospital readmissions. CMS has

had great concern for hospital readmissions related to the specific conditions of congestive heart failure, heart attack, and pneumonia, and the transition models' designs address the several personal and contextual factors that increase the chance of readmission. KATS' responsibility for tracking the APRN patient visits and services throughout the course of the program ensures that Medicare beneficiaries are receiving quality care from trained professionals conducive to their needs.

The decision by CMS to extend funding to KATS until the end of 2016 is a further reflection of their continued success at reducing readmissions and costs associated with the Medicare program across all four hospitals. The success is particularly impressive since these hospitals were set to pay penalties for having some of the highest readmission rates in the country. With a beginning baseline of approximately 30 percent readmissions among Medicare beneficiaries, KATS has succeeded in reducing the 30-day, all-cause readmission rate for Medicare beneficiaries by an average of 12.3 percent across the four hospitals. Whitesburg ARH Hospital has had the greatest decrease at 21.5 percent. This could be attributed to such factors as the health status of patients upon discharge, the support they have from caregivers at home, and the dedication of individuals to completing the program. The program has led to a net savings for the Medicare program of \$4,154,085 (Fowler & Swinford, 2016). It is evident that this program will have financial benefits for KATS and the four hospitals by reducing readmission rates and potential financial penalties the hospitals would have to pay, along with reducing expenses for Medicare.

The sustainability of the program after 2016 will require the recruitment and commitment of other insurance payers. Currently, Humana SeniorBridge's case management program is working to collaborate with KATS as a payer. Other payers beyond CMS will be essential for the



program to be able to continue and expand to other health care systems throughout Kentucky. Similarly to the Bluegrass “TLC” Program, KATS has future plans to expand to other hospitals including the University of Kentucky Chandler Hospital where the program is in the beginning stages of being implemented. The value of such a program can be seen in its potential ability to reduce emergency department utilization, increase Consumer Assessment of Healthcare Providers and Systems (CAHPS) survey scores, and improve health outcomes as patients receive support directly suiting their needs (Fowler & Swinford, 2016). A community-based organization that focuses on end-of-life care, such as Hospice of the Bluegrass, has a great amount of knowledge regarding the resources necessary to care for older adults. This is especially beneficial since the cost of care greatly increases for older adults in the last years of life. An organization with employees and leaders who have a broad understanding of how to provide care to individuals with various co-morbidities, while also remaining conscious of costs, would have the skills necessary to implement a transition program. Thus, the success of KATS is not surprising.

The CCTP represents that quality care can be accomplished through the collaboration of different care organizations. The coalition established by the BGAAAIL to formulate the Bluegrass “TLC” Program and KATS’ collaboration with different area development districts and community organizations supports that great benefits arise when different facets of the health care system work together to support care transitions. This will be especially important since Medicare beneficiaries that have been high-risk of hospital readmissions will make up a larger portion of society as the population continues to age, and have often utilized various care providers in the past. The collaboration built on evidence-based models will have the potential to combat the problem of fragmentation throughout the United States’ health care system that has

been a contributing factor to poor care transitions. The ability of the Bluegrass “TLC” Program and KATS to accomplish many of the goals set forth by the CCTP may be in large part due to the programs following transition models that address many of the social and medical factors acknowledged by the literature that contribute to poor care transitions.

### Limitations of the Study

A limitation of this case study is that only one community-based organization in Kentucky accepted into the CCTP was available to participate in an interview. The Green River Area Development District had also developed a transition program that received CCTP funding, but was unavailable for an interview. This additional interview would have increased the sample size and provided more data about the different care transition models various programs have used, and their influence on Medicare readmission rates in Kentucky. Furthermore, patient ratings of the quality of care received from both programs was not available for review. This information from the perspective of program enrollees would have provided more insight into the quality outcome measures of both programs.

### Conclusion

As an individual ages, they have various medical and health needs that make it difficult for one medical professional to take sole responsibility of caring for that individual (Eric A. Coleman & Berenson, 2004). Thus, the coordination of care transitions will be imperative to support quality of patient care. The Bluegrass “TLC” Program and KATS have demonstrated that following evidenced-based models of care transition can decrease health expenditures and increase the coordination of care. When compared to individuals who are eligible for the two

programs but do not accept enrollment, those who have decided to complete the program and work with a transition coach have experienced greater decreases in hospital readmissions. The next phase for such programs should be to review the factors that prevent eligible enrollees from accepting admittance. One reason could be that these individuals believe they do not need the services offered. Thus, the manner in which these programs are marketed to patients should be the subject of ongoing review. CCTP funding has helped address the difficulties that acute care hospitals face in coordinating care transitions and reducing Medicare beneficiaries' hospital readmission rates.

The purpose of this capstone case study was to identify whether two community-based organizations, KATS and the Bluegrass "TLC" Program, had accomplished the goals set forth by the national CCTP. The interviews conducted with stakeholders from the community-based organizations provided insight into the extensive development, implementation, and evaluation process of care transition programs and the positive impact they can have on hospital readmissions in years to come. However, the sustainability and development of new transition programs will depend on the recruitment of other payers. Avedis Donabedian's three domains of quality would be a beneficial model for future care transition programs to utilize in order to evaluate the progress of their program in accomplishing their goals. As the population of the United States continues to age, transition programs will be an important investment for health systems to make not only from a financial aspect, but also as a way to improve quality across the care continuum.

## Appendix

### Capstone Interview Questions

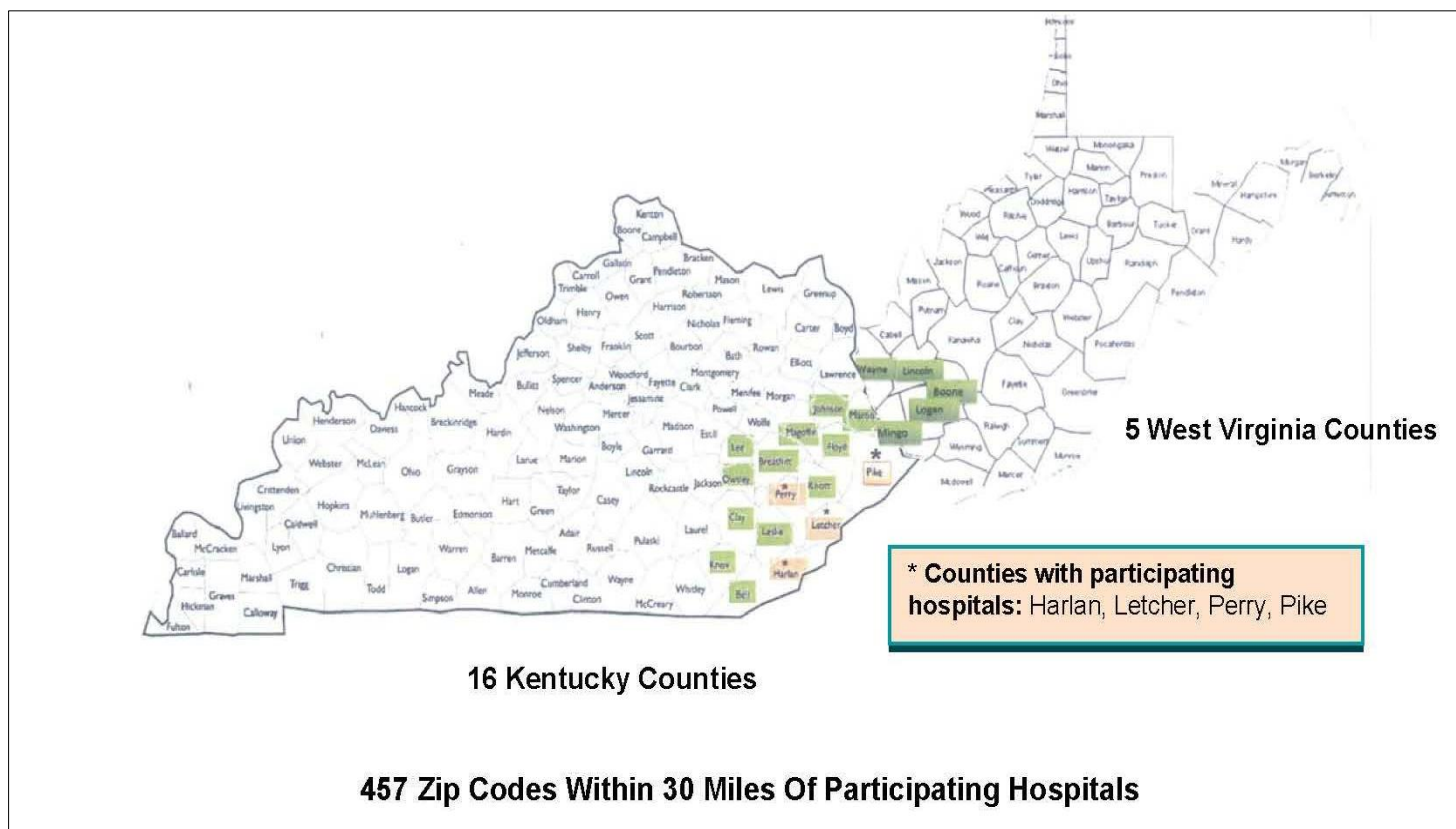
1. What hospitals is the initiative collaborating with to implement the care transition program? (Structure)
2. What factors contributed to the program's decision to choose and follow the model of care transition that the program is based on? (Process)
3. Could you please discuss the hospital departments and other community organizations that work with the program and what their role is? (structure)
4. During program development, did the program team consider any other transition programs used by other payers in the community? (Process)
5. How were high risk Medicare beneficiary participants identified? Did the hospital assist with this process? (Process)/(Structure)
6. Could you please explain the process by which the initiative is reimbursed by the CCTP program? (Structure)
7. What is the length of time that Medicare beneficiaries are enrolled in the program? (Process)
8. What are the services and support that a Medicare beneficiary receives from the program? (Process)
9. How many times does a beneficiary meet with a member of the program team? (Process)
10. Is there a cost to a beneficiary to be enrolled in the program? (Structure)
11. What measure is used to determine that the requirement to reduce Medicare readmissions has been met? Is Partnership for Patients' goal rate of 20 percent used? Is it based against the Kentucky baseline? (Structure/Outcome)
12. What measure is used to determine that the requirement to reduce Medicare costs has been met? (Structure/Outcome)
13. By how much has Medicare readmissions been decreased? Is there a hospital that had a greater reduction? What could this be attributed to? (Outcomes)
14. Will the program continue?

**KATS TCM Risk Assessment Tool**  
**Used in the hospital to screen for eligible at-risk FFS**  
**Medicare recipients**

- **Risk Factors to screen for eligibility:**
- *Are the following statements true for the patient?*
  - The patient was admitted to hospital within the last 24-48 hours?
  - The patient is 65 years of age or older?
  - Does the patient speak English?
  - Is the patient reachable by telephone?
  - Is the patient alert & cognitively intact?
  - Is there a document HX of a primary cardiovascular, respiratory, heart, and endocrine?
  - Does not have end-stage renal disease?
  - Does not have a major psychiatric illness?
  - Does not have a primary diagnosis of cancer?
  - Does the patient live within 30 miles of the admitted facility?
  - Is the returning home after discharge (SNF/rehab stay < 3 weeks?)
  
- *If yes to all of the above, does the patient have 2 or more of the following risk factors?*
  - Age 80 or older
    - Moderate to severe functional deficits (e.g., KATZ Activities of Daily Living <4)
  - HX of mental/emotional illness (e.g. Geriatric Depression Scale >5)
  - Four or more active co-existing health conditions
  - Six or more prescribed medications
  - Two or more hospitalizations within past 6 months
  - Hospitalization in the past 30 days
  - Inadequate support system
  - “Poor” self-rating of health
  - Documented history of non-adherence to therapeutic regimen

(KATS, 2015)

## 21 Counties Served By KATS



(KATS, 2015)

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## Biographical Sketch

Audra Kathryn Putt is originally from Auburn, Michigan. As she pursued her undergraduate studies and majored in Health Science, she attended Saginaw Valley State University in Saginaw, Michigan. Audra graduated in 2014 with her Bachelor of Science and minors in Sociology and Gerontology. Beginning in August 2014, she attended the University of Kentucky to obtain a Master's degree in Public Health with a concentration in Health Management and Policy and a certificate in Gerontology. Throughout her graduate school career at the University she served as a student support associate for the Office of Research Integrity and a teaching assistant with the Department of Transformative Learning.