Q1 Please provide your contact information below.

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Q2 Please describe your company or organizations overall goals and mission.

Child & Family Services (C&FS) is a private, not-for-profit, nonsectarian agency that strengthens families and promotes the well-being of children through prevention, intervention, education and advocacy. C&FS is one of Western New York's oldest human service agencies, having worked to foster safe and healthy environments for children and families in local homes, schools, workplaces and communities for over 140 years. Child & Family Services is also one of the largest family agencies in the nation and is recognized as a national leader in innovative programming and services.

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Q3 Please indicate which category your organization falls under.

Community Based Organization

Q4 Innovation Executive Summary. Please describe the innovation, and how it addresses the social determinants of health. Please identify how the innovation addresses the 6 innovation criteria (i.e. ROI, scaleability, feasibility, evidence based support for innovation, relevance to the Medicaid population and speed to market).

Oishei Children's Hospital & Child & Family Services of Erie County

In 2014, the Western New York Community Needs Assessment was jointly conducted and led by the two Performing Provider Systems, Catholic Medical Partners/Catholic Health System and Millennium Collaborative Care. Much information regarding the population and needs of WNY can be gleaned from this extensive assessment, and the following details can be found in this assessment (http://wnycommunitypartners.org/wp-content/uploads/2015/01/Volume-One-CNA-Summary.pdf). About 13% of the 1,416 primary care providers in the region are designated safety net, or those who provide care to the vulnerable populations, including those utilizing government sponsored health insurance coverage. Large portions of the inner city and rural areas of the region are designated population Health Professional Shortage Areas. The ratio of Medicaid population to Safety Net PCP is excessively high (over 4,500:1) in Niagara and Allegany Counties and high (over 2,250:1) in Erie, Wyoming and Chautauqua Counties. The City of Buffalo has a high need designation due to many PCPs not practicing full time outpatient in high poverty areas due to teaching, precepting, inpatient and suburban service location obligations. Behavioral health is a key issue in WNY, with a severe shortage of psychiatrists and psychologists as compared to the entire state of New York. Mental Health stigma tends to result in patients accessing services late rather than accessing preventive or early treatment.

Poverty status is perhaps the most important indicator of health care need. In the region, 15% of the population lives below federal poverty level compared to 10% for the State. People at 200 percent of the Federal poverty level are overwhelmingly concentrated in the cities of Buffalo and Niagara Falls and widely across the Southern Tier counties of Chautauqua, Cattaraugus and Allegany in both small cities and rural areas. These areas also have excessively high rates of children under 18 living in poverty (30% in Chautauqua County). In June 2014 the US Census Bureau ranked the City of Buffalo as the 4th poorest city in the nation, where nearly 27 percent of the population lives in poverty, nearly two thirds under 200% threshold of the federal poverty level.

Western New York has a broad array of community resources spanning all counties serving various social service needs. The following data was noted during the Community Needs Assessment. In WNY, there are 437 food banks, including food pantries and soup kitchens, as well as community gardens and farmers markets. There are 370 shelter programs, including agencies that provide housing services to special populations, such as: victims of domestic violence, people living with HIV/AIDS, people with mental illness, and homeless veterans. There are 199 basic needs programs that provide clothing and furniture.

There are 184 local government agencies such as food stamp programs and Medicaid offices located in the counties. There are 317 employment support services such as job centers, located predominantly in counties with urban areas. One hundred twenty one youth development programs exist, including those designed to keep at-risk youths away from gun violence and substance abuse. Further, there are 487 education programs, including schools, colleges, and community-based organizations providing educational services. Some of these organizations focus on special populations such as children with emotional disturbances, at-risk youth, immigrants, and refugees. There are approximately 16 programs that offer alternatives to incarceration services located in Erie and Niagara Counties.

A significant asset that ties these resources together is an online *211 central referral information system that is well developed. However, many medical providers are not aware of these resources and not geared to assess patients for social determinants of health and to actively assist patients in accessing these programs. According to the Community Needs Assessment, connected chronic disease patients to community supports is one of the most neglected components of the Chronic Care Model to improve and sustain self management skills.

There are 91 transportation service programs, including those providing transportation services to seniors and the disabled. Despite these programs, transportation is a pervasive problem in ensuring access to health care for the poor and nearly poor. Many low-income households lack access to a vehicle. Additionally, public transit systems in the region are weak or non-existent (especially in suburban and rural areas) and use of Medicaid funded services requires significant advance notice for pick-up and drop-off. These challenges contribute to the problems with no-shows to primary care appointments.

Social Determinants of Health

Health outcomes are complex and have many influences. Healthcare alone accounts for only 10 to 25 percent of the variance in health over time, and subsequently it only accounts for a fraction of the cost of health interventions. The remaining variance is shaped by genetic factors (up to 30 percent), health behaviors (30 to 40 percent), social and economic factors (15 to 40 percent) and physical

environmental factors (5 to 10 percent) (http://www.altfutures.org/). These conditions are known as the Social Determinants of Health.

According to the Centers for Disease Control, chronic diseases, which are largely preventable, are responsible for 7 of every 10 deaths among Americans yearly, and account for 75% of the nation's health spending (https://www.cdc.gov/healthcommunication/toolstemplates/entertainmented/tips/preventivehealth.html). Similarly, one US study estimated that high-risk, high-need patients represent 20 percent of the population and generate 80 percent of healthcare costs (http://www.ahrq.gov/). Despite these increasing costs associated with the treatment of chronic conditions, enrollees in health care often do not make significant progress with their health conditions, and it has been suggested this lack of progress is in part due to population social determinants of health (https://www.healthify.us/healthify-insights/using-social-determinants-of-health-data-to-decrease- healthcare-expenditures).

With the recognition of the importance of social determinants in the health of individuals, limiting solutions to healthcare problems to the healthcare system is no longer feasible. Patients with multiple health and social needs are high consumers of healthcare services, and thus drivers of high healthcare costs. Homelessness, food insecurity, educational challenges, substance abuse, physical disability and economic factors are just a few examples of social determinants of health that add massive costs to the healthcare system. Addressing these challenges requires smarter solutions that achieve lasting outcomes (https://www-01.ibm.com/common/ssi/cgi-bin/ssialias?htmlfid=ZZW03212USEN).

Oishei Children's Hospital

Oishei Children's Hospital is the regional center for comprehensive and state-of-the-art pediatric trauma, surgical and medical care, including neonatal, perinatal and obstetrical services. It is the only access point for pediatric critical care as the region's only Level I Pediatric Trauma Center. Oishei Children's Hospital (OCH) also serves as the only Level III Neonatal Intensive Care Unit in WNY. The only freestanding children's hospital in New York State, OCH enjoys a worldwide reputation for innovation and research and also provides highly specialized care and treatment through an array of outpatient services.

Approximately 70% of patients seen at Oishei Children's Hospital have Medicaid as their primary health insurance. The hospital's emergency room sees approximately 40,000 visits per year, and there are approximately 2,700 births delivered per year, with 2,000 receiving care in the mother/baby unit (regular nursery). The Neonatal Intensive Care Unit cares for about 1,000 infants per year. Excluding these obstetric and newborn data, the hospital experiences between 4,000 and 5,000 inpatient visits annually. OCH operates two primary care clinics, serving approximately 11,000 children in WNY.

It is anticipated that during the next few months, developmental screening will begin in the OCH primary care clinics. More involved than a simple checklist, these screenings will include questionnaires (and conversations with parents) related to the child's development, including language, movement, cognitive functioning, behavior and emotions. The need for further screening related to the social determinants of health has been identified by OCH administration, in order to improve the outcomes of children in their care. There exist a number of screening tools which are utilized throughout the country that can be utilized to capture the basic needs of patients and their families and OCH is eager to ensure their patients have access to much needed community resources.

Child & Family Services of Erie County

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Each year, Child & Family Services provides prevention, intervention, education and advocacy services to thousands of Western New Yorkers. Our clients represent a wide variety of ethnic and racial backgrounds, and over 60% live at or below the national poverty level.
Oishei Children's Hospital and Child & Family Services
Vision
It is the vision and intent of C&FS and OCH to partner to ensure children and families in Western New York have access to community services which will both improve their health outcomes and reduce overall healthcare costs. The innovation proposed is a simple concept; children and their families are screened at OCH, screening results are sent to C&FS, and C&FS links families with the existing services located throughout Western New York.

Experience & Evidence

Children's hospitals located outside of the Western New York area have already begun screening for social determinants. The Golisano Children's Hospitals are located in both Rochester and Syracuse, New York, and screenings for various social determinants are conducted at these locations. At the Golisano outpatient primary care clinics, patients are screened for food insecurity, and are subsequently linked with various community services to address their needs. Additionally, screenings for diaper needs are conducted, which is a proxy for poverty and access.

There exists evidence that a screening and referral system can result in increased patient access to community resources. Specifically, the effect of a clinic based screening and referral system, Well Child Care, Evaluation, Community Resources, Advocacy, Referral, Education [WE CARE], was evaluated via a cluster randomized controlled trial at eight urban community health centers in Boston. During this study, mothers completed a self-report screening instrument that assessed needs for child care, education, employment, food security, household heat and housing. Providers made referrals for families; staff provided requisite applications and telephoned referred mothers within one month. Families at the four control community health centers received their usual care without screening and linkage. The study concluded that systematically screening and referring for social determinants during well child care can lead to the receipt of more community resources for families (http://pediatrics.aappublications.org/content/135/2/e296).

Various models and interventions suggest a positive return on investment for interventions addressing the social determinants of health, and various methods exist to analyze this data. One model focuses on six medical conditions as common drivers of 30-day readmissions. These variables include mental health, substance abuse, diabetes, chronic obstructive pulmonary disease, congestive heart failure, and asthma (on an out-patient basis). This model utilizes a potential readmission reduction number, which fluctuates depending on the hospital and community's population, as well as a readmission avoidance number which is driven by addressing the social determinants of health (http://www.ajmc.com/contributor/ara-ohanian/2018/01/the-roi-of-addressing-social-determinants-of-health?). Baptist Health Hospital in Louisville, Kentucky, is using an algorithm which was initially intended to reduce readmissions, to track social determinants of health. In addition to measuring length of stay, acuity at admission, co-morbid conditions and the number of emergency room visits, they are now asking questions related to housing, food and the ability to afford medications and transportation to appointments. Three years post implementation of this system, readmission rates improved by 14.5% for chronic obstructive pulmonary disease patients, 11.6% for his and knee surgery patients, and 7.2% for pneumonia patients (http://www.modernhealthcare.com/article/20180331/NEWS/180339986). The Lehigh Valley Network in Pennsylvania is employing social workers to address the social determinant needs of those who visit the emergency room at least five times in four months. The social workers assist with developing a plan to address a variety of social needs, including organizing transportation and securing childcare. In the first four months of this project, emergency room visits dropped by 68 percent for some of these patients, and the cost to care for them fell from $1.5 million to $440,000 (http://blogs.deloitte.com/centerforhealthsolutions/health-systems-tackle-social-determinants-health-reduce-readmissions-improve-outcomes/).

The social conditions in which we find ourselves can determine why some members of the population are healthier than others and why some segments of the population are not as healthy as they could be. Targeted assessment of those most at risk for poor health outcomes provides an opportunity for early intervention that is able to change the trajectory of projected outcomes. As described previously, the Western New York community has an established, although somewhat fragmented, portfolio of services available to consumers. A key missing piece to this equation is a lack of screening and referral system for the Medicaid population, along with the

ability to analyze clinical and geographic characteristics of the patients served.

Hypothesis

It is the hypothesis of OCH and C&FS that screening patients at primary care clinics for social determinants of health and creating pathways for patients and their family members to local services will result in increased wellness. We further predict that increased wellness of these patients will reduce their future healthcare costs.

Intervention & Early Steps

For purposes of this RFI, baseline data will be collected to determine average health care usage for those receiving treatment at the OCH primary care clinics. These clinics serve approximately 11,000 children, resulting in over 24,000 patient visits per year, with over 95% having Medicaid as their primary insurance. Next, the screening will occur with randomly selected patients receiving care at the two primary care clinics.
The screening tool described previously, WE CARE, will be utilized during this innovation, in addition to a screening component utilized to assess for domestic violence. Screening results will be sent to C&FS to engage with the family to conduct an informed assessment, and link the family to appropriate community resources as needed.

Numerous tasks will be completed prior to project implementation, in addition to collection of baseline data. These include review of the project by the OCH Institutional Review Board. C&FS will establish Memorandums of Understanding with key entities to which we expect we will link OCH patients. These include food pantries, housing entities, legal advocates, transportation services, language and literacy services, pre & peri-natal services, mental health providers and parent advocates. Additionally, C&FS and OCH will establish an advisory group which will include a data analytics entity, to address project design focusing on quality, cost and impact related to population health. The advisory group will clarify the shared vision, develop plans for implementation and evaluation, resource alignment and shared decisions regarding next steps. Throughout project implementation, the advisory group will monitor project progress and outcomes.
It is expected that this initial multi-year intervention will result in additional knowledge about the local gaps in service provision experienced by the patient population served at these clinics. While we anticipate seeing a decrease in healthcare costs, there will likely be an increase in non-healthcare costs related to the remediation of social determinants of health. This basic intervention should be easily expanded in the future to include other populations served at OCH and potentially the healthcare affiliate system in which OCH is embedded.

Q5 Was your innovation implemented? If so, please explain when, the number of people impacted, and the results.	**No**
Q6 Please identify the SDH Domain that your innovation addresses. (Select all that apply.)	**Social and Community Context** , **Health and Health Care**
Q7 I give the Department of Health the right to share the information submitted in this application publicly (for example: on the DOH website). I understand that there is no monetary reward/reimbursement for my submission or for attending the summit should my innovation be selected.	**I consent to have my innovation shared**