UI Health | UIC
MILE SQUARE HEALTH CENTER

UNIVERSITY OF ILLINOIS MILE SQUARE HEALTH CENTER
RESPONSE TO ILLINOIS COMMUNITY HEALTH FOUNDATION
REQUEST FOR PROPOSALS

I. PROJECT SUMMARY

University of Illinois Hospital & Health Sciences System Mile Square Health Center ("UI Health Mile Square") seeks grant support to build the infrastructure necessary to implement a sustainable population health management program to optimize patient care throughout our Mile Square Health Center enterprise: 5 Regional Primary Care clinics; 5 School-Based Health Centers; and 1 nurse-led Integrated Health Care (IHC) clinic that provides care to patients with serious mental illness. A key component of UI Health Mile Square's population health management program is data-driven clinical decision making through the use of health information technology to improve quality and clinical outcomes of our patients. UI Health Mile Square has implemented and begun testing population health management software for this purpose. This new software tool will allow our health center to better assess high risk patients; improve care coordination, workflow and decision making among our care team; and strategically target interventions to improve health outcomes and measure patient progress in real time. In addition, UI Health Mile Square's clinics and providers will benefit from on-demand access to data, providing performance feedback and comparative benchmarking information to help our health center identify and focus on specific areas for improvement, and highlight better practices, tools and resources to drive quality. However, population health management software, alone, is insufficient. Indeed, a related component is ensuring that our health center providers and staff are able to effectively utilize data and information generated to deliver care. To that end, UI Health Mile Square is seeking grant support to hire a .50 FTE health informatics specialist to oversee data management, analyze data for patient quality and process improvements, and train and advise other staff on use of the population health system software tool. We anticipate $40,000 in personnel costs for this part-time position, of which we

are requesting $20,000 in grant support from the Illinois Community Health Foundation. Matching funds of $20,000 will be paid, in-kind, from UI Health Mile Square's program income.

II. PROJECT NARRATIVE

A. STATEMENT OF NEED

1) Specific Clinical Quality Challenges of Underserved Residents to be Improved by the Project

Our Mile Square Health Center enterprise delivered care to nearly 38,000 unique patients, totaling over 100,000 visits in calendar year 2015. Our patients are predominantly Black/African American (87%) and Hispanic/Latino (9.2%). Almost all of our patients (98.8%) live below 100% of the federal poverty level and experience multiple other barriers to health care, including disproportionately high unemployment; low educational attainment; limited access to healthy foods; and extreme violence in many of our neighborhoods on Chicago's west and south sides. Health disparities among our service area population are evident across most key indicators, exceeding national and/or severe benchmarks for prevalence of diabetes, cardiovascular disease, cancer, asthma and obesity. Our goal is to improve clinical disease management and optimize health outcomes of these patients by building a sustainable population health management infrastructure. A key component of UI Health Mile Square's population health management infrastructure is data-driven clinical decision making tools that include health information technology. Mile Square utilizes Cerner as its electronic medical record (EMR), which, unfortunately, does not allow us to systematically collect, organize and analyze patient data that can then be used to more effectively and efficiently manage the health of our patient population. We are currently unable to generate quality reports at a detailed patient level to allow for effective, timely intervention to target patients most at risk and conduct interventions specific to each patient's need. To address this deficiency, Mile Square purchased population health management software that provides this functionality, including the following: on-demand, online quality improvement information; physician-level reporting; tools for creating action lists; alignment with key national initiatives; and national and state benchmarking. Use of the new population health management software tool will allow our staff to quickly, reliably and cost-effectively view population-based, quality-oriented

measures of performance that can be compared to evidenced-based standards. In addition, use of this new software product will better position Mile Square to achieve important certifications such as Patient Centered Medical Home.

2) Level of Current Quality Measures/Need for Focus in the Service Area/Why Additional Technological or other Resources are Needed

Geographically, UI Health Mile Square's service area is divided into six regions (North, West, South, southwest, Far South and Cicero/Berwyn), with variations in demographics and community needs across this geographic expanse. The service area includes 32 zip codes; 51 of 77 Chicago Community Areas; and the two near-west suburbs of Cicero and Berwyn. The service area is home to roughly 1.9 million residents. As of calendar year 2015, our Mile Square enterprise provided care to close to 38,000 service area patients and provided over 100,000 encounters. The service area population suffers from serious health disparities across core quality measures, several of which are highlighted below (See Attachment I, Clinical Indicators and Health disparities in Mile Square's Six-Region Service Area, for more detail.)

Diabetes is more prevalent across Mile Square's six-region service area, with prevalence between 11 and 13 percent of the adult population, compared to the U.S. Department of Health and Human Services Health Resources and Services Administration's (HRSA) severe benchmark of 9.2 percent. When taking into account two risk factors for Type II Diabetes (adult obesity and lack of physical activity), the South Region fares worst, with both risk factors worse than HRSA's severe benchmark. The West and Far South Regions also suffer from great disparity, with adult obesity exceeding the severe benchmark, and lack of physical activity exceeding the national benchmark.

Preventive Screenings: None of our UI Health Mile Square Service Area Regions has sufficient cholesterol screenings, as indicated by all six Regions exceeding the severe benchmark for lack of screenings. This lack of preventive health service is most concerning in the West, South and Far South Regions, where the percent of adults reporting diagnoses of high blood pressure also exceeds the severe benchmark.

While PAP test frequency is below the national benchmark for all Regions other than Cicero/Berwyn, which is between the national and severe benchmarks, this data is differentiated only by race and ethnicity. For mammography screening, data that corresponds with HRSA's methodology yields an indicator for the total Service Area. Accordingly, the Service Area as a whole is between national and severe benchmarks for women aged 50+ with no mammograms in the past two years.

The remaining cancer screening indicators (fecal occult blood testing and cigarette smoking) are consistent with the pattern of health disparities found in the Service Area. Between 87 and 90 percent of Service Area adults have not been tested for fecal occult blood, compared to the national benchmark of 83.3 percent and the severe benchmark of 85.0 percent. Cigarette smoking prevalence is extremely high, ranging from a low of 27 percent in the South Region, to a range of 43 to 46 percent in the North, West and Far South Regions, and highs of 61 and 64 percent in the Southwest and Cicero/Berwyn Regions, respectively. When compared to a national benchmark of 17.3 percent and a severe benchmark of 20.3 percent, it is self-evident that cigarette smoking is a major public health issue throughout UI-Mile Square's Service Area.

Technological resources such as population health management software and critical support staff such as a health informatics specialist will strengthen Mile Square's population health management infrastructure aimed at addressing the pervasive health disparities that persist within our service area communities.

B. PROJECT OBJECTIVES

Below are measurable objectives in which the project proposes to achieve improvement in quality, based on the challenges identified above:

Table 1.

Quality of Care Measure	Current	Objective / Target (by 2019)
Asthma	95.71%	100%
Cancer Screenings		
• Breast Cancer	37.2%	47.2%

Screening (increase by 20%)		
• Colorectal Cancer Screening (increase by 25%)	37.1%	50%
• Cervical Cancer Screening (increase by 10%)	65.71%	75%
Diabetes A1C<9	**57.14%**	**75%**
Hypertension <140/90	**57.28%**	**75%**

Special focus will be given to Hypertension and Diabetes where large numbers of our patients suffer from these chronic diseases.

Hypertension: Percentage of adult patients with diagnosed hypertension whose most recent blood pressure is less than 140/90. Target outcome: Increase the percentage of adult patients 18 years and older with diagnosed hypertension whose blood pressure is less than 140/90. In calendar year 2015, 4,083 Mile Square patients had a diagnosis of Hypertension, resulting in 12,435 patient encounters at our clinic.

Diabetes: Percentage of adult diabetic patients whose Hemoglobin A1c (HbA1c) is less than 9%. Target outcome: Increase the percentage of adult patients 18 years and older whose most recent hemoglobin A1c (HbA1c) is less than 9% (under control). In calendar year 2015, 2,049 Mile Square patients had a diagnosis of Diabetes, resulting in 11,970 at our clinic.

C. PLAN OF OPERATIONS

1) Use of Funds

Foundation funds will be used to support development of Mile Square's Population Health Management infrastructure through the hiring of a .50 FTE health informatics specialist to oversee data management, analyze data for patient quality and process improvements, and train and advise other staff on use of population health management software. Population Health Management is a key component of Mile Square's overall Quality Improvement Program. Our Population Health Management infrastructure includes the use of data-driven

clinical decision making through the use of health information technology to improve quality and clinical outcomes of our patients. UI Health Mile Square has already purchased and begun to test population health management software for this purpose. We anticipate $40,000 in personnel costs for this part-time position, of which we are requesting $20,000 in grant support from the Illinois Community Health Foundation. Matching funds of $20,000 will be paid, in-kind, from UI Health Mile Square's program income.

2) Implementation Plan

Mile Square has already taken significant steps toward building its population health management infrastructure, including putting in place Care Coordination staff and purchasing population health management software. As it relates to the software and associated tools/resources proposed for funding, the implementation plan includes the below-referenced components.

Mile Square became a participant in The Guideline Advantage Program (TGA Program), a jointly directed quality improvement program of the American Cancer Society, American Diabetes Association and American Heart Association. The TGA Program includes a program registry that allows Mile Square to submit certain patient data and have the data mapped and analyzed for quality improvement purposes. The program registry is managed by Forward Health Group, the exclusive technology vendor to the TGA Program. Forward Health Group utilizes a customized web-based platform, Population Manager, to extract, map, analyze and report patient-physician-level data. TGA allows Mile Square to compare its adherence to guidelines, data comparisons to national and regional benchmarks and other standard data points, based on the data submitted. The population health management software has been tested and rolled out at Mile Square (see Table 2 below).

Table 2. Implementation Plan & Time Table

Activity	Time Frame	Responsible Individual
Implementation of Forward Health Group PopulationManager Software	Completed August 23, 2016	Forward Health Group
Identification and Implementation of Core Quality Measures for mapping and analyzing	Completed August 23, 2016	Mile Square Quality Nurse
Hire Health Informatics Specialist/Data Analyst	April 2017	Mile Square HR
Training	April/May 2017	Health Informatics Specialist
Go Live/Launch	June 1, 2017	Health Informatics Specialist; Mile Square Quality Team (RN and Chief Medical Officer)
Integrate technology/software into QI Plan/day-to-day operations	June 1, 2017	Health Informatics Specialist; Mile Square Quality Team (RN and Chief Medical Officer)
Quality Improvement Reports Generated	Monthly starting July 1, 2017	Mile Square Quality Team

A progress report describing implementation of the project to date will be submitted to the Foundation Board of Directors by June 30, 2017. A Final Report will be submitted to the Foundation Board by January 1, 2018.

3) Integration of Proposed Project into the Health Center's Existing Operations

The UI Health Mile Square population health management project is currently being integrated into Mile Square's existing operations and quality improvement program, the goal of which is the ongoing improvement of the delivery, quality, efficiency, and outcome of patient care, patient safety and services. All quality improvement activities are completed in accordance with standards of professional health care practices, regulatory, and licensing agencies, and support our health center's overall mission and strategic plans. This program is accomplished through a systematic examination of information provided through ongoing monitoring, evaluation and improvement activities associated with established clinical indicators and health center priorities. Opportunities to evaluate clinical and operational performance measures, to plan for change, and to implement an action plan to improve patient care will be integrated into ongoing management processes. These quality measures will be regularly presented to our providers and leadership staff during our monthly provider and quality and improvement

meetings. Registries based on high risk patients will be created to assess and implement quality improvement programs to reduce risk.

D. PROJECT EVALUATION

1) Identify who will be responsible for the Project and describe the process to be used to analyze the data and document the project's progress in meeting the objectives

Mile Square will utilize an evaluation that corresponds with program goals and objectives outlined in this funding request. The evaluation will address patient outcomes over a tow-year period, as measured by improvements in the above-described quality of care measures (current versus targeted).

Clinical Disease Registries: Mile Square with develop clinical disease registries with patient and provider specific quality health measures. These registries will provide feedback to providers and identify patients who do not meet quality health outcomes for regional and national quality measures. Data from these registries will be used to implement intervention strategies to improve health outcomes and meet target goals outlined in this proposal.

The quality improvement team will consist of the informatics specialist, quality improvement coordinator, quality improvement registered nurse (RN), community health workers. Monthly meetings with the quality improvement team to assess progress of quality measures and implementation of interventions to improve disease outcomes. Data extracted from quality improvement software will be presented to providers and leadership monthly and quarterly to the Community Board Members. See Table 3 below.

Table 3.

Informatics Specialist	Create Registries based on data from software and established quality measures	TBD
Quality Improvement RN	Provide Feedback Reports to health providers	Quality Nurse
Quality Improvement Coordinator	Implement care coordination for improving quality outcomes	TBD
Community Health Workers	Meet with high risk patients and assess barriers to care	Community Health Workers (2)

2) Describe the process to be used to determine the efficiency of operations and effectiveness of the project in meeting improvement goals

The process to be used to determine efficiency and effectiveness of the project will include monthly meetings with Mile Square Health Center leadership and providers to assess overall outcomes and discuss interventions; development of quality improvement programs (e.g., Plan, Do, Study, Act interventions; and reassessment of effectiveness of meeting health targets at quarterly meetings with leadership and Mile Square Health Center Board members. Mile Square's quality improvement/population health management team will monitor and report progress toward project goals and objectives to Mile Square's Executive Director, our Mile Square Health Center Board and the Illinois Community Health Foundation. Results will inform any programmatic modifications and future activity related to program expansion.

E. SUSTAINABILITY

Describe how initial quality improvement achieved through new technology/operational resources will be sustained upon completion of the grant period.

Quality improvements will be sustained through the following:

- Improved care coordination by focusing on individuals with the greatest need
- Improved performance outcomes through "pay-for-performance" outcomes incentive program
- Improved provider-patient relations

In addition, Mile Square Health Center anticipates using health center program revenue to continue to support most, if not all, of the population health management program and the proposed new .50 FTE Health Informatics Specialist laid out in this proposal. After the first year of the model's implementation, we believe that we will gain critical insights into the most impactful program components, thus allowing further fine-tuning and focusing of resource deployment to those areas in an effort to continue to improve patient outcomes and quality of care.

BUDGET PROPOSAL

PROJECT EXPENDITURES

Expenditure Category	Description	Total Amount Required	Amount Provided by Applicant/Others Amount	Amount Requested from Grant
Equipment				
New Software				
Personnel	Health Informatics Specialist	$ 40,000.00	$ 20,000.00	$ 20,000.00
Fringe Benefits - 40.23%	Health Informatics Specialist	$ 16,092.00	$ 16,092.00	
Consultants				
Training				
Other				
TOTAL		**$ 56,092.00**	**$ 36,092.00**	**$ 20,000.00**

Narrative: Mile Square Health Center is requesting $20,000 in Foundation funding to support the hire of a .50 FTE health informatics specialist. We anticipate an expense of $56,092 ($40,000 in salary and $16,092 in benefits) for this part-time position, of which $36,092 will be paid in-kind from Mile Square Health Center program income.

ATTACHMENT I. CLINICAL INDICATORS AND HEALTH DISPARITIES IN MILE SQUARE'S SIX-REGION SERVICE AREA

Source: Mile Square Health Center 2014 Community Needs Assessment (data sources attached)

Health Disparities HRSA 2013 NAP Form 9 Indicators	North Region	West Region	South Region	Southwest Region	Far South Region	Cicero/ Berwyn	National Benchmark	Severe Benchmark
Diabetes								
Diabetes Prevalence	11%	12%	12%	12%	13%	12%	8.1%	9.2%
Adult Obesity Prevalence	27%	32%	36%	30%	34%	28%	27.6%	30.2%
Adults with No Physical Activity in Past 30 Days	21%	25%	27%	22%	25%	21%	24.0%	26.6%
Cardiovascular Disease								
Adults Reporting Diagnosis of High Blood Pressure	28%	33%	40%	26%	33%	24%	28.7%	31.4%
No Cholesterol Screening	32%	37%	36%	39%	39%	39%	23.1%	25.7%
Cancer								
Women with No Pap Test in the Past 3 years	18%	15%	12%	18%	15%	19%	18.4%	20.1%
Women Aged 50+ with No Mammogram in the Past 2 Years	23%						22.2%	25.8%
Adults with No Fecal Occult Blood Test (FOBT) within the Past 2 Years	89%	88%	87%	89%	88%	90%	83.3%	85.0%
Adults who Currently Smoke Cigarettes	44%	43%	27%	61%	46%	64%	17.3%	20.3%
Prenatal and Perinatal Health								
Percent Low Birth Weight	8.0%	11.4%	13.8%	8.4%	11.0%	not	7.9%	9.4%
Infant Mortality Rate	5.5	13.1	6.2	6.9	7.3	available	6.60	7.90
Percent Births to Teenage Mothers	8%	15%	18%	14%	16%	5%	8.4%	10.0%
Percent Late Entry into Prenatal Care	24%	24%	27%	20%	25%	not	16.4%	21.1%
Percent Preterm Births	9%	12%	14%	9%	14%	available	12.0%	13.0%
Child Health								
Children not Receiving Recommended Immunizations (4-3-1-3-3-1-4)	40%					n/a	30%	35%
Children not Tested for Elevated Blood Lead Levels	94.8%						84.1%	89.3%
Pediatric Asthma Hospital Admission	126.0						116.0	148.3
Percent Children 95th %ile BMI or above	19%	23%	26%	22%	25%	21%	15.0%	18.1%
Behavioral and Oral Health								
Suicide Rate per 100,000	7.1	5.2	4.8	4.7	4.4	5.4	13.5	15.2
Binge Alcohol Use in the Past Month	27.2%	27.1%	26.9%	26.4%	26.0%	26.5%	24.1%	26.1%

Key:

- Pink cells indicate disparities that exceed HRSA's Severe Benchmark.
- Yellow cells indicate disparities between HRSA's National and Severe Benchmarks.
- Green cells indicate health conditions that are below HRSA's National Benchmark.
- Indicators are calculated to the smallest, most relevant possible geography. When the indicator could only be calculated for the City of Chicago, one result is shown for the 5 UI-Mile Square Service Area Regions in the City of Chicago (e.g., Children's Immunizations). When the indicator could only be calculated for Cook County, the result is shown for all six Regions (e.g., Mammography for Women Aged 50+ and Children's Blood Lead Testing.)

Disparity Indicators, Sources and Methodology

Core Access Barriers	Source	Differentiating Factor
Low Income Population to Primary Care Provider Ratio	US Census: American Community Survey 2012 5-year Estimates, combined with HPSA data accessed April 2014	N/A
Percent of Population Living below 200 percent FPL	UDS Mapper, April 2014	N/A
Percent of Target Population Uninsured	UDS Mapper, April 2014	N/A
Health Disparities	**Source**	**Differentiating Factor**
Diabetes		
Diabetes Prevalence. Percent Adults Ever Told by Doctor Have Diabetes	BRFSS, Illinois, 2010	Race and Ethnicity
Adult Obesity Prevalence. Percent of Adults at or above 95th %ile of BMI	BRFSS, Illinois, 2012	Race and Ethnicity
Adults with No Physical Activity in Past 30 Days	BRFSS, Illinois, 2012	Race and Ethnicity
Cardiovascular Disease		
Adults Reporting Diagnosis of High Blood Pressure	BRFSS, Illinois, 2011	Race and Ethnicity
No Cholesterol Screening	BRFSS, Illinois, 2011	Race and Ethnicity
Cerebrovascular Disease Mortality	CDPH Public Health Statistics 2005-2009	Chicago Community Areas
Cancer		
Women with No Pap Test in the Past 3 years	BRFSS, Illinois, 2012	Race and Ethnicity
Women with No Mammogram in the Past 2 Years	Health, United States, 2012. State of Illinois 2012	Race and Ethnicity
Adults with No Fecal Occult Blood Test (FOBT) within the Past 2 Years	BRFSS, Illinois, 2012	Race and Ethnicity
Adults who Currently Smoke Cigarettes	BRFSS, Illinois, 2012	Race and Ethnicity
Breast Cancer Mortality among Females	CDPH Public Health Statistics 2005-2009	Chicago Community Areas
Colorectal Cancer Mortality	CDPH Public Health Statistics 2005-2009	Chicago Community Areas
Prenatal and Perinatal Health		
Low Birth Weight. Percent of all Births under 2500 grams	CDPH Public Health Statistics, 2009	Chicago Community Areas
Infant Mortality Rate. 5-year Average number of deaths in first year of life per 1,000 Live Births.	CDPH Public Health Statistics, 2009	Chicago Community Areas
Births to Teenage Mothers. Percent of all births to mothers aged 15-19	CDPH Public Health Statistics, 2009	Chicago Community Areas

Core Access Barriers	Source	Differentiating Factor
Late Entry into Prenatal Care. Percent of all births whose first prenatal visit was after first trimester.	CDPH Public Health Statistics, 2009	Chicago Community Areas
Preterm Births	CDPH Public Health Statistics, 2009	Chicago Community Areas
Child Health		
Children not Receiving Recommended Immunizations (4-3-1-3-3-1-4)	US, National Immunization Survey City of Chicago, 2012	None
Children not Tested for Elevated Blood Lead Levels	CDC, Blood Level Surveillance, County-level Summary Data for IL, 2008	None
Children who are Obese	2011/12 National Survey of Children's Health	Race/Ethnicity
Behavioral and Oral Health		
Binge Alcohol Use in the Past Month	BRFSS, Illinois, 2012	Race and Ethnicity