

## **APPLICATION FORM**

**Title of Entry:** Holistic Care Coordination: Caring for the Mind, Body and Spirit to Create a Healthier Pennsylvania

**Award:** Living the Vision

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Holistic Care Coordination:  
Caring for the Mind, Body and Spirit to Create a Healthier Pennsylvania

**Executive Summary:** Healthy People 2020 defines social determinants of health (SDOH) as, "conditions in the environments in which people live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risk".<sup>1</sup> Health disparities are linked to social and economic differences, which negatively affect those who have systematically experienced greater social or economic obstacles to health.<sup>2</sup> If we, as a healthcare organization, do not push back against the negative SDOH, we allow ourselves and our patients to become victims of health disparities.

Impoverishment is known to have a rate limiting effect on a patient's access to healthy foods and safe neighborhoods. We also know there is a causal link between higher education and better health. Positive outcomes in health and wellness are lower in communities with poor SDOH such as unstable housing, low income, unsafe neighborhoods, or substandard education.<sup>3</sup> By applying what we know about SDOH, we can not only advance individual health but also advocate health equity across our urban population.

To achieve the goal of serving our community, our team participated in a Community Health Needs Assessment (CHNA). The assessment revealed that 27% of families with children residing in the service area were living below the poverty line. Our health system endeavored to understand how we could utilize this data to prioritize the social determinants of health that create impediments to achieving and maintaining healthy lifestyles.

Aligning with our core value of serving those who are poor, especially those most vulnerable, we created a program that would help our highest-need patients to receive appropriate health services- in the appropriate setting and at the appropriate time - via a person-centric, holistic approach to care coordination. This initiative was led by a Population Health Social Worker (PHSW) and Community Health Worker (CHW) who were hired in early 2016. We partnered with AmeriCorps through a grant-funded program and two additional AmeriCorps- sponsored Community Health Coordinators (CHC) were added to the program.

Our strategy was to reduce inappropriate health care resource utilization through community-based, intensive care coordination that would address not only unmanaged chronic disease conditions, but unmet social needs as well. The initial population targeted was comprised of Congestive Heart Failure (CHF) patients. CHF patients with unmanaged disease exacerbations incur the highest health care costs from frequent Emergency Department (ED) visits and inpatient (re)admissions. Additionally, we utilized free community resources aimed at disease prevention, while working closely with patients to identify socially challenging impediments to achieving and/or maintaining healthy lifestyles. As the program evolved, we expanded the focus to include all high cost, chronic diseases.

These medically fragile patients are vulnerable, and their situations exacerbated by a lack of financial resources, food, transportation, education and access to appropriate levels of health care, e.g. Primary Care Physician (PCP). Equally important to address is the lack of emotional, spiritual, community and family support systems. Social determinants of health complicate clinical treatment and prevent patients from the empowerment gained from an understanding of prognosis and disease treatment options. The program objective was to care for the mind, body and spirit of those patients with the greatest needs while managing health care costs, to empower patients to become active participants in, and owners of, their medical care to create a healthier Pennsylvania. While a relatively young initiative, longitudinal data studies will demonstrate achievements and opportunities. Preliminary data analysis indicated this endeavor resulted in improved quality of life outcomes with decreased inappropriate utilization of the Emergency Department (ED) which will be reviewed in detail in the following pages.

**Assessment:** The CHNA was a one-year process which began in 2015. Our Hospital (H1) in an urban setting was the designated host site for this assessment. The hospital’s service area comprises five zip codes, with a population of approximately 234,222. With support of our health system, H1 collaborated with 11 other health systems to contract with the Public Health Management Corporation (PHMC), a private non-profit public health institute. PHMC conducted data collection, research, identified the health needs in the individual communities, and prepared the CHNA report. H1's approach to community health was to, not only to respond to the needs outlined in the assessment, but align initiatives with our system’s vision and mission. As a result of the analysis, inclusive of community input, 15 unmet needs were identified and subsequently prioritized. The stratification process resulted in grouping 12 of the 15 needs into three tiers: 1) improve access to healthcare services for persons who are poor and vulnerable; 2) improve access to mental and behavioral healthcare; and 3) improve chronic disease prevention and management.

**Table 1: Unmet Needs Stratification**

Priority	Unmet Needs
1. Improve access to healthcare services for persons who are poor and vulnerable.	<ul style="list-style-type: none"> <li>• Access to health care for low income residents, older adults, and uninsured</li> <li>• Prescription drug coverage for low income and older adults</li> <li>• Access to health care for immigrants</li> </ul>
2. Improve access to Mental and Behavioral Health Care.	<ul style="list-style-type: none"> <li>• Mental and behavioral health care for residents</li> </ul>
3. Improve Chronic Disease Prevention and Management.	<ul style="list-style-type: none"> <li>• First leading cause of death among residents: cancer</li> <li>• Smoking prevention, interventions, and cessation programs</li> <li>Heart Disease Prevention:               <ul style="list-style-type: none"> <li>• Prevalence of high blood pressure, which is a risk factor for heart disease and stroke</li> </ul> </li> <li>• Second leading cause of death: heart disease</li> <li>• Third leading cause of death: stroke</li> <li>Obesity Control:               <ul style="list-style-type: none"> <li>• Higher percentage of overweight and obese children and adults</li> <li>• Cases of diabetes among adult residents</li> </ul> </li> <li>• Nutrition and healthy food access</li> </ul>

The assessment was only conducted in the H1 service area. Included here are results from the analysis of the service area (N=234,222).

**AGE**

- One in five residents (23%) were children between the ages of 0-17
- Adults age 18-44 years comprised 44% of the population
- Twenty-one percent of residents were between the ages of 45-64
- Residents 65 years and older accounted for 12% of the population

## **RACE**

- The majority of residents (71%) identified as African American
- Sixteen percent of the population identified as Caucasian, 6% as Asian and 4% as Latino
- The above percentages are in sharp contrast to the overall population, where 41% of the population identified as African American, 36% as Caucasian, 14% as Latino, and 7% as Asian

## **EDUCATION**

- Twenty percent of residents did not graduate from high school
- Three in five residents (60%) graduated high school
- Twenty-one percent had a college degree or higher

## **ECONOMICS**

- Almost one in five families without children (19%) were living in poverty
- Of those with children, more than one in four families (27%) were living below the poverty line
- Families, with or without children, living in H1's service area were more likely to live in poverty than their counterparts in other neighborhoods throughout the city (32% and 22% respectively)
- Of adults age 16+, 18% are unemployed
- The median household income was \$40,981

**Intervention:** It is important to recognize the necessary coexistence of the Population Health Social Worker (PHSW) and a Community Health Worker (CHW) dyad as an extension of the medical team, including Primary Care Physician (PCP), Specialist physician and nurses. While the PHSW acts as the team lead, the CHW/CHC is the individual who is actively in the home and community helping to make connections, provide support, and ensure interventions are being enacted. It should be noted the care team continually assesses the patient and their needs to determine how to best serve them. Dyad referrals come from a myriad of professionals including Population Health Registered Nurse (RN) Care Coordinators, primary care physicians, hospital-based RN Navigators, inpatient social workers, as well as self-referrals.

One Masters-prepared PHSW and one CHW with a Bachelor's degree in Social Work were hired and identified as key players in the initiative to tackle the SDOH faced by the targeted populations, in addition to a team of three Population Health Registered Nurses embedded within three PCP practices in the community. Two AmeriCorps-sponsored Community Health Coordinators (CHCs) were added. Their specific caseload consists of dual eligible Medicare/Medicaid patients who have been identified as medically complex and at high risk. These criteria are defined as having multiple comorbidities which lead to high inpatient utilization, high ED usage, inappropriate ED usage, and various psychosocial factors. The PHSW/CHW team was based in a large PCP office, centrally located within the community, and within easy access to our hospitals for inpatient visits required for post-acute care planning and coordination.

The PHSW is responsible for completing a comprehensive psychosocial assessment on all referrals received and for triaging the case to the CHW or CHC. The PHSW provides continual intensive care coordination and psychosocial support to the patient and family, connecting patients to community resources, such as food banks. We partner with local libraries that provide free blood pressure and diabetic screening programs as preventative services for our patients. Additionally, the PHSW manages the CHW and CHC to ensure the above is being carried out efficiently and effectively. To foster effective and consistent communication, a key driver to program success, we leverage face to face interactions, email, phone calls and EMR tasking amongst the team members. The CHW/CHC conduct home visits, track ongoing assessments of the patient, and assist with identifying resources beneficial to the patient.

These roles form the frontline to assist the care team in better understanding the needs, strengths and barriers of the patients and families. The AmeriCorps CHCs are additionally responsible for identifying community resources and services to which patients can be referred. From there, they are expected to make the connection between patient and service, and ensure the patient has appropriate access. The key to success is intense and careful monitoring.

We then analyzed an internal CMS claims-based report of Medicare Shared Saving Program patients for those who would benefit from the intervention. From the report, we can decipher a list of high risk/high utilizers, as well as identify those who are dually eligible. Next, the PHSW meets with the patient in the primary care office or telephonically and conducts a needs assessment addressing transportation, food, ability to pay for medications, and disease self-management.

Once patients are referred to the PHSW, and after the psychosocial assessment is completed, they have the option to receive support from the CHW or CHC. During the first home visit the patient completes a self-reported health assessment, using a Likert scale of 1-5 to evaluate the quality of activities of daily living. Any additional psychosocial issues are reported back to the PHSW. Optimal duration of home visits range from 60 to 90 minutes (max.) depending on acuity of the case. For the more complex cases, additional research for community resources is conducted. When appropriate, the patient is tasked to gather pertinent documentation and/or schedule doctor's appointments for themselves to garner participation and engagement in the process. Self-reported health assessments are also completed at case closure, with comparisons made to initial assessment to determine if there was improvement in patient knowledge level of disease, as well as used as a tool to identify ways to fine tune and improve CHW/C in-home interventions. Findings are shared with Primary Care Physician and team.

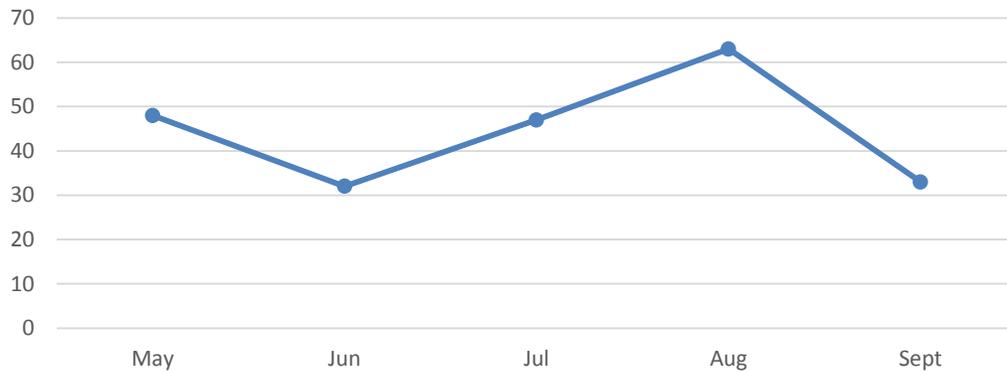
The CHW/Cs continually conduct safety checks of the home and assess environmental factors affecting health. They encourage achievement of patient goals that may consist of medication compliance, smoking cessation, and blood pressure screenings; recommend additional services if necessary; and assist in completing lengthy applications required for free, or reduced cost community services, while tracking service utilization. The patient is followed no less than six weeks with continuous coordination and assistance around non-clinical barriers to care to reduce both ER recidivism and potentially preventable readmissions. The CHW/CHC remains highly involved in the ongoing assessment of the case since they are an active part of the home life and community of the patient.

**Results:** In order for us to understand the initial effectiveness of this new, community-based public health initiative, we ran an early analysis for the time period from May 2016 through Sept 2016 (pre and post implementation respectively). At the time of analysis, our PHSW had a case load of 125 patients, for which we could parse out their particular utilization based on historical and current claims. We focused on ER visits and hospitalizations preliminarily as these are good indicators of both cost management and appropriate use. Additionally, we looked at the percentage of improvement from initial patient self-assessment to final self-assessment, and saw a 42% improvement in reported ratings.

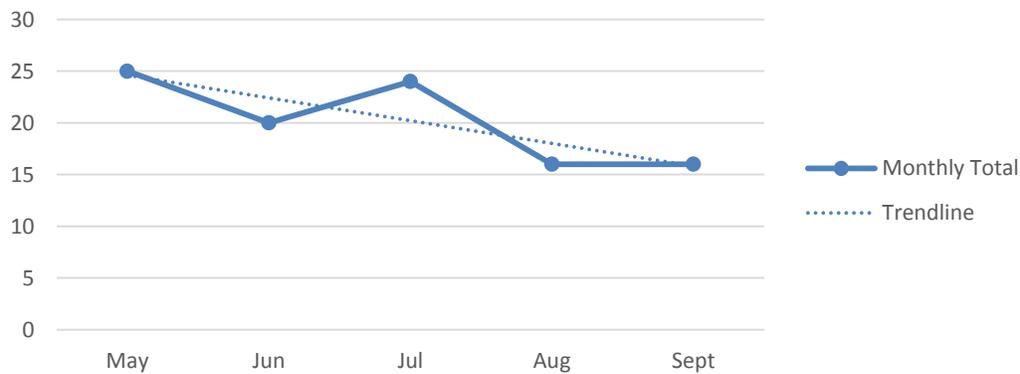
When analyzing historical claims-based utilization for this patient catchment, in the month of May 2016 they experienced 48 ER visits and 25 hospitalizations. At our second observation point of Sept 2016, the same patients' utilization of the ER decreased to 33 visits and hospitalizations to 16. This is a relative percentage change of 31.3% and 36.0% respectively. When accounting for the intervening months, we observed average totals of ER and hospitalization stays at 44.6 and 20.2 respectively, with the greatest monthly ER variance being -47.6% (Graph 1). We attribute the spike in Aug to a particularly difficult case, who demonstrated repeated misuse, and have since connected this patient with appropriate services. We expect to see peaks and troughs, with a continued downward trend across overall program metrics.

Graph 2 is a visualization demonstrating the decreased number of hospitalizations for the study population. The case load has subsequently increased to 133 patients, with preliminary observations continuing the downward trend. In 2012, the average cost for a hospitalization was \$10,400.<sup>4</sup> Using this figure, we can estimate our pre/post cost savings to be \$93,600. Extrapolated for a full year and factoring in the continued increase in medical costs, we expect to experience substantial savings. Given the program’s recent implementation of June 2016, we are in the process of collecting long-term longitudinal data.

**Graph 1: Total ER Visits for Program Patients, N=125**



**Graph 2: Total Hospitalizations for Program Patients, N=125**



**Adaptability:** In the next three years, there is a projected shortage of 91,500 doctors.<sup>5</sup> A single healthcare organization will not be able to manage its patient population alone; but it will need to rely on external resources to provide patients with the extra attention to care they deserve. Our theory is once the patient is connected to resources and actively utilizes them, so begins the elimination of barriers.

The model outlined here will translate well to other organizations, especially those located in impoverished areas. This type of program can be furnished through a hospital, outpatient clinic, community mental health agency, or other type of community social service. We implemented in the urban setting and special consideration should be given to suburban and rural areas. These areas have their own sets of challenges and should be addressed by the organization accordingly. Understanding the availability of the community’s resources is vital and the foundation upon which the success of the

program is built. It is the conduit to connect patients to care that they so desperately need. By fostering relationships with community partners and services, we can bridge the multiple gaps for our patients' care.

To assist in identifying the patient caseload, we suggest administrators decide on the best data source from which to pull the lists. They should have a thorough understanding of the data that is utilized to pinpoint patterns which lead to high ED use, a high number of hospitalizations, and a low number of primary care or specialist visits.

Ideally the dyad team lead would be Masters prepared, either a licensed social worker (LSW) or a licensed clinical social worker (LCSW), with several years of clinical experience working with vulnerable populations. The social worker should possess skills in care assessment, effective communication, crisis management, clinical judgment, and understand psychosocial issues. Strong cultural competency, and experience working within a multidisciplinary treatment team are also important.

The dyad workers should be located in the same clinical setting where most patients receive their care for accessibility during office visits. It should be noted that this may not be true for all patients serviced as they may live in areas which extend far beyond the parameters of the office. We would also suggest the CHW/CHC having an active caseload of about 25 patients to permit appropriate time and attention per case. The social worker's caseload is more fluid as the patients are in different levels of ongoing case management and varying statuses of active, paused, or discharged. Active are those currently engaged; paused are not currently active due to varying clinical and social reasons; and discharged are patients who have declined services, are unable to be located, lack compliance, or have met their goals.

To actively manage or passively monitor cases is decided by coupling clinical discretion/judgment with data and trend observations. The social worker determines this appropriate level based on psychosocial needs, social needs, clinical suggestion, and the state of the home/community environment. These recommendations are then reviewed by the surrounding interdisciplinary medical team and drafted as a comprehensive care plan. It is suggested that assessments be ongoing and the process noted above followed when considering to close or reopen a case. Ultimately it is a collective decision based on the clinical interpretation of the case keeping in mind the patient is at the center of care with the right to self-determination.

While this dyadic initiative is new to our health system, it has been both exciting and a learning experience. It is important to understand the patient's starting point and that the team's goals may be secondary, or even tertiary, to the patient's goals and needs. We have experienced the greatest success utilizing a person-centric approach, where the focus of care and the treatment team is symbolically wrapped around the patient. One lesson to note is the dyad team should be comfortable advocating for the patient intrinsically, as well as providing realistic expectations to the patient. Also, when the social worker outreaches to patients prior to initial outreach of the nurse, it should be as concise and direct as possible without failing to mention the name of the physician in charge. The patient may mistake this as telemarketing and decline services. It is important for the team to ascertain a patient's receptivity, reciprocity, and accountability. Delinquency and lack of effort can then be addressed among the team and with the patient.

Lastly, to further demonstrate the versatility of this model, our initial success with the Congestive Heart Failure patient population led us to quickly expand to include other complex, chronic conditions complicated by unmet social needs such as Chronic Obstructive Pulmonary Disease, Diabetes Mellitus and Obesity. We will continue to provide coordinated care that supports the mind, body and spirit of the patients we serve, and are certain that with the focus of healthcare being to decrease costs while improving outcomes and patient experience, innovative approaches such as this are the path to the future.

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