Pines Health Services

Aroostook County
Caribou, ME

Community Health Needs Assessment
and Implementation Strategy

Completed December 2019

PINES
HEALTH SERVICES

Dear Community Member,

This “2019 Community Health Needs Assessment” identifies local health and medical needs and provides a plan of how we will respond to such needs. This document illustrates one way we are meeting our obligations to efficiently deliver high quality, patient-centered medical services. Assessing our community’s needs will be conducted at least once every three years. As you review this plan, please see if, we have identified the primary needs of the community and if you think our intended response will lead to needed improvements.

We do not have adequate resources to solve all the problems identified. Some issues are beyond the mission of the organization and action is best suited for a response by others. Some improvements will require personal actions by individuals rather than the response of one single organization. We view this as a plan for how we, along with other area organizations and agencies, can collaborate to bring the best each has to offer to support change and to address the most pressing identified needs.

We invite your response to this report. As you read, please think about how to help us improve health and medical services in our area. We all live in, work in, and enjoy this wonderful community, and together, we can make our community healthier for every one of us.

Thank you,

Kris A. Doody, RN, MSB
Chief Executive Officer

TABLE OF CONTENTS

Executive Summary 1

Approach 3

Project Objectives 4

Community Health Needs Assessment Subsequent to Initial Assessment 4

Community Characteristics 7

Definition of Area Served 8

Demographics of the Community 10

Consumer Health Service Behavior 11

Conclusions from Demographic Analysis Compared to National Averages 12

Leading Causes of Death 13

Priority Populations 14

Social Vulnerability 15

Comparison to Other State Counties 17

Conclusions from Other Statistical Data 18

Community Benefit 20

Implementation Strategy 21

Significant Health Needs 21

Other Needs Identified During CHNA Process 40

Overall Community Need Statement and Priority Ranking Score 41

Appendix 42

Appendix A – Written Commentary on Prior CHNA (Local Expert Survey) 42

Appendix B – Identification & Prioritization of Community Needs (Local Expert Survey Results) 51

Appendix C – Additional Information 57

Appendix D – National Healthcare Quality and Disparities Report 60

EXECUTIVE SUMMARY

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Our organization has performed a Community Health Needs Assessment to determine the health needs of the local community.

Data was gathered from multiple well-respected secondary sources to build an accurate picture of the current community and its health needs. A survey of a select group of Local Experts was performed to review the prior CHNA and provide feedback, and to ascertain whether the previously identified needs are still a priority. Additionally, the group reviewed the data gathered from the secondary sources and determined the Significant Health Needs for the community.

The 2019 Significant Health Needs identified for Aroostook County are:

1. Drug and Alcohol Abuse – 2016 Significant Need
2. Mental Health – 2016 Significant Need
3. Obesity – 2016 Significant Need
4. Cancer
5. Tobacco Use – 2016 Significant Need
6. Diabetes – 2016 Significant Need

We have developed implementation strategies for these six needs including activities to continue or pursue, community partners to work alongside, and measures to track progress.

APPROACH

APPROACH

A Community Health Needs Assessment (CHNA) is part of the required documentation of "Community Benefit" under the Affordable Care Act (ACA). ***This study is designed to identify and respond to the primary health needs of its residents that will enable us to focus our efforts and resources on the most significant health needs of the community.***

Project Objectives

Pines Health Services partnered with Cary Medical Center and Quorum Health Resources (Quorum) to:

- Complete a CHNA report
- Produce the information necessary to issue an assessment of community health needs and document its intended response

Community Health Needs Assessment Subsequent to Initial Assessment

The goal of the CHNA process it to help determine the priority health needs of our area and develop an implementation strategy for addressing those needs. The CHNA report consists of the following information:

(1) a definition of the community served and a description of how the community was determined;

(2) a description of the process and methods used to conduct the CHNA;

(3) a description of how we solicited and took into account input received from persons who represent the broad interests of the community it serves;

(4) a prioritized description of the significant health needs of the community identified through the CHNA, along with a description of the process and criteria used in identifying certain health needs as significant and prioritizing those significant health needs; and

(5) a description of resources potentially available to address the significant health needs identified through the CHNA.

The methodology takes a comprehensive approach to the solicitation of written comments. Input was obtained from the required three minimum sources and expanded input to include other representative groups:

(1) Departments and Agencies – Federal, tribal, regional, State, public health, local health or other departments or agencies, with current data or other information relevant to the health needs of the community served

(2) Priority Populations – Leaders, representatives, or members of medically underserved, low income, and minority populations, and populations with chronic disease needs in the community served by the hospital facility. Also, in other federal regulations the term Priority Populations, which include rural residents and LGBT interests, is employed and for consistency is included in this definition

(3) Chronic Disease Groups – Representative of or member of Chronic Disease Group or Organization, including mental and oral health

(4) Broad Interest of the Community – Individuals, volunteers, civic leaders, medical personnel, and others to fulfill the spirit of broad input required by the federal regulations

The methodology also takes a comprehensive approach to assess community health needs. Perform several independent data analyses based on secondary source data, augment this with Local Expert Advisor opinions, and resolve any data inconsistency or discrepancies by reviewing the combined opinions formed from local experts. The report relies on secondary source data, and most secondary sources use the county as the smallest unit of analysis. Local expert area residents were asked to note if they perceived the problems or needs identified by secondary sources existed in their portion of the county.

Most data used in the analysis is available from public Internet sources and proprietary data. Any critical data needed to address specific regulations or developed by the Local Expert Advisor individuals cooperating in this study are displayed in the CHNA report appendix.

Data sources include:

Website or Data Source	Data Element	Date Accessed	Data Date
www.countyhealthrankings.org	Assessment of health needs of Aroostook County compared to all Maine counties	February 19, 2019	2012-2014
IBM Watson Health (formerly known as Truven Health Analytics)	Assess characteristics of the service area, at a zip code level, based on classifying the population into various socio-economic groups, determining the health and medical tendencies of each group and creating an aggregate composition of the service area according to the proportion of each group in the entire area; and, to access population size, trends and socio-economic characteristics	February 19, 2019	2019
http://svi.cdc.gov	To identify the Social Vulnerability Index value	February 20, 2019	2012-2016
http://www.healthdata.org/us-county-profiles	To look at trends of key health metrics over time	February 20, 2019	2014
www.worldlifeexpectancy.com/usa-health-rankings	To determine relative importance among 15 top causes of death	February 20, 2019	2016

A standard process of gathering community input was developed. In addition to gathering data from the above sources:

- Local Expert Advisors were local individuals selected according to criteria required by the Federal guidelines and regulations and the desire to represent the region's geographically and ethnically diverse population. Community input from 52 Local Expert Advisors was received. Survey responses started June 23rd, 2019 and ended on July 18th, 2019.

- Information analysis augmented by local opinions showed how Aroostook County relates to its peers in terms of primary and chronic needs and other issues of uninsured persons, low-income persons, and minority groups. Respondents commented on whether they believe certain population groups ("Priority Populations") need help to improve their condition, and if so, who needs to do what to improve the conditions of these groups.
- Local opinions of the needs of Priority Populations, while presented in its entirety in the Appendix, was abstracted in the following "take-away" bulleted comments
    - The top three priority populations in the area are low-income groups, older adults and residents of rural areas
    - There should be a focus on providing affordable and accessible care to the community, chronic conditions, and elderly care

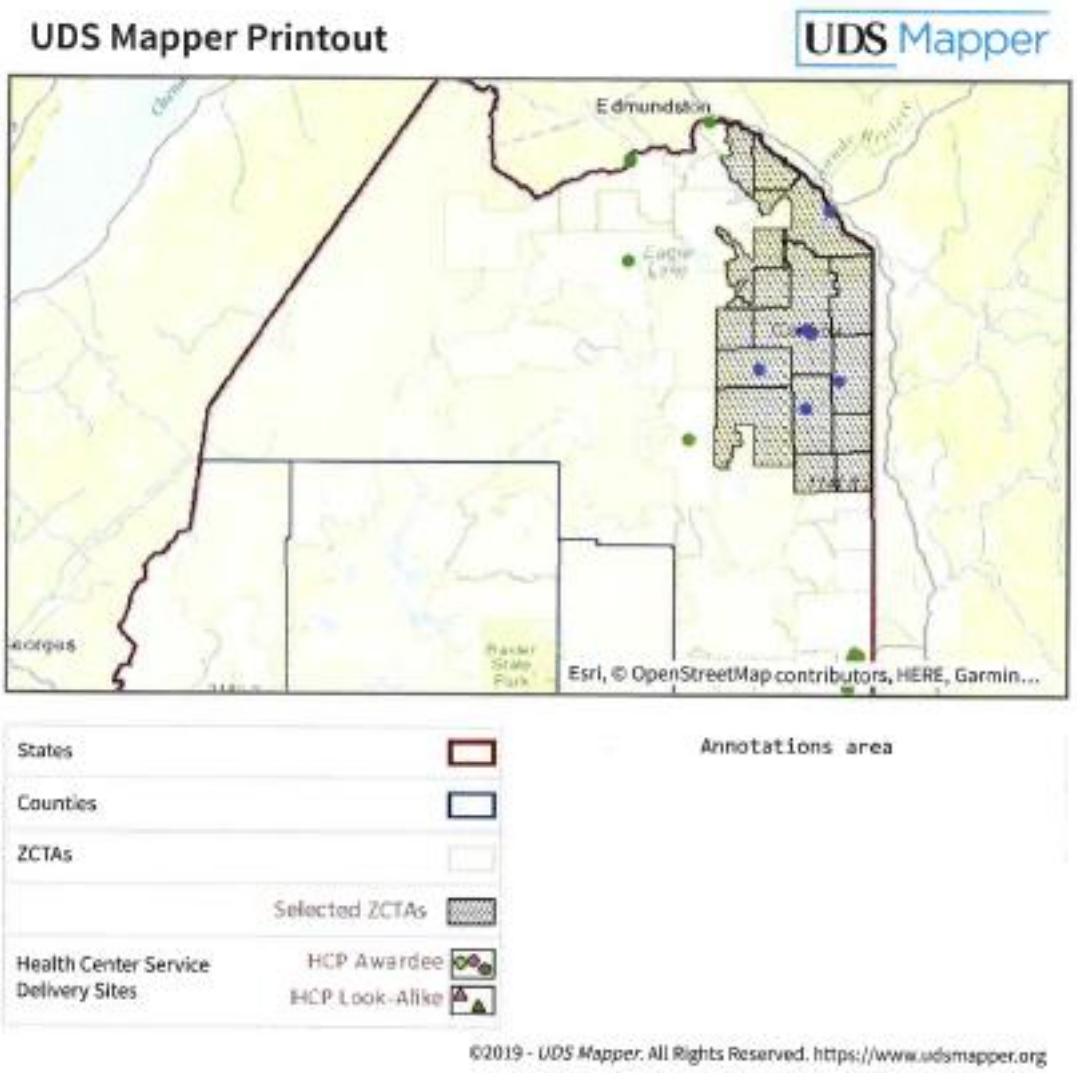
Having taken steps to identify potential community needs, the Local Experts then participated in a structured communication technique called a "Wisdom of Crowds" method. The premise of this approach relies on a panel of experts with the assumption that the collective wisdom of participants is superior to the opinion of any one individual, regardless of their professional credentials.

Local Experts had the opportunity to introduce needs previously unidentified and to challenge conclusions developed from the data analysis. While there were a few opinions of the data conclusions not being completely accurate, most of the comments agreed with the findings. A list of all needs identified by any of the analyzed data was developed. The Local Experts then allocated 100 points among the list of health needs, including the opportunity to list additional needs that were not identified from the data.

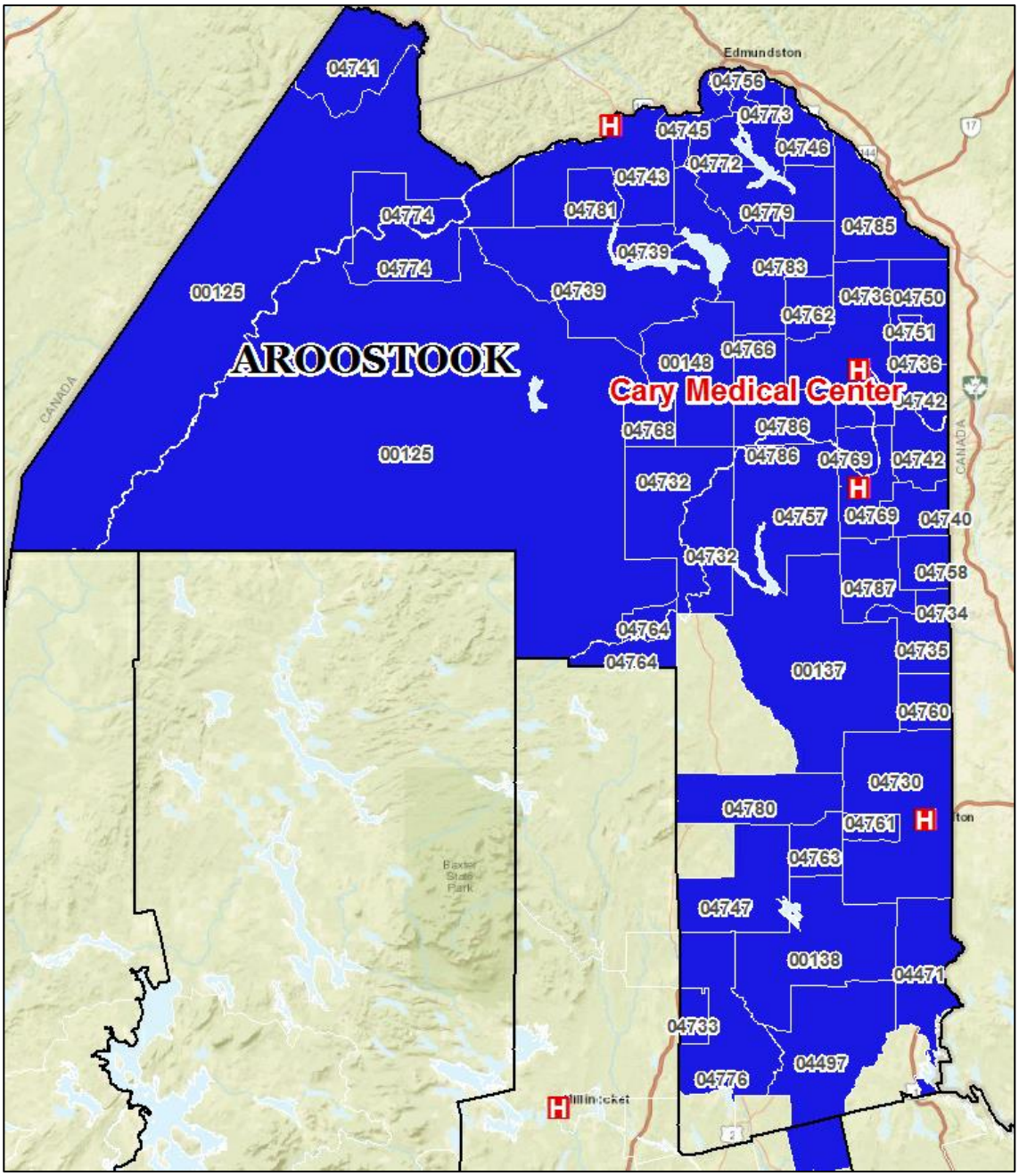
The ranked needs were divided into two groups: "Significant" and "Other Identified Needs." The Significant Needs were prioritized based on total points cast by the Local Experts in descending order, further ranked by the number of local experts casting any points for the need. By definition, a Significant Need had to include all rank ordered needs until at least fifty percent (50%) of all points were included and to the extent possible, represented points allocated by a majority of voting local experts. The determination of the break point — "Significant" as opposed to "Other" — was a qualitative interpretation where a reasonable break point in rank order occurred.

COMMUNITY CHARACTERISTICS

Definition of Area Served by Pines Health Services



Definition of Area Served by the Hospital



For the purposes of this study, Cary Medical Center defines its service area as Aroostook County in Maine, which includes the following ZIP codes listed above.

Demographics of the Community [2]

Variable	Aroostook County 2019	Aroostook County 2024	Aroostook County %Change	Maine 2019	Maine 2024	Maine %Change	United States 2019	United States 2024	United States %Change
DEMOGRAPHIC CHARACTERISTICS									
Total Population	66,443	64,235	-3.3%	1,332,654	1,337,959	0.4%	326,533,070	337,947,912	3.5%
Total Male Population	32,826	31,743	-3.3%	652,950	655,753	0.4%	160,763,625	166,448,475	3.5%
Total Female Population	33,617	32,492	-3.3%	679,704	682,206	0.4%	165,769,445	171,499,437	3.5%
Females, Child Bearing Age (15-44)	10,398	9,915	-4.6%	230,522	227,825	-1.2%	63,920,735	64,819,726	1.4%
Average Household Income	$56,512			$73,569			$86,278		
POPULATION DISTRIBUTION									
Age Distribution									
0-14	9,748	9,169	-5.9%	203,718	195,319	-4.1%	61,041,209	61,251,924	0.3%
15-17	2,345	2,194	-6.4%	46,827	46,602	-0.5%	12,768,680	13,285,276	4.0%
18-24	5,503	5,419	-1.5%	115,353	118,323	2.6%	31,582,678	32,239,015	2.1%
25-34	6,521	6,422	-1.5%	151,468	145,764	-3.8%	43,889,724	43,505,348	-0.9%
35-54	15,657	13,502	-13.8%	332,693	310,547	-6.7%	83,269,718	83,715,341	0.5%
55-64	11,301	11,022	-2.5%	214,920	219,358	2.1%	42,204,839	43,372,785	2.8%
65+	15,368	16,507	7.4%	267,675	302,046	12.8%	51,776,222	60,578,223	17.0%
HOUSEHOLD INCOME DISTRIBUTION									
Total Households	29,155	28,373	-2.7%	567,476	572,972	1.0%	123,942,877	128,512,554	3.7%
2019 Household Income									
<$15K	5,233			65,419			13,504,093		
$15-25K	4,257			60,663			11,746,600		
$25-50K	7,726			133,868			27,363,648		
$50-75K	4,594			104,614			21,179,900		
$75-100K	3,165			74,838			15,192,390		
Over $100K	4,180			128,074			34,956,246		
EDUCATION LEVEL									
Pop Age 25+	48,847			966,756			221,140,503		
2019 Adult Education Level Distribution									
Less than High School	2,870			27,893			12,391,997		
Some High School	3,679			51,916			16,363,756		
High School Degree	18,580			317,439			61,028,690		
Some College/Assoc. Degree	14,972			282,610			64,253,906		
Bachelor's Degree or Greater	8,746			286,898			67,102,154		
RACE/ETHNICITY									
2019 Race/Ethnicity Distribution									
White Non-Hispanic	62,431			1,239,326			197,066,325		
Black Non-Hispanic	575			19,335			40,402,616		
Hispanic	899			24,185			59,581,510		
Asian & Pacific Is. Non-Hispanic	368			17,284			18,958,063		
All Others	2,170			32,524			10,524,556		

[2] Claritas (accessed through IBM Watson Health)

Consumer Health Service Behavior[3]

Key health services topics for the service area population are presented in the table below. In the second column of the chart, the national average is 100%, so the 'Demand as % of National' shows a community's likelihood of exhibiting a certain health behavior more or less than the national average. The next column shows the percentage of the population that is likely to exhibit those behaviors.

Where Aroostook County varies more than 5% above or below the national average (that is, less than 95% or greater than 105%), it is considered noteworthy. Items in the table with **red text** are viewed as **adverse** findings. Items with **blue text** are viewed as **beneficial** findings. Items with black text are neither a favorable nor unfavorable finding.

Health Service Topic	Demand as % of National	% of Population Affected
Weight / Lifestyle		
BMI: Morbid/Obese	119.7%	36.5%
Vigorous Exercise	91.7%	52.3%
Chronic Diabetes	126.1%	19.8%
Healthy Eating Habits	99.2%	23.1%
Ate Breakfast Yesterday	96.1%	76.0%
Slept Less Than 6 Hours	126.6%	17.3%
Consumed Alcohol in the Past 30 Days	67.9%	36.5%
Consumed 3+ Drinks Per Session	125.2%	35.3%
Behavior		
Search for Pricing Info	88.3%	23.7%
I am Responsible for My Health	99.5%	90.2%
I Follow Treatment Recommendations	100.9%	77.7%
Pulmonary		
Chronic COPD	144.6%	7.8%
Chronic Asthma	96.2%	11.4%
Heart		
Chronic High Cholesterol	114.7%	28.0%
Routine Cholesterol Screening	89.0%	39.5%
Chronic Heart Failure	172.8%	7.0%

Health Service Topic	Demand as % of National	% of Population Affected
Cancer		
Cancer Screen: Skin 2 yr	85.2%	9.1%
Cancer Screen: Colorectal 2 yr	94.9%	19.5%
Cancer Screen: Pap/Cerv Test 2 yr	80.7%	38.9%
Routine Screen: Prostate 2 yr	91.9%	26.0%
Orthopedic		
Chronic Lower Back Pain	110.4%	34.1%
Chronic Osteoporosis	139.0%	14.1%
Routine Services		
FP/GP: 1+ Visit	101.7%	82.7%
NP/PA Last 6 Months	103.7%	43.0%
OB/Gyn 1+ Visit	74.3%	28.6%
Medication: Received Prescription	102.6%	62.2%
Internet Usage		
Use Internet to Look for Provider Info	68.8%	27.5%
Facebook Opinions	84.0%	8.5%
Looked for Provider Rating	67.5%	15.8%
Emergency Services		
Emergency Room Use	105.3%	37.1%
Urgent Care Use	89.5%	29.5%

[3] Claritas (accessed through IBM Watson Health)

Conclusions from Demographic Analysis Compared to National Averages

The following areas were identified from a comparison of Aroostook County to national averages. **Adverse** metrics impacting more than 30% of the population and statistically significantly different from the national average include:

- 19.7% more likely to have a **BMI of Morbid/Obese**, affecting 36.5%
- 8.3% less likely to **Vigorously Exercise**, affecting 52.3%
- 25.2% more likely to **Consume 3+ Drinks per Session**, affecting 35.3%
- 11.0% less likely to receive **Routine Cholesterol Screenings**, affecting 39.5%
- 19.3% less likely to receive **Cervical Cancer Screening every 2 years**, affecting 38.9%
- 10.4% more likely have **Chronic Lower Back Pain**, affecting 34.1%
- 5.3% more likely to **Visit the Emergency Room (for non-emergent issues)**, affecting 37.1%

Beneficial metrics impacting more than 30% of the population and statistically significantly different from the national average include:

- 32.1% less likely to have **Consumed Alcohol in the Past 30 Days**, affecting 36.5%

Leading Causes of Death[4]

The Leading Causes of Death are determined by official Centers for Disease Control and Prevention (CDC) final death total. Maine's Top 15 Leading Causes of Death are listed in the table below in Aroostook County's rank order. Aroostook County was compared to all other Maine counties, Maine state average and whether the death rate was higher, lower or as expected compared to the U.S. average.

Cause of Death			Rank among all counties in ME (#1 rank = worst in state)	Rate of Death per 100,000 age adjusted		Observation (Aroostook County Compared to U.S.)
ME Rank	Aroostook Rank	Condition		ME	Aroostook	
2	1	Heart Disease	3 of 16	149.5	207.1	Higher than expected
1	2	Cancer	8 of 16	168.9	192.1	Higher than expected
3	3	Lung	10 of 16	47.3	49.6	Higher than expected
5	4	Stroke	7 of 16	34.4	44.7	Higher than expected
4	5	Accidents	11 of 16	62.3	41.1	Lower than expected
7	6	Diabetes	7 of 16	23.9	26.5	Higher than expected
6	7	Alzheimer's	7 of 16	29.6	25.4	Lower than expected
9	8	Flu - Pneumonia	2 of 16	12.0	20.3	Higher than expected
8	9	Kidney	3 of 16	12.3	16.2	As expected
10	10	Suicide	8 of 16	15.8	14.0	As expected
11	11	Liver	4 of 16	10.5	10.2	As expected
13	12	Blood Poisoning	8 of 16	8.1	7.9	As expected
12	13	Parkinson's	16 of 16	8.9	5.2	As expected
14	14	Hypertension	9 of 16	5.2	4.8	As expected
N/A	15	Homicide	15 of 16	N/A	1.6	Lower than expected

[4] www.worldlifeexpectancy.com/usa-health-rankings

Priority Populations[5]

Information about Priority Populations in the service area is difficult to encounter if it exists. The approach is to understand the general trends of issues impacting Priority Populations and to interact with the Local Experts to discern if local conditions exhibit any similar or contrary trends. The following discussion examines findings about Priority Populations from a national perspective by analyzing the National Healthcare Quality and Disparities Reports (QDR), which are annual reports to Congress mandated in the Healthcare Research and Quality Act of 1999 (P.L. 106-129). These reports provide a comprehensive overview of the quality of healthcare received by the general U.S. population and disparities in care experienced by different racial, ethnic, and socioeconomic groups. The purpose of the reports is to assess the performance of the local health system and to identify areas of strengths and weaknesses in the healthcare system along three main axes: **access to healthcare**, **quality of healthcare**, and **priorities of the National Quality Strategy** (NQS). The complete report is provided in Appendix D.

A specific question was asked to the Local Expert Advisors about unique needs of Priority Populations, and their responses were reviewed to identify if there were any report trends in the service area. Accordingly, the organization places a great reliance on the commentary received from the Local Expert Advisors to identify unique population needs to which we should respond. Specific opinions from the Local Expert Advisors are summarized below:[6]

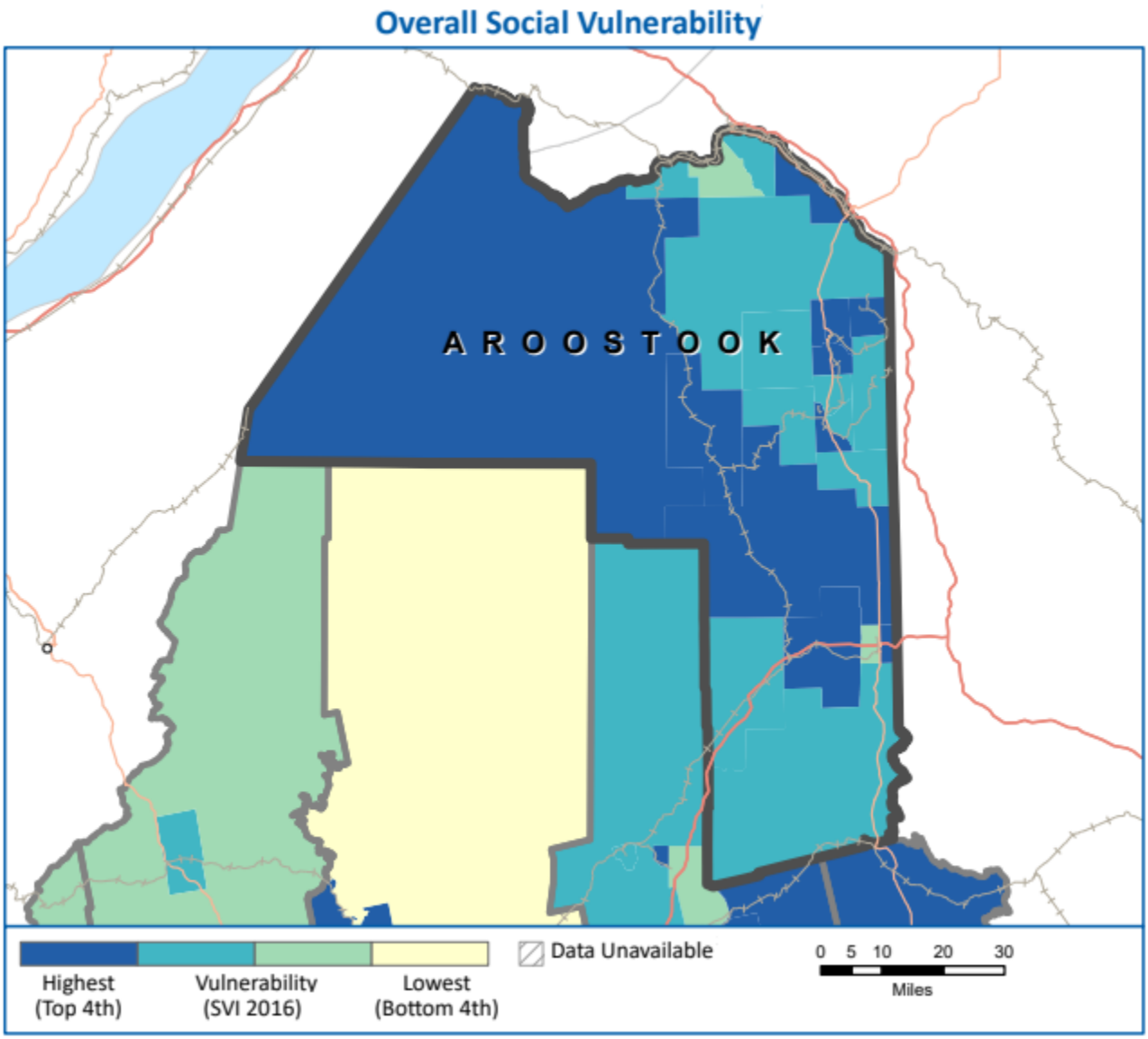
- The top three priority populations in the area are low-income groups, older adults and residents of rural areas
- There should be a focus on providing affordable and accessible care to the community, chronic conditions, and elderly care

[5] http://www.ahrq.gov/research/findings/nhqrdr/nhqdr14/index.html Responds to IRS Schedule H (Form 990) Part V B 3 i
[6] All comments and the analytical framework behind developing this summary appear in Appendix A

Social Vulnerability[7]

Social vulnerability refers to the resilience of communities when confronted by external stresses on human health, such as natural or human-caused disasters, or disease outbreaks.

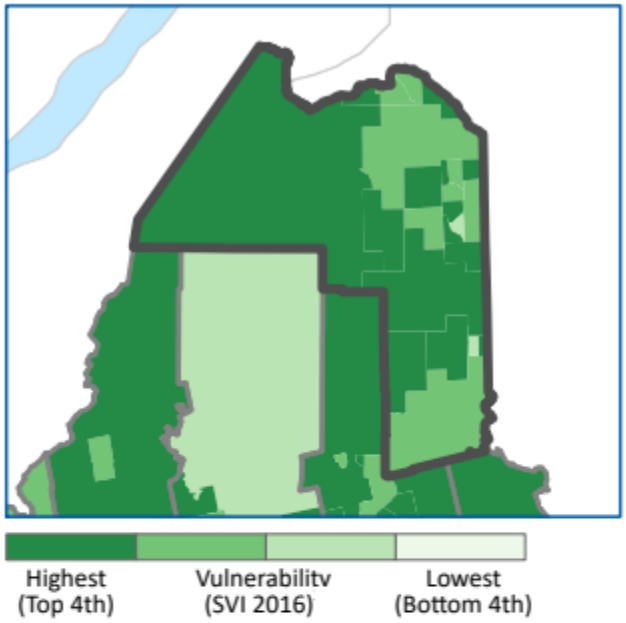
Overall, Aroostook County falls into three of the four quartiles of social vulnerability. With the majority of the county falling into the 3rd and 4th quartile, which make those areas higher in social vulnerability.



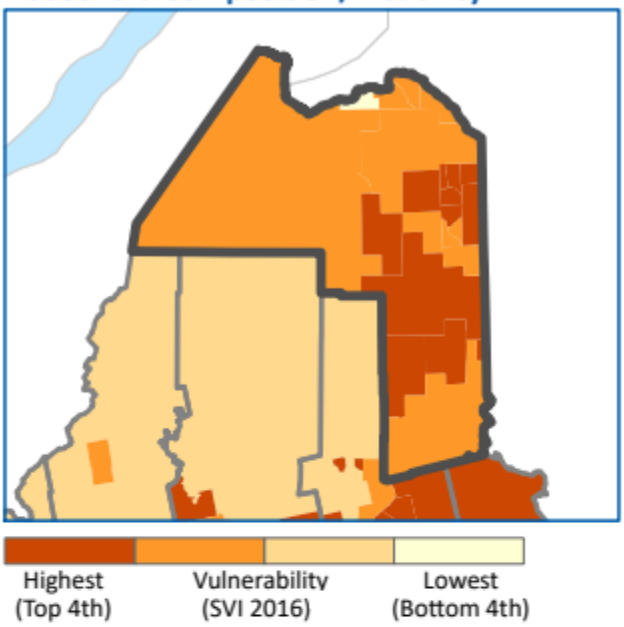
[7] http://svi.cdc.gov

SVI Themes

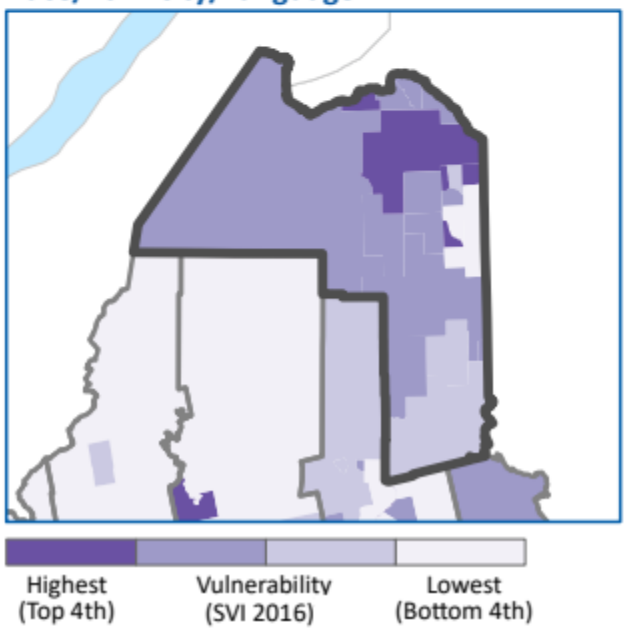
Socioeconomic Status



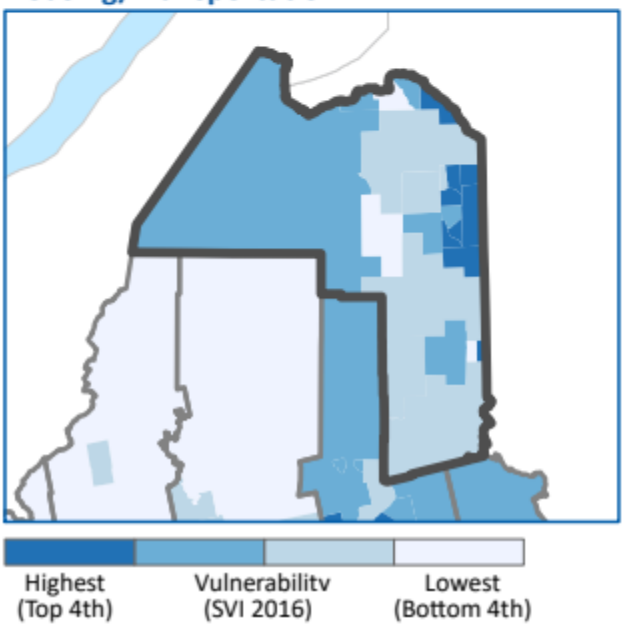
Household Composition/Disability



Race/Ethnicity/Language



Housing/Transportation



Comparison to Other State Counties[8]

To better understand the community, Aroostook County has been compared to all 16 counties in the state of Maine across six areas: Length of Life, Quality of Life, Health Behaviors, Clinical Care, Social & Economic Factors, and Physical Environment.

In the chart below, the county's rank compared to all counties is listed along with measures in each area compared to the state average and U.S. Median.

	Aroostook	Maine	U.S. Median
Length of Life			
Overall Rank *(best being #1)*	13/16		
- Premature Death*	7,800	6,500	7,800
Quality of Life			
Overall Rank *(best being #1)*	16/16		
- Poor or Fair Health	18%	15%	17%
- Poor Physical Health Days	4.3	4.2	3.9
- Poor Mental Health Days	4.4	4.4	3.9
Health Behaviors			
Overall Rank *(best being #1)*	14/16		
- Adult Smoking	21%	20%	17%
- Adult Obesity	35%	29%	32%
- Physical Inactivity	30%	21%	27%
- Excessive Drinking	15%	21%	17%
- Alcohol-Impaired Driving Deaths	23%	39%	29%
Clinical Care			
Overall Rank *(best being #1)*	9/16		
- Uninsured	12%	10%	11%
- Population to Primary Care Provider Ratio	1,070:1	900:1	2,040:1
- Population to Dentist Ratio	1,890:1	1,670:1	2,520:1
- Population to Mental Health Provider Ratio	200:1	230:1	1,050:1
- Preventable Hospital Stays	65	49	56
- Diabetes Monitoring	89%	89%	86%
- Mammography Screening	75%	69%	61%
Social & Economic Factors			
Overall Rank *(best being #1)*	12/16		
- Unemployment	5.7%	3.9%	5.0%
- Children in Poverty	22%	12%	21%
- Children in Single-Parent Households	30%	32%	32%
- Violent Crime*	85	127	198
- Injury Deaths*	80	75	79
Physical Environment			
Overall Rank *(best being #1)*	5/16		
- Air Pollution - Particulate Matter	6.8 µg/m³	7.4 µg/m³	9.2 µg/m³
- Severe Housing Problems	14%	16%	14%

Per 100,000 Population

[8] www.countyhealthrankings.org

Conclusions from Other Statistical Data[9]

The Institute for Health Metrics and Evaluation at the University of Washington analyzed all 3,143 U.S. counties or equivalents applying small area estimation techniques to the most recent county information. The below chart compares Aroostook County statistics to the U.S. average, as well as the trend in each measure over a 34-year span.

Aroostook County	Current Statistic (2014)	Percent Change (1980-2014)
UNFAVORABLE Aroostook County measures that are **WORSE** than the U.S. average and had an **UNFAVORABLE** change		
- Female Tracheal, Bronchus, and Lung Cancer*	52.9	93.7%
- Male Diabetes, Urogenital, Blood, and Endocrine Disease Deaths*	77.6	66.5%
- Female Liver Disease Related Deaths*	14.3	10.9%
UNFAVORABLE Aroostook County measures that are **WORSE** than the U.S. average and had a **FAVORABLE** change		
- Male Heart Disease*	200.9	-59.6%
- Male Stroke*	51.3	-48.3%
- Male Tracheal, Bronchus, and Lung Cancer*	89.3	-24.1%
- Male Transport Injuries Related Deaths*	21.4	-36.8%
DESIRABLE Aroostook County measures that are **BETTER** than the US average and had an **UNFAVORABLE** change		
- Female Mental and Substance Use Related Deaths*	5.5	310.2%
- Male Mental and Substance Use Related Deaths*	15.7	137.6%
DESIRABLE Aroostook County measures that are **BETTER** than the US average and had a **FAVORABLE** change		
- Female Heart Disease*	118.0	-54.0%
- Female Stroke*	38.0	-55.3%
- Female Breast Cancer*	21.1	-38.2%
- Female Self-Harm and Interpersonal Violence Related Deaths*	6.8	-12.0%
AVERAGE Aroostook County measures that are **EQUAL** to the US average and had a **FAVORABLE** change		
- Female Life Expectancy	81.4	4.3%
- Male Life Expectancy	76.1	7.1%
- Male Breast Cancer*	0.4	-4.4%
- Female Transport Injuries Related Deaths*	8.4	-21.5%
- Male Liver Disease Related Deaths*	22.9	-5.2%
AVERAGE Aroostook County measures that are **EQUAL** to the US average and had an **UNFAVORABLE** change		
- Female Skin Cancer*	2.1	14.9%
- Male Skin Cancer*	4.5	40.8%
- Female Diabetes, Urogenital, Blood, and Endocrine Disease Deaths*	49.5	37.3%
- Male Self-Harm and Interpersonal Violence Related Deaths*	30.9	46.1%

*rate per 100,000 population, age-standardized

[9] http://www.healthdata.org/us-county-profiles

Community Benefit

Community benefit activities or programs seek to achieve a community benefit objective, including improving access to health services, enhancing public health, advancing increased general knowledge, and relief of a government burden to improve health. This includes activities or programs that do the following:

- Are available broadly to the public and serve low-income consumers.
- Reduce geographic, financial, or cultural barriers to accessing health services, and if they ceased would result in access problems (for example, longer wait times or increased travel distances).
- Address federal, state, or local public health priorities such as eliminating disparities in access to healthcare services or disparities in health status among different populations.
- Leverage or enhance public health department activities such as childhood immunization efforts.
- Otherwise would become the responsibility of government or another tax-exempt organization.
- Advance increased general knowledge through education or research that benefits the public.

Local activities reported:

- $3,000,000 Free Care – Cary Medical Center
- $800,000 Free Care – Pines Health Services
- Other Examples:
    - $30,000 free flu shots
    - $45,000 free Hepatitis A vaccine (Local exposure)
    - $22,500 free Cholesterol and Blood Sugar Tests
    - $10,000 in sponsorship Caribou Marathon
    - $50,000 Community Health events
    - $15,000 Other charitable sponsorships
    - $60,000 Community prevention activities through Healthy You

IMPLEMENTATION STRATEGY

Significant Health Needs

The methodology used the priority ranking of area health needs by the Local Expert Advisors to organize the search for locally available resources as well as the response to the needs. The following list:

- identifies the rank order of each identified Significant Need,
- presents the factors considered in developing the ranking,
- establishes a Problem Statement to specify the problem indicated by use of the Significant Need term,
- identifies current efforts responding to the need including any written comments received regarding prior implementation actions,
- establishes the Implementation Strategy programs and resources the organizations will devote to attempt to achieve improvements,
- documents the Leading Indicators the organizations will use to measure progress,
- presents the Lagging Indicators the organizations believe the Leading Indicators will influence in a positive fashion, and
- presents the locally available resources noted during the development of this report as believed to be currently available to respond to this need.

Pines Health Services is a 501(c)(3) nonprofit established in 1981 and governed by a community-based Board of Directors. Pines is committed to providing excellence in patient centered health care and are actively engaged in advancing the health and wellness needs of the residents of Aroostook County, focusing on the unserved and underserved. In 2007 Pines was designated as a Federally Qualified Health Center (FQHC). Ten years later Pines' community outreach efforts were expanded to include oral health services.

In general, CMC is the major hospital in the service area. CMC is a 49-bed, acute care medical facility located in Caribou, ME. The next closest facilities are outside the service area and include:

- Northern Light AR Gould Hospital, Presque Isle, ME; 15.7 miles (26 minutes)
- Northern Maine Medical Center, Fort Kent, ME; 43.0 miles (52 minutes)
- Houlton Regional Hospital, Houlton, ME; 55.2 miles (1 hour and 15 minutes)
- Millinocket Regional Hospital, Millinocket, ME; 123.9 miles (2 hours and 22 minutes)

All statistics analyzed to determine significant needs are "Lagging Indicators," measures presenting results after a period of time, characterizing historical performance. Lagging Indicators tell you nothing about how the outcomes were achieved. In contrast, the Implementation Strategy uses "Leading Indicators." Leading Indicators anticipate change in the Lagging Indicator. Leading Indicators focus on short-term performance, and if accurately selected, anticipate the broader achievement of desired change in the Lagging Indicator. In the QHR application, Leading Indicators also must be within the ability of the organzations to influence and measure.

1. **DRUGS AND ALCOHOL ABUSE – 2016 Significant Need; Residents of Aroostook County are more likely to consume 3+ drinks per session compared the US average; Liver Disease is the #11 Leading Cause of Death in Aroostook County; Aroostook County's Mental and Substance Use related deaths increased from 1980-2014**
2. **MENTAL HEALTH – 2016 Significant Need; Aroostook County's Poor Mental Health Days is worse than the national average; Suicide is the #10 Leading Cause of Death in Aroostook County; Aroostook County's Mental and Substance Use Related Deaths rate increased from 1980-2014**
5. **TOBACCO USE – 2016 Significant Health Need; Aroostook County's Adult Smoking rate is worse than the state and US median; Cancer is the #2 Leading Cause of Death in Aroostook County; Lung Disease is the #3 Leading Cause of Death in Aroostook County; Aroostook County's Female Tracheal, Bronchus, and Lung Cancer rate is worse than the national average and the rate increased from 1980-2014; Aroostook County's Male Tracheal, Bronchus, and Lung Cancer rate is worse than the national average but decreased from 1980-2014**

Because of the similarity in implementation actions as well as the importance of the needs, Health Needs number two (mental health) and five (tobacco use) are also being addressed in this implementation plan.

Public comments received on previously adopted implementation strategy:

- *See Appendix A for full list of comments*

Services, programs, and resources available to respond to these needs include:

- Pines successfully obtained a HRSA grant to expand behavioral services
- Power of Prevention Coalition-Advisory coalition to address substance use and misuse issues
- Aroostook Marijuana Workgroup-Advisory workgroup to address marijuana use and misuse issues
- Prime for Life Curriculum taught in local schools and the Aroostook County Jail-6 hour evidence based substance abuse prevention program
- Student Intervention Reintegration Program-12 hour program for students who have exhibited substance use in partnership with local juvenile service programs and schools.
- Hidden In Plain Sight Program-educate parents and adults about risky teen behavior focusing on substance use.
- Promote Up and Away campaign, Safe Storage in Homes for Prescription Medications, and Safe Home Medication Program
- Promote 24/7/Drug Take Back and National Take Back Days
- Presentations on Safe Medication storage and disposal
- Presentations on Marijuana use and misuse
- Presentations on Vaping and Electronic Nicotine Devices
- Presentations on alcohol use and misuse

- Drug Impairment Presentations and Activities
- Presentations on Substance Use Prevention
- Town Hall Meetings on Substance Use, Treatment and Recovery
- Education provided at health fairs and health promotion events
- Work with local municipalities on marijuana policies and ordinances
- Collaborate with local law enforcement to coordinate party patrols, compliance checks, drug impairment detection trainings and responsible beverage server trainings for on and off premise liquor licenses.
- Media Campaigns on Substance Use Prevention
- Social Media Posts on Substance Use Prevention
- Promote Substance Use Prevention on Power of Prevention Website
- Update and distribute a comprehensive directory of substance abuse and addiction services in Aroostook County.
- Offered Suboxone therapy
- Developed narcotics prescription contracts in ER

Additional plans to address these needs:

- Find ways to work with and expand youth programs that promote healthy lifestyle choices, including summer camps and outdoor activities (e.g., Youth Voices, Community Voices)
- Organize resources and provide awareness of alternative pain management options
- Implement Developmental Assets program
- Work with local AA and NA groups to expand meetings; find resources more targeted to youth
    - 237 attendees in Q2 2019
- Care coordinator to follow-up with patients following emergency room visit related to opioid use
- Implement a 6 week pain management program called Living With Pain
- Expand mental health and substance use disorder services at all FQHC sites
- Explore offering mental health services in primary care offices
- Look into hosting a suicide prevention seminar

Evaluation of impact of actions taken since the immediately preceding CHNA:

- The Rural Recovery Clinic Network was established in February 2019 after CMC was awarded a grant from the US Department of Health and Human Services, Health Resources and Services Administration (HRSA), to establish a Rural Health Opioid Program (RHOP) in rural Maine.
    - *See Appendix C for more information*

- Launched the Better Breathing, Better Living Project (BBBL) through the Small Health Care Provider Quality Improvement grant from HRSA received from 2016-2019. The BBBL is a collaboration between five rural Maine hospitals which impacts patients of Pines Health Services. The participants are members of the Maine Rural Health Collaborative (MRHC) that aims to empower patients and their caregivers to improve the management of their COPD symptoms and medication following their discharge from the hospital.
    - *See Appendix C for more information*
- Developed and distributed comprehensive directory of substance abuse and addiction services in Aroostook County
    - Printed over 10,000 in 2019
- Received a HRSA grant to implement expanded mental health and substance use disorder services at all FQHC clinics
- Established a Medication Assisted Therapy (MAT) program for pregnant women at the Women's and Children'
- Received a grant in collaboration with the state Medicaid program
- The CEO was appointed to the Maine Rural Health Transformation Team and serves as Chair of the AHA Rural Health Transformation Task Force, a national committee

Anticipated results from the Implementation Strategy

Community Benefit Attribute Element	Yes, Implementation Strategy Addresses	Implementation Strategy Does Not Address
1. Available to public and serves low income consumers	X	
2. Reduces barriers to access services (or, if ceased, would result in access problems)	X	
3. Addresses disparities in health status among different populations	X	
4. Enhances public health activities	X	
5. Improves ability to withstand public health emergency		X
6. Otherwise would become responsibility of government or another tax-exempt organization	X	
7. Increases knowledge; then benefits the public	X	

The strategy to evaluate intended actions is to monitor change in the following Leading Indicator:

- Number of participants in prevention programs = To begin tracking
- Number of support group meetings/programs for substance abuse users and families = To begin tracking

The change in the Leading Indicator anticipates appropriate change in the following Lagging Indicator:

- Drug-induced mortality per 100,000 population = To begin tracking
- Number of patients in MAT program = To begin tracking

The organizations anticipate collaborating with the following other facilities and organizations to address this Significant Need:

Organization	Contact Name	Contact Information
Aroostook Mental Health Center	Ellen Bemis, CEO	P.O. Box 1018, Caribou, Maine 04736 (207) 498-6431 www.amhc.org
Other local healthcare providers	Peter Sirois, CEO Northern Maine Medical Center Tom Moakler, CEO Houlton Regional Hospital	
Local school districts	Tim Doak, Superintendent RSU 39 (207) 492-4365	
Local municipalities	Dennis Marker, City Manager	25 High Street, Caribou, Maine 04736 (207) 493-3324
Local coalitions (Healthy You, Community Voices, Drug Free Aroostook, Link for Hope)	Kim Parent, Lead Outreach Worker	Cary Medical Center 163 Van Buren Road, Caribou, Maine 04736 (207) 540-3659
Local law enforcement agencies	Mike Gahagan, Caribou Chief of Police (207) 493-3301 LaurieKelley, Presque Isle Chief of Police (207) 764-2535	
Gray Memorial United Methodist Church	Reverend Tim Wilcox	2 Prospect Street, Caribou, Maine 04736 (207) 498-2103
7th Day Adventist Church		650 Main Street, Caribou, Maine 04736 (207) 492-0049
Holy Rosary Roman Catholic Church	Father David Cyr	31 Thomas Avenue, Caribou, Maine 04736 (207) 498-8844

Organization	Contact Name	Contact Information
Caribou Rotary Club		P.O. Box 1073, Caribou, Maine 04736 caribourotary@gmail.com
Caribou Kiwanis Club		m.me/CaribouKiwanisClub
United Veterans of Maine	John Deveau, President	385 Washburn Street, Caribou, Maine 04736-4117 (207) 492-2190
Caribou VFW	Commander Roger Felix	253 Van Buren Road, Caribou, Maine 04736 (207) 498-2761
Local employers	Central Aroostook Chamber LaNiece Sirois, Executive Director	3 Houlton Road, Presque Isle, 04769 (207) 764-6561
Aroostook County Collaborative	Gloria Duncan, Administrative Assistant ACAP – Aroostook County Action Plan	771 Main Street, Presque Isle, ME 04769 P.O. Box 1116, Presque Isle, ME 04769 (207) 764-3721 or 1-800-432-7881
Local tribal groups	Nicole Francis, Tribal Administrator	7 Northern Road, Presque, Maine 04769 (207) 764-1972
Loring Job Corps Center	Kristie Moir, Center Director (207) 328-4212	36 Montana Rd, Limestone, ME 04750 (207) 328-4212 loring.jobcorps.gov
City of Caribou	Dennis Marker, City Manager	25 High Street, Caribou, Maine 04736

Other local resources identified during the CHNA process that are believed available to respond to this need:

Organization	Contact Name	Contact Information
Life by Design	Deb Gray, Owner, Director	27 Birdseye Avenue, Caribou, Maine 04736 (207) 492-1653 www.lifebydesignpa.com
Wings for Children and Families		93 State St, Presque Isle, ME 04769 (207) 941-2988

Organization	Contact Name	Contact Information
Department of Health and Human Services	Stacey Boucher, State Liaison Regional Office	30 Skyway Drive, Unit 100, Caribou, Maine 04736 (207) 493-4000 www.maine.gov/dhhs
Journeys		
Hope Recovery Services	Lela Lyons	2 Armco Ave, Caribou, ME 04736 (207) 493-1700
VA	Tracye Davis, CEO	1 VA Center, Augusta, Maine 04330 (207) 623-8411 http://www.maine.va.gov/locations/caribou.asp

3. **OBESITY – 2016 Significant Need; Aroostook County's Obesity rate is worse than the state and US median; Residents of Aroostook County are more likely to have a BMI of Morbid/Obese compared to the national average; Residents of Aroostook County are less likely to Vigorously Exercise compared to the national average; Diabetes is the #6 Leading Cause of Death in Aroostook County; Aroostook County's Male Diabetes, Urogenital, Blood, and Endocrine Disease Deaths is worse than the national average and increased from 1980-2014; Female Diabetes, Urogenital, Blood, and Endocrine Disease Deaths is average compared to the national average, but increased from 1980-2014**

Public comments received on previously adopted implementation strategy:

- *See Appendix A for a full list of comments*

Services, programs, and resources available to respond to this need include:

- Healthy You Program
    - 2,000-3,000 participates each year
    - All the programs are free to the community
- Stress Management – educational seminars on nutrition, physical activity (stretching, not sitting too long), making healthy choices to combat stress
- Sponsoring Bone Builders class in six communities – age 55+ osteoporosis prevention exercise classes
- Healthy You Walking Club with almost 803 members; weekly e-newsletter with walking/exercise tips; group walks
- Offer physical activity programs:
    - 100 Miles in 100 Days Challenge/200 Miles in 200 Days – program with incentives and prizes to encourage participants to log walking 100/200 miles
    - 803 community member participation
- Sponsor for Take It Outside (senior activity program) and Caribou Rec Extreme (CRX) – programs to encourage physical activity
- Seniority Program for people over age 50 that offers monthly lunch 'n' learns on healthy eating and increasing physical activity
- Encourages increasing nutrient-dense foods in local food pantries
- Comprehensive assessment of local food pantries to determine needs and increase state funding
- Sponsored expansion of community garden
- Partnership with Snap Ed – grocery store tours to teach reading nutrition labels, choosing healthy foods, etc.; grocery store "pop-up" tours – brings education to other places
- Sponsor of many local run/walks, 5Ks, and bike events
- Hospital cafeteria has adjusted pricing to make healthier options less expensive than less healthy options

- Promotion of community-supported agriculture, farm stands, farmer's markets to encourage purchasing and consuming locally grown produce
- Working with local businesses to encourage physical activity and healthy eating for employees
- Worked with local hospitals to identify progress toward being a Baby Friendly Hospital, including encouraging and teaching breastfeeding
- Worked with 22 communities to complete Rural Active Living Assessment (RALA) to help identify locations for physical activity and assess community members' access to physical activity opportunities
- Cary Kids Cook – healthy cooking program for kids (ages 8-14) offered on Saturdays to teach healthy eating and making good food choices, as well as take home meals for the family
- Healthy Hearts Program – all-day seminar and six weeks of instruction on how to transition to a plant-based diet
- Exercise and Thrive Program – free community exercise program supported by hospital foundation
- Sponsor food drives during Hospitals Against Hunger Week
- Sponsor and participate in local health fairs (5+) and school wellness days that include education on physical activity, fitness programs, and nutrition, and provide free screenings for blood sugar, glucose, cholesterol, BMI, and blood pressure
- Gave out vegetable seed packets during local parades and health fairs to encourage growing healthy vegetables at home
- Let's Move (physical activity program) and 5210 program (nutrition) – targeting initially toward youth, then to local work sites
- 30 for 90 program – 30 minutes of exercise, 4 days per week for 90 days

Additional plan to address this need:

- Through the Healthy You program, look into offering cooking classes with plant-based diet education and weight management education
- Explore expanded SNAP education through Pines that focuses on the youth population
- Explore implementing a marketing campaign that supports community health
- Look into options/programs for offering access to care for severely obese population

Evaluation of impact of actions taken since the immediately preceding CHNA:

- Expanded Diabetes Prevention Program to the community
- Worked with public health medical student for 10 weeks on childhood obesity summit with the strategy to develop ways to reduce childhood obesity
- Work with local health organizations to screen for food insecurity and refer to community food resources
- Added nutrition and physical activity to the website and social media, including videos on YouTube
- Implemented food pantries at Pines Health Center locations

Anticipated results from Implementation Strategy

Community Benefit Attribute Element	Yes, Implementation Strategy Addresses	Implementation Strategy Does Not Address
1. Available to public and serves low income consumers	X	
2. Reduces barriers to access services (or, if ceased, would result in access problems)	X	
3. Addresses disparities in health status among different populations	X	
4. Enhances public health activities	X	
5. Improves ability to withstand public health emergency		X
6. Otherwise would become responsibility of government or another tax-exempt organization	X	
7. Increases knowledge; then benefits the public	X	

The strategy to evaluate intended actions is to monitor change in the following Leading Indicator:

- Number of participants in Healthy You program = To begin tracking
- Number of programs offered through Healthy You program = To begin tracking

The change in the Leading Indicator anticipates appropriate change in the following Lagging Indicator:

- Adult obesity rate = 35% (2015)[10]
- High-school student obesity rate = To begin tracking

Both organizations anticipate collaborating with the following other facilities and organizations to address this Significant Need:

Organization	Contact Name	Contact Information
Caribou Recreation Department	Gary Marquis, Manager (207) 493-4224	55 Bennett Dr, Caribou, ME 04736 (207) 493-4224 www.caribourec.org

[10] https://www.countyhealthrankings.org/

Organization	Contact Name	Contact Information
Aroostook County Collaborative	Gloria Duncan, Administrative Assistant ACAP – Aroostook County Action Plan	771 Main Street, Presque Isle, ME 04769 P.O. Box 1116, Presque Isle, ME 04769 (207) 764-3721 or 1-800-432-7881
Pines Health Services	SNAP ED – UNE Grant	74 Access Highway, P.O. Box 40, Caribou, ME 04736 (800) 371-6240 www.pineshealth.org
Aroostook Agency on Aging	Joy B. Saucier, Executive Director	250 Main Street, Presque Isle, Maine 04769 (207) 764-3396 www.aroostookaging.org
Retired Senior Volunteer Program (RSVP)	Judy Anderson, Program Director janderson@aroostookaging.org	http://www.aroostookaging.org/rsvp.html
Other local healthcare providers	Peter Sirois, CEO Northern Maine Medical Center Tom Moakler, CEO Houlton Regional Hospital	
Local school districts	Tim Doak, Superintendent RSU 39 (207) 492-4365	
Local municipalities	Dennis Marker, City Manager	25 High Street, Caribou, Maine 04736 (207) 493-3324
Local food pantries	Catholic Charities Maine Dixie Shaw, Manager	14 Old Van Buren Road, Caribou, Maine 04736 (207) 496-3243
Outdoor recreation organizations	Caribou Wellness Center Gary Marquis, Manager	55 Bennett Drive, Caribou, Maine 04736 (207) 493-4224
Local employers	Central Aroostook Chamber LaNiece Sirois, Executive Director	3 Houlton Road, Presque Isle, 04769 (207) 764-6561

Other local resources identified during the CHNA process that are believed available to respond to this need:

Organization	Contact Name	Contact Information
Aroostook Teen Leadership Camp	Amber Stedt astedt@amhc.org	(207) 498-6431 ext. 156 www.atlc-camp.org
Weight Watchers		(800) 651-6000 55 Bennett Street, Caribou, ME http://www.weightwatchersmaine.com/caribou
TOPS (Taking off Pounds Sensibly)		www.tops.org

4. **CANCER – Local Expert Concern; Residents of Aroostook County are less likely to receive Cervical Cancer Screenings Every 2 Years compared to the US average; Cancer is the #2 Leading Cause of Death in Aroostook County; Aroostook County's Female Tracheal, Bronchus, and Lung Cancer rate is worse than the national average and the rate increased from 1980-2014; Aroostook County's Male Tracheal, Bronchus, and Lung Cancer rate is worse than the national average but decreased from 1980-2014; Aroostook County's Female and Male Skin Cancer was average compared to the national average but the rate increased from 29180-2014**

Public comments received on previously adopted implementation strategy:

This was not a significant health need in 2016, so no comments were solicited.

Services, programs, and resources available to respond to this need include:

- Pines recruited full time Oncologist/Hematologist and added a mid-level provider
- Completed a major renovation of the building for Specialty Clinics and Oncology
- Developed public awareness campaigns on colorectal cancer and promoted early detection through colonoscopy
- The Pink Aroostook program continued to expand and build a patient support group, and conducted a number of programs to promote early breast cancer detection prevention strategies
- The hospital was/is part of a campaign called 'In the Pink,' which uses television to encourage women to have mammograms
- Low dose CT scanner used for lung cancer screenings
    - 146 low-dose CT scans on former smokers. We are now Gathering data on how many of these patients returned for follow up exams. It is our hope over the next three years to increase the number of patients having initial low-dose CT scans to 200 or 40% and to achieve a 50% follow up rate.

Additional plans to address this need:

- Through partnership with other organizations, increase colorectal screenings. Aroostook County has a high rate of colon cancer. Considering Cancer is one of the top five priority areas we applied for and we were awarded a two year grant to increase the number of patients being screened for colon cancer. We are working with five area hospitals in an effort to get the screening rate to 80%, the national benchmark. Our current rate is mid-seventies.
    - Published brochure and sent out 30,000 copies
- Explore offering water quality testing program that tests the chemicals in water (nitrates)
- Follow-up with smoking patients to ensure they are getting lung CT
    - Distribute letters to smoking patients that have not scheduled or received their lung CT scan
- Currently gathering data to help increase number of smoking patients having initial low-dose CT scans by 40% from 146 to 200 patients to achieve an overall 50% follow-up rate
- Working with cancer center to have someone that will come in and talk to patients and work with the cancer

care team

- Work with the American Cancer Society and National Breast Cancer Association on ways to help patients with accessible and affordable cancer care

Anticipated results from Implementation Strategy

Community Benefit Attribute Element	Yes, Implementation Strategy Addresses	Implementation Strategy Does Not Address
1. Available to public and serves low income consumers	X	
2. Reduces barriers to access services (or, if ceased, would result in access problems)	X	
3. Addresses disparities in health status among different populations	X	
4. Enhances public health activities	X	
5. Improves ability to withstand public health emergency		X
6. Otherwise would become responsibility of government or another tax-exempt organization	X	
7. Increases knowledge; then benefits the public	X	

The strategy to evaluate intended actions is to monitor change in the following Leading Indicator:

- Number of mammography screenings provided = 2,787 (2018)
    - Goal by 2022 = 3,200

The change in the Leading Indicator anticipates appropriate change in the following Lagging Indicator:

- Number of cancer deaths = 192.1/100,000 population (2017)[11]
    - Goal by 2022 = 185/100,000 population

The organizations anticipate collaborating with the following other facilities and organizations to address this Significant Need:

Organization	Contact Name	Contact Information

[11] https://www.worldlifeexpectancy.com/

Organization	Contact Name	Contact Information
American Cancer Society		https://www.cancer.org/about-us/local/maine.html
National Breast Cancer Foundation		www.nationalbreastcancer.org
Maine Cancer Foundation	Heather Drake, Program Manager	170 US Route 1, Suite 250, Falmouth, Maine 04105
Jefferson Cary Cancer Center	Allan Espinosa, MD	163 Van Buren Road, Caribou, Maine 04736
The Jackson Lab	Edison Liu, President and CEO	600 Main Street, Bar Harbor, Maine 04609
Central Aroostook Chamber	LaNiece Sirois, Executive Director	3 Houlton Road, Presque Isle, Maine 04769
Northern Light/AR Gould	Gregory Lafrancois, CEO	(207) 768-4015 glafrancois@northernlight.org
Northern Maine Medical Center	Peter Sirois, CEO	(207) 834-1411 Peter.Sirois@nmmc.org
Fish River Regional Rural Health	Heather Pelletier, CEO	(207) 444-5973
Houlton Regional Hospital	Shawn Anderson, COO	(207) 532-9471 Ext. 2152 sanderson@houltonregional.org

6. **DIABETES – 2016 Significant Health Need; Aroostook County's Obesity rate is worse than the state and US median; Residents of Aroostook County are more likely to have a BMI of Morbid/Obese compared to the national average; Residents of Aroostook County are less likely to Vigorously Exercise compared to the national average; Diabetes is the #6 Leading Cause of Death in Aroostook County; Aroostook County's Male Diabetes, Urogenital, Blood, and Endocrine Disease Deaths is worse than the national average and increased from 1980-2014; Female Diabetes, Urogenital, Blood, and Endocrine Disease Deaths is average compared to the national average, but increased from 1980-2014**

Public comments received on previously adopted implementation strategy:

- *See Appendix A for a full list of comments*

Services, programs, and resources available to respond to this need include:

- Diabetes Education Program – education classes for diabetes patients; insulin pump therapy and other advanced programs and therapies at Pines Caribou Health Center
- Camp Adventure – week-long residential summer camp for teens with Type 1 Diabetes
- Employee-based diabetes prevention program – year-long intervention and behavioral modification program
- Diabetes educators at Pines participate in local events and provide seminars and educational events
- Pines Caribou Health Center Diabetes clinic – full-time clinical diabetes management program
    - 1,603 Diabetes Clinic Visits in 2018 and plan to expand by 15% or 240 patients over the next three years
- Offer physical activity programs:
    - 100 Miles in 100 Days Challenge/200 Miles in 200 Days – program with incentives and prizes to encourage participants to log walking 100/200 miles
    - 803 community member participation
- Caribou Marathon – fundraiser for diabetes children's camp

Additional plans to address this need:

- Explore offering community additional awareness and education on diabetes by offering current educators of Healthy Living for Maine additional certifications toward diabetes education
    - Free to general public
- Expanding diabetes education program to offer a nationally certified type 2 diabetes prevention program
    - 1,603 Diabetes Clinic Visits in 2018 and plan to expand by 15% to 240 patients over the next three years

Evaluation of impact of actions taken since the immediately preceding CHNA:

- Expanded Diabetes Prevention Program (DPP) community-wide
- Developed public awareness campaign on significance of diabetes problems

Anticipated results from Implementation Strategy

Community Benefit Attribute Element	Yes, Implementation Strategy Addresses	Implementation Strategy Does Not Address
1. Available to public and serves low income consumers	X	
2. Reduces barriers to access services (or, if ceased, would result in access problems)	X	
3. Addresses disparities in health status among different populations	X	
4. Enhances public health activities	X	
5. Improves ability to withstand public health emergency		X
6. Otherwise would become responsibility of government or another tax-exempt organization	X	
7. Increases knowledge; then benefits the public	X	

The strategy to evaluate intended actions is to monitor change in the following Leading Indicator:

- Number of patients seen in the Diabetes Clinic = To begin tracking

The change in the Leading Indicator anticipates appropriate change in the following Lagging Indicator:

- Diabetes emergency department visits (principal diagnosis) per 100,000 population = To begin tracking

Both organizations anticipate collaborating with the following other facilities and organizations to address this Significant Need:

Organization	Contact Name	Contact Information
Pines Health Services Caribou Health Center	Kathy Burden, RN, CDE Karen Ouellette, RN	74 Access Highway, Caribou, Maine 04736 (207) 498-2356 kdoody@pineshealth.org
CDC National Diabetes Prevention Program	Nancy Holmquist	Cary Medical Center 163 Van Buren Road, Caribou, Maine 04837 www.cdc.gov/diabetes/prevention

Organization	Contact Name	Contact Information
Diabetes Service Cary Medical Center	Sue Ouellette, RN	163 Van Buren Road, Caribou, ME 04736 (207) 498-1283 sparker@carymed.org
SIRUNO Fund	Tami Kilcollins, Executive Director Jefferson Cary Foundation	163 Van Buren Road, Caribou, Maine 04736 (207) 493-4849 tkilcollins@carymed.org
Siruno Stroke Prevention Program	Nancy Holmquist	163 Van Buren Road, Caribou, Maine 04736 (207) 498-04736 nholmquist@carymed.org

Other local resources identified during the CHNA process that are believed available to respond to this need:

Organization	Contact Name	Contact Information
American Diabetes Association		www.diabetes.org
Maine VA Healthcare System	Tracye Davis, CEO	1 VA Center, Augusta, Maine 04330 (207) 623-8411 http://www.maine.va.gov/locations/caribou.asp
CDC Chronic Disease Transformation Initiative	Stacey Meyer	286 Water Street, August, Maine 04333-0011
University of Maine Cooperative Extension	Elizabeth Carrol	P.O. Box 727 Houlton Road, Presque, Maine 04769-0727 Extension.centrala@maine.edu

Other Needs Identified During CHNA Process

7. **Cardiovascular Diseases – 2016 Significant Need**
8. **Affordability**
9. **Respiratory Diseases – 2016 Significant Need**
10. **Physical Inactivity**
11. **Chronic Pain Management**
12. **Education/Prevention**
13. **Accessibility**
14. **Alzheimer's**
15. **Dental**
16. **Women's Health**
17. **Hypertension**
18. **Suicide**
19. **Lung Disease**
20. **Flu/Pneumonia**
21. **Accidents**
22. **Stroke**
23. **Kidney Disease**
24. **Write in: Parkinson's**
25. **Write in: Family Relations**
26. **Write in: Grieving/Caregiver Education**
27. **Write in: Nutrition Education**

Overall Community Need Statement and Priority Ranking Score

Significant needs where organizations have successfully implemented strategy

1. Drug and Alcohol Abuse – 2016 Significant Need
1. Mental Health – 2016 Significant Need
2. Obesity – 2016 Significant Need
3. Cancer
4. Tobacco Use – 2016 Significant Need
5. Diabetes – 2016 Significant Need

Significant needs where organizations did not develop implementation strategy

1. N/A

Other needs where organizations developed implementation strategy

1. N/A

Other needs where organizations did not develop implementation strategy

1. N/A

APPENDIX

Appendix A – Written Commentary on Prior CHNA (Local Expert Survey)

Written comments were solicited about its 2016 CHNA. 52 individuals responded to the request for comments. The following presents the information received in response to the solicitation efforts. No unsolicited comments have been received.

1. Please indicate which (if any) of the following characteristics apply to you. If none of the following choices apply to you, please give a description of your role in the community.

	Yes (Applies to Me)	No (Does Not Apply to Me)	Response Count
1) **Public Health Expertise**	17	17	34
2) **Departments and Agencies** with relevant data/information regarding health needs of the community served by the hospital	15	18	33
3) **Priority Populations**	16	15	31
4) Representative/Member of **Chronic Disease Group** or Organization	10	22	32
5) Represents the **Broad Interest of the Community**	35	5	40
Other			6
Answered Question			48
Skipped Question			4

Congress defines "Priority Populations" to include:

- Racial and ethnic minority groups
- Low-income groups
- Women
- Children
- Older Adults
- Residents of rural areas
- Individuals with special needs including those with disabilities, in need of chronic care, or in need of end-of-life care
- Lesbian Gay Bisexual Transsexual (LGBT)
- People with major comorbidity and complications

2. Do any of these populations exist in your community, and if so, do they have any unique needs that should be addressed?

- *Children- We need more Daycare providers -, especially for infants. Older Adults- Daytime Care Center for seniors, also, an assisted living facility.*
- *Caribou is a small city of 7700 people. Cary Medical Center is one of the primary medical providers for many rural*

communities surrounding it. The populations in these communities are primarily elders. Diabetes (both childhood and adult onset), cardiovascular, stroke, obesity, substance abuse are all controlling factors in the quality of life and health.

- *Affordable insurance with low deductibles to insure uninterrupted access to care.*
- *Access to health insurance, access to affordable medications, lack of adequate public transportation which is a huge problem.*
- *more low-income housing for older adults*
- *Ability to access health care during evenings and weekends at Pines*
- *Transportation, financial assistance, in home health care*
- *transportation issues, food insecurity, loneliness and lack of social inclusion*
- *combating assumptions made by the community & sometimes by health providers about their lifestyle; inability to pay the high prices of services especially diagnostic testing and lab work; transportation to & from appointments; difficulty to follow up care of chronic conditions & treatment because of high mobility"*
- *There are many needs in Aroostook County and all populations have needs and strengths. One group that is overarching in the County in low-income/poverty.*
- *Affordable housing, access to health care, limited work opportunities, educational opportunities, limited communication systems*
- *People with addiction.*

In the 2016 CHNA, there were seven health needs identified as "significant" or most important:

1. **Obesity**
2. **Drug and Alcohol Abuse**
3. **Tobacco Use**
4. **Mental Health**
5. **Cardiovascular Diseases**
6. **Diabetes**
7. **Respiratory Disease**

3. Should resources be allocated to help improve the needs identified in the 2016 CHNA?

	Yes	No	Response Count
Obesity	43	2	45
Drug and Alcohol Abuse	46	1	47
Tobacco Use	38	5	43
Mental Health	45	0	45
Cardiovascular Diseases	42	1	43
Diabetes	44	1	45
Respiratory Disease	35	4	39

Comments:

- *Caribou has many of these needs and Cary Medical has to remain diligent in providing services for these.*
- *These are all serious health issues for this area. I would like to say that there are not adequate smoking cessation programs for folks to become a part of. Also, Alzheimer's support for caregivers needs to improve as a high percentage of people are caring for loved ones with the disease.*
- *Reliable and adequate Transportation so patients are able to get to appointments.*
- *All important issues that need on-going community education, but drug and alcohol misuse and mental health rise to the top for me, at this point in time.*
- *Cancer of all types.*
- *Consider how they specifically affect older people and resources to address.*
- *Food deprive*

Please share comments or observations about the actions taken to address <u>OBESITY</u>.

- *Very good list of options.*
- *It has been difficult to keep nutrition education and cooking classes going on. Available personnel and resources seem to be an ongoing issue.*
- *I don't think there is anything that has not covered to address obesity-especially training and including employees.*
- *No comment.*
- *Has work to identify many of the areas and have started many of these programs*
- *I believe that I have seen information for diabetes prevention on numerous occasions. I have also seen programs for diet, healthy cooking, etc. CARY is present at meetings, frequently, that are related to addressing food insecurity in Aroostook county. Healthy YOU is present and information is readily available. 35for95 fitness challenge.*
- *Proactive in attempting to address all of these areas.*
- *Snap Ed Program through ACAP and Pines*
- *well organized and continuing programs needed for #5-11*
- *Continue the work they have started. Habits die hard.*
- *weight groups, healthy eating*
- *Food insecurity work important. Consider adding evidenced based nutrition and physical activity programs. More links to 5210.*
- *Green leaf diets*
- *Not sure*

- *Education programs through the Seniority program.*
- *agree with content*
- *Programing and Outreach*
- *Many community-based groups, unsure of the popularity of these groups. Need to have more focused attention to patients who are frequently admitted/discharged at the local hospitals and struggling to manage their weight related comorbidities*
- *Good stuff just not practical for "my" population to be involved in*
- *Ongoing ideas to support diet and physical activity.*
- *I think what CMC is doing is FINE, but I think doing things BETTER is always possible. Never get complacent.*
- *It would be very helpful to include any progress or updates on the status of what was proposed in order reflect appropriately. "look into", "research" and "explore" don't reflect as strongly as "implement" or "add"*
- *Healthy you programs.*
- *Really appreciate the help with community health and fitness events. Especially for youth sports and education programs*
- *Hosting positive active community events*

4. Please share comments or observations about the actions taken to address <u>DRUG AND ALCOHOL ABUSE</u>.

- *Good list, but, keep a good focus on adults as well as the youth.*
- *There are several ongoing programs that are a part of Cary's emphasis on community wellness.*
- *Working with the youth to start them in the right direction is critical and working with the local agencies to combat the abuse.*
- *The need for treatment remains acute.*
- *Needs to work with community and leaders to add more mental health recovery coaches, needle exchange programs reduction of harm programs and for sure a recovery center so we need*
- *CARY has been an active participant in community convening, and resource development for Drug and Alcohol misuse programming and services.*
- *Community Voices a positive impact*
- *We need to get more secure long-term funding to fight these problems.*
- *involved with recovery groups*
- *Youth focus wise and beneficial.*
- *Opioid issue continues to be a challenge in our community*
- *counselor access*

- *Suboxone program at Pines and AMHC, media awareness ads, family interactions*
- *agree with content*
- *Programing and Outreach*
- *Significant increased involvement in drug and alcohol initiatives, implementation of a rural recovery network through HRSA grant funding,*
- *Could benefit from these materials in Spanish*
- *Efforts to support Aroostook Recovery*
- *I think what CMC is doing is FINE but I think doing things BETTER is always possible. Never get complacent.*
- *Same. Think there is much potential in where this could go, but I cannot assess if they yielded any results in the past cycle.*
- *Involvement with rehab programs*
- *appreciate the help with community health and fitness events.*
- *Continue youth expansion programming*

5. Please share comments or observations about the actions taken to address <u>TOBACCO USE</u>.

- *A good program similar to AA meetings. Smoking cessation very difficult to do independently.*
- *Attempts have been made to secure grant funding for smoking cessation programs, but have not been able to attain funding for an evidence-based program.*
- *Feel the same with tobacco use as the drip and alcohol.*
- *No comment.*
- *Needs to work with community and leaders to add more mental health recovery coaches, needle exchange programs reduction of harm programs and for sure a recovery center so we need*
- *Smoking cessation information*
- *More focus on vaping as it has become the choice of youth.*
- *Smoking sensations programing*
- *Consider best practices on support structures to help adult smokers quit.*
- *Smoking cessation*
- *In hospital they address with all patients*
- *Continuing education by medical providers during office visits*
- *Agree with content, add more info dealing with newer nicotine delivery systems- e.g. juul.*
- *Programing and Outreach*
- *Continued efforts in the TIPS campaign. Ongoing support for discontinuing smoking.*

- *we need to actively engage the community around vaping*
- *I think what CMC is doing is FINE but I think doing things BETTER is always possible. Never get complacent.*
- *Same*
- *Tobacco is less of an issue now than marijuana and opioids.*
- *Increase programming for all ages regarding vaping and e-cigarettes*

6. Please share comments or observations about the actions taken to address <u>MENTAL HEALTH</u>.

- *Not clear on CMC's Mental Health Actions currently.*
- *CMC provides the best care it can on an individual basis, evaluating the critical needs of the patient. Efforts are made to find an available bed and if none is available, a room in the Emergency Room with an attendant outside the door.*
- *One cannot do too much to treat patients afflicted with mental health problems.*
- *At Pines it has been very helpful to have LCSW's and using warm handoffs to help patients on the spot I think that is also something that is needed at Cary in the ER for sure*
- *Healthy YOU programming sometimes address mental health for community members, in terms of providing positive information, free community activities, etc.*
- *I have no knowledge in this area as to the success or failure of their efforts.*
- *Need to have better facility for people with mental health issues*
- *Consider depression and anxiety screenings and programs.*
- *Counselor access and coping skills*
- *Working to refer patients to appropriate settings.*
- *agree with content, this is the area we are most underserved in my opinion, esp. with treatment of the psychotic or majorly depressed, we need help with recruitment of trained prescribing practitioners.*
- *Programing and Outreach*
- *Increased partnerships with AMHC and increased work with behavioral health specialists.*
- *Not aware of what actions were taken, but definitely recognize this as a need*
- *Need to support agencies that are providing MH services in the County support open referral to MH services.*
- *I think what CMC is doing is FINE but I think doing things BETTER is always possible. Never get complacent.*
- *Same. I see mental health in the heading but cannot distinguish which of the proposed activities is specific to mental health.*
- *Rise in suicides nationally. Additional behavioral classes about managing depression, eating right, avoiding boredom, exercise, mental exercise, etc. need to be provided for youth and adults.*
- *Additional mental health awareness campaigns and screenings. Especially for teens.*

7. Please share comments or observations about the actions taken to address <u>CARDIOVASCULAR DISEASES</u>.

- *Is there more that can be available to diagnose cardiovascular disease early before it reaches emergency status?*
- *the Siruno Stroke Prevention Program is a recent (2017) program that includes blood pressure screening events at health fairs, businesses, schools and wellness events. The Program also uses an evidence-based program through the CDC to address prediabetes and the probability of disease, including cardiovascular. There are wellness events to encourage walking and fitness and healthy eating.*
- *Education is the key with nursing and universities.*
- *The need is acute as the population ages.*
- *Cary continues to have yearly updates on stroke and cardiovascular disease like as Dr. Siruno stroke conference*
- *good e-resources on website*
- *More focus needed on heart disease, hypertension and risk of stroke.*
- *Green leaf diet*
- *Offer staff and community education*
- *Cardiac rehab program inhouse. CHF readmission prevention program*
- *agree with content*
- *Programing and Outreach*
- *Ongoing community support through heart healthy lifestyle changes*
- *Actions similar to what we do with our population; would be interested in working with nursing students to do outreach about hypertension*
- *Community education on diet and physical activity. strengthen information and classes on Plant based diet*
- *I think what CMC is doing is FINE but I think doing things BETTER is always possible. Never get complacent.*
- *Same. Proposed activities listed not actual actions taken. Love the idea of including information on the hospital menus and working with partners such as UMFK. Did this occur?*
- *Healthy you programs*
- *provide great support for youth programs and learning.*
- *Unknown*

8. Please share comments or observations about the actions taken to address <u>DIABETES</u>.

- *These are good programs. Let them continue.*
- *Diabetic educators are still available to work with diabetes patients. The National Diabetes Prevention Program works with people who are considered prediabetic in a one year evidenced based program.*

- *Public awareness and education again is key.*
- *The response has been well implemented and the need continues.*
- *Cary and Pines continue to offer the CDE diabetes program encompassing type one type 2,Gestational. Has Attempted community diabetes programs but I do not know how successful in outreach that has been*
- *I believe that I have seen information for diabetes prevention on numerous occasions.*
- *Pines/Cary diabetes educators works with local schools regarding diabetes education.*
- *Pines diabetic educator very willing to work with schools and their families with diabetes education.*
- *Strong programming perceived.*
- *sugar and the dangers of overuse for young ages.*
- *Great Diabetic Camp*
- *Diabetes camp for juvenile diabetics done annually*
- *agree with comment. This is a rapidly growing population and will continue to do so until at least 2050 per population models, need to expand our diabetes program, add staff, etc.*
- *Programing and Outreach*
- *Ongoing diabetes education including increased information on A1c. Ongoing implementation of the diabetes camp*
- *Remember seeing PSAs or similar promotional materials around*
- *I think what CMC is doing is FINE but I think doing things BETTER is always possible. Never get complacent.*
- *Great diabetes clinic and camp for children*
- *Don't see much of the community campaign element.*

9. Please share comments or observations about the actions taken to address <u>RESPIRATORY DISEASE</u>.

- *Diligence in early diagnosis or prevention for these very common afflictions needed. Programs listed sound good.*
- *I do not know what actions have been taken.*
- *Public awareness and education again is the key which CMC is implementing.*
- *Consider community support programming.*
- *We have the BBBL grant currently*
- *COPD readmission prevention is being developed.*
- *agree with content*
- *Programing and Outreach*
- *Ongoing participation in the Better Breathing, Better Living grant, a grant to increase the independent*

management of patients living with COPD.

- *Not familiar with this category's actions*
- *I think what CMC is doing is FINE but I think doing things BETTER is always possible. Never get complacent.*
- *Very strong respiratory program*

Appendix B – Identification & Prioritization of Community Needs (Local Expert Survey Results)

Need Topic	Total Votes	Number of Local Experts Voting for Needs	Percent of Votes	Cumulative Votes	Need Determination
Drug and Alcohol Abuse – 2016 Significant Need	582	34	15.7%	15.7%	Significant Needs
Mental Health – 2016 Significant Need	578	35	15.6%	31.4%	
Obesity – 2016 Significant Need	365	32	9.9%	41.2%	
Cancer	251	26	6.8%	48.0%	
Tobacco Use – 2016 Significant Need	208	28	5.6%	53.7%	
Diabetes – 2016 Significant Need	204	25	5.5%	59.2%	
Cardiovascular Diseases – 2016 Significant Need	184	25	5.0%	64.2%	Other Identified Needs
Affordability	162	18	4.4%	68.5%	
Respiratory Diseases – 2016 Significant Need	148	24	4.0%	72.5%	
Physical Inactivity	137	18	3.7%	76.3%	
Chronic Pain Management	115	17	3.1%	79.4%	
Education/Prevention	107	17	2.9%	82.3%	
Accessibility	89	17	2.4%	84.7%	
Alzheimer's	85	16	2.3%	87.0%	
Dental	79	17	2.1%	89.1%	
Women's Health	68	12	1.8%	90.9%	
Hypertension	60	15	1.6%	92.6%	
Suicide	49	14	1.3%	93.9%	
Lung Disease	41	11	1.1%	95.0%	
Flu/Pneumonia	40	13	1.1%	96.1%	
Accidents	39	13	1.1%	97.1%	
Stroke	30	10	0.8%	97.9%	
Kidney Disease	23	10	0.6%	98.6%	
Liver Disease	23	10	0.6%	99.2%	
Write In: Parkinson's	10	1	0.3%	99.5%	
Write In: Family Relations	10	1	0.3%	99.7%	
Write In: Grieving/Caregiver Education	5	1	0.1%	99.9%	
Write In: Nutrition Education	5	1	0.1%	100.0%	
Total	3697		100.0%		

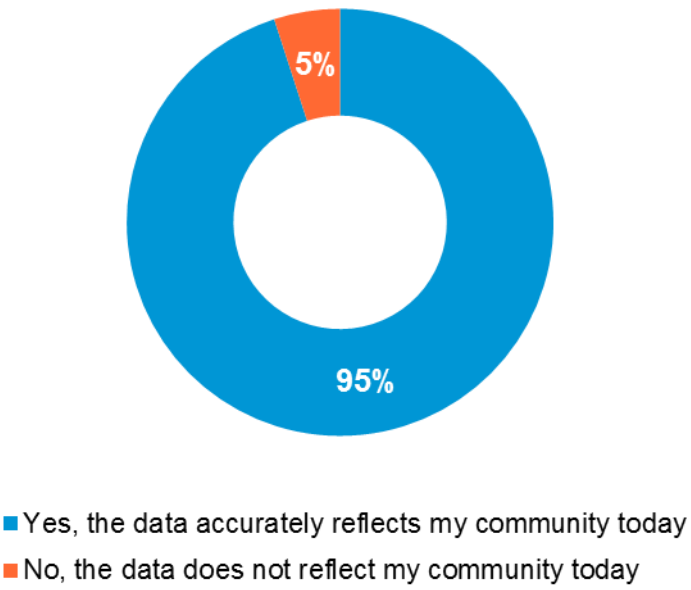
Individuals Participating as Local Expert Advisors[12]

	Yes (Applies to Me)	No (Does Not Apply to Me)	Response Count
1) **Public Health Expertise**	17	17	34
2) **Departments and Agencies** with relevant data/information regarding health needs of the community served by the hospital	15	18	33
3) **Priority Populations**	16	15	31
4) Representative/Member of **Chronic Disease Group** or Organization	10	22	32
5) Represents the **Broad Interest of the Community**	35	5	40
Other			6
Answered Question			48
Skipped Question			4

Advice Received from Local Expert Advisors

[12] Responds to IRS Schedule H (Form 990) Part V B 3 g

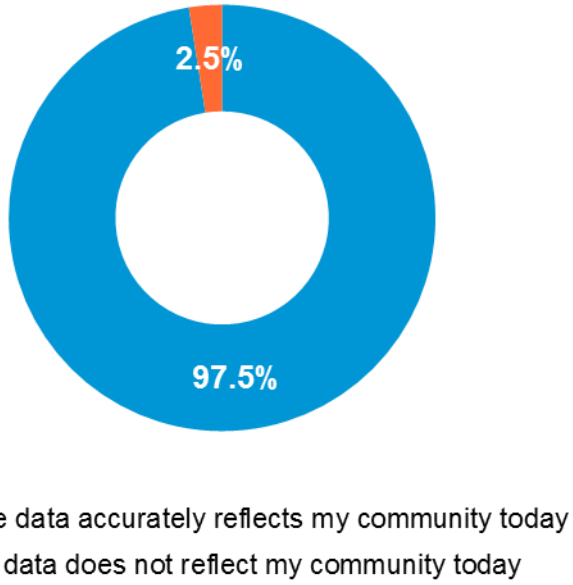
Question: Do you agree with the comparison of Aroostook County to all other Maine counties?



Comments:

- *I feel confident in the above data, except for the area of obesity. I would think it would be higher for the area. There is a significant number of obese children also.*
- *As much as I hate to see the percentages as high as they are especially in the health and social area, I believe the data is pretty accurate.*
- *Air pollution and housing problems likely higher.*
- *No reason to believe that this data is not accurate.*
- *Obesity and inactivity might have to do with the long winters of northern Maine. Hence, indoor infrastructure dedicated to physical activities might be even more important to our community than our downstate counterparts.*
- *I believe excessive drinking would be closer to 25%*
- *Things more beyond our control we score exceptionally poor, but for clinical care we score relatively better, that shows our effort is there, now we need to see that make results on some of the other categories in a trickle down effect.*
- *Looks like we need to increase physical activity.*
- *I believe the City of Caribou, if compared to Aroostook County, would have better indicators due to proximity and access to services.*

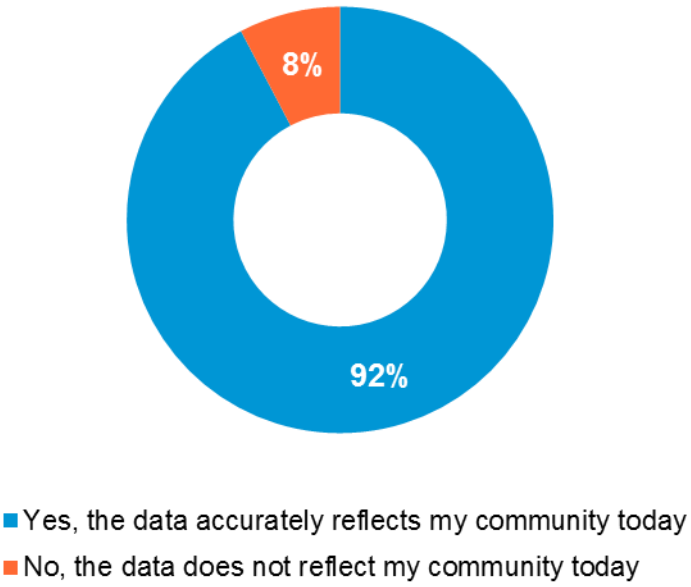
Question: Do you agree with the demographics and common health behaviors of Aroostook County?



Comments:

- *I believe our community is older and poorer.*
- *Yes we are in the "oldest county" of the "oldest state" in the union.*

Question: Do you agree with the overall social vulnerability index for Aroostook County?



Comments:

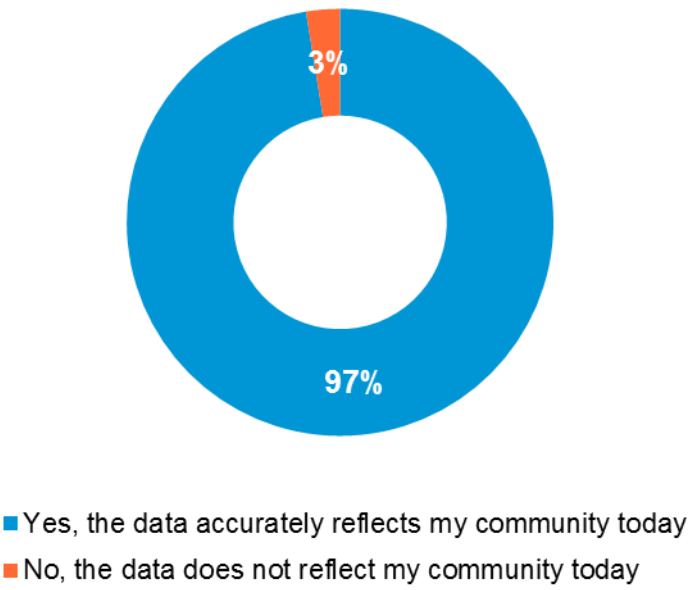
- *I agree, but I feel we are in the 3rd and 4th quartile because the country has such a large land base or double township, compared to all other counties.*
- *don't feel qualified to answer*
- *For the most part, unsure about housing and transportation; would have expected to be more vulnerable.*
- *I think the inclusion of the North Maine woods potentially skews the data; particularly the socioeconomic and race/language/ethnicity ranking. Also, not clear how this data set in particular assists the hospital in planning especially if there are no plans to offer solutions to these vulnerabilities in the next plan. If there are, then I would suggest expanding on those ideas (which could potentially be exciting).*

Question: Do you agree with the national rankings and leading causes of death?

Comments:

- *We are a very old and poor community.*
- *Both Parkinson's and Alzheimer's numbers may be worse at this time*
- *We need to work on diet and physical activity. We also need to work with farmers and there use of chemicals.*

Question: Do you agree with the health trends in Aroostook County?



Comments:

- *I believe this is correct, but I didn't understand all parts of the chart.*
- *I have no reason to dispute the data, but certainly do not have enough first-hand information to accurately judge.*
- *not qualified to answer*
- *I'm not sure in the area of substance abuse deaths we capture all accurately.*

Appendix C – Additional Information

The Rural Recovery Network

The Rural Recovery Network was established in February 2019 after Cary Medical Center was awarded a grant from the US Department of Health and Human Services, Health Resources and Services Administration (HRSA), to establish a Rural Health Opioid Program (RHOP) in rural Maine. The Rural Recovery Network is operated by Erika Arguello, Project Director, and Courtney Cote, Project Coordinator, and is a collaboration between 5 rural Maine hospitals – Cary Medical Center, Northern Maine Medical Center, Houlton Regional Hospital, Millinocket Regional Hospital, and Mount Desert Island Hospital. The purpose of RHOP is to promote rural health care services outreach by expanding the delivery of opioid-related health care services to rural communities. RHOP supports 3 years of program funding (2019- 2021) and incorporates a range of objectives and goals to respond comprehensively to the opioid crisis within our rural communities.

In 2017, Maine was among the top ten states with the highest overdose deaths involving opioids in the United States. With these high statistics of drug and opioid-related deaths, Maine continues to lack adequate resources for those seeking treatment and those in need of support during their recovery. The Rural Recovery Network and RHOP seek to expand treatment options for Opioid Use Disorder and reduce stigma surrounding Opioid and Substance Use Disorders in the rural communities of Maine. To target these goals, RRN is working to establish Medication Assisted Treatment (MAT) induction of Suboxone (Buprenorphine & Naloxone) in emergency departments of several Maine Rural Health Collaborative Hospitals (Cary Medical Center, Northern Maine Medical Center, Houlton Regional Hospital, Millinocket Regional Hospital).

By having MAT inductions in these Emergency Departments, patients seeking to begin recovery from Opioid Use Disorder can receive immediate treatment in the Emergency Department and receive immediate referral and a warm handoff to a local outpatient MAT clinic and behavioral health center for continued treatment (Aroostook Mental Health Center). This decreases the average wait list time of over 30 days for a patient to get into an outpatient MAT clinic. Throughout this process, the Project Coordinator of the Rural Recovery Network will be following up with patients and keeping in contact with them on a scheduled basis to be a patient navigator, collect data, remind them of upcoming appointments with their PCPs, MAT Clinic, Substance Use Counselor, refer them to other resources if needed, connect them to peer recovery services, and help them with anything that will make it easier for them to continue treatment services.

The Rural Recovery Network is also working on a stigma assessment that will evaluate stigma across the northern Maine community in healthcare workers, emergency department physicians, primary care physicians, law enforcement officers, and emergency services personnel. Collecting the data from this assessment will give the Rural Recovery Network the information needed to provide education and trainings on stigma and give these professionals the resources and tools needed to help them better support to individuals seeking treatment and recovery whilst bringing awareness to Opioid and Substance Use Disorders and decreasing the stigma surrounding these diseases.

The Better Breathing, Better Living Grant

On August 2016, Cary Medical Center received a Health Resources and Services Administration (HRSA) Small Health Care Provider Quality Improvement grant of $600,000 for three years (2016-2019). The Better Breathing, Better Living project is a collaboration between 5 rural Maine hospitals who are participants of the Maine Rural Health Collaborative (MRHC) – Cary Medical Center, Northern Maine Medical Center, Houlton Regional Hospital, Millinocket Regional Hospital, and Mount Desert Island Hospital. The project's objective is to enhance patient care during the inpatient stay & ensure comprehensive carry-through of care during the transition to their home environment. The Better Breathing, Better Living (BBBL) project goal is to improve health outcomes for COPD patients during transitions of care, including decreasing re-admission rates.

Project Activities & Services:

The BBBL aims to empower patients and their caregivers to improve the management of their COPD symptoms and medication following their discharge from the hospital. A multidisciplinary Care Delivery Model was established to provide a more comprehensive inpatient and outpatient team-oriented care for patients living with COPD. The following are activities developed with the BBBL program:

- Weekly multidisciplinary team rounding of admitted COPD patients that included the BBBL clinical coordinator, pharmacist, occupational therapist, respiratory therapist, dietician, case management, and nursing.
- Medication reconciliation performed at hospital admission and discharge.
- COPD medication education. Inhaler technique assessment and training with educational videos and In-Check Dial device.
- Smoking status assessment and smoking cessation counseling.
- Pulmonary Function Tests referral at hospital discharge for patients with COPD who do not have a previous or recent PFT.
- Referral to Occupational Therapy and Pulmonary Rehabilitation COPD programs.
- Enhanced Coordination of Care at discharge for one year.

Key Outcomes:

During the BBBL project grant period, 158 patients enrolled in the program showed a decrease in re-admission rates. Patients enrolled in the program had an 11.4% readmission rate vs. patients who did not participate in the program had a 15.5% of readmission rate. Overall, COPD readmission rates were down from a re-admission rate of 30% before the implementation of the program.

Of the 41 patients who were smoking at hospital admission and received smoking cessation counseling, nine reported having quit smoking after discharge. There was also an increase in patients referred to COPD outpatient services after hospital discharge: 66 patients referred for a Pulmonary Function Testing, 29 patients referred to Occupational Therapy program, and 29 patients referred to Pulmonary Rehabilitation program.

The project was granted a no-cost extension until July 2020 to complete follow-up and Coordination of Care for one year for COPD patients participating in the program.

Appendix D – National Healthcare Quality and Disparities Report[13]

The National Healthcare Quality and Disparities Reports (QDR; annual reports to Congress mandated in the Healthcare Research and Quality Act of 1999 (P.L. 106-129)) are based on more than 300 healthcare process, outcome, and access measures, covering a wide variety of conditions and settings. Data years vary across measures; most trend analyses include data points from 2000-2002 to 2012-2015. An exception is rates of uninsured, which we are able to track through 2017. The reports are produced with the support of an HHS Interagency Work Group (IWG) and guided by input from AHRQ's National Advisory Council and the Institute of Medicine (IOM), now known as the Health and Medicine Division of the National Academies of Sciences, Medicine, and Engineering.

For the 15th year in a row, the Agency for Healthcare Research and Quality (AHRQ) has reported on progress and opportunities for improving healthcare quality and reducing healthcare disparities. As mandated by the U.S. Congress, the report focuses on "national trends in the quality of health care provided to the American people" (42 U.S.C. 299b-2(b)(2)) and "prevailing disparities in health care delivery as it relates to racial factors and socioeconomic factors in priority populations" (42 U.S.C. 299a-1(a)(6)).

The 2017 report and chartbooks are organized around the concepts of access to care, quality of care, disparities in care, and six priority areas—including patient safety, person-centered care, care coordination, effective treatment, healthy living, and care affordability. Summaries of the status of access, quality, and disparities can be found in the report.

The report presents information on trends, disparities, and changes in disparities over time, as well as federal initiatives to improve quality and reduce disparities. It includes the following:

- **Overview of Quality and Access in the U.S. Healthcare System** that describes the healthcare systems, encounters, and workers; disease burden; and healthcare costs.
- **Variation in Health Care Quality and Disparities** that presents state differences in quality and disparities.
- **Access and Disparities in Access to Healthcare** that tracks progress on making healthcare available to all Americans.
- **Trends in Quality of Healthcare** that tracks progress on ensuring that all Americans receive appropriate services.
- **Trends in Disparities** that tracks progress in closing the gap between minority racial and ethnic groups and Whites, as well as income and geographic location gaps (e.g., rural/suburban disparities).
- **Looking Forward** that summarizes future directions for healthcare quality initiatives.

Key Findings

Access: An estimated 43% of access measures showed improvement (2000-2016), 43% did not show improvement, and 14% showed worsening. For example, from 2000 to 2017, there were significant gains in the percentage of people who reported having health insurance.

[13] http://www.ahrq.gov/research/findings/nhqrdr/nhqdr14/index.html Responds to IRS Schedule H (Form 990) Part V B 3 i

Quality: Quality of healthcare improved overall from 2000 through 2014-2015, but the pace of improvement varied by priority area:

- Person-Centered Care: Almost 70% of person-centered care measures were improving overall.
- Patient Safety: More than two-thirds of patient safety measures were improving overall.
- Healthy Living: More than half of healthy living measures were improving overall.
- Effective Treatment: More than half of effective treatment measures were improving overall.
- Care Coordination: Half of care coordination measures were improving overall.
- Care Affordability: Eighty percent of care affordability measures *did not* change overall.

Disparities: Overall, some disparities were getting smaller from 2000 through 2014-2015; but disparities persist, especially for poor and uninsured populations in all priority areas.

Trends

- Trends show that about 55% percent of quality measures are improving overall for Blacks.[14] However, most recent data in 2014-2015 show that about 40% of quality measures were worse for Blacks compared with Whites.
- Trends show that about 60% of quality measures are improving overall for Asians. However, most recent data in 2014-2015 show that 20% of quality measures were worse for Asians compared with Whites.
- Trends show that almost 35% of quality measures are improving overall for American Indians/Alaska Natives (AI/ANs). However, most recent data in 2014-2015 show that about 30% of quality measures were worse for AI/ANs compared with Whites.
- Trends show that approximately 25% of quality measures are improving overall for Native Hawaiians/Pacific Islanders (NHPIs). However, most recent data in 2014-2015 show that nearly 33% of quality measures were worse for NHPIs compared with Whites.
- Trends show that about 60% of quality measures are improving overall for Hispanics, but in 2014-2015, nearly 33% of quality measures were worse for Hispanics compared with non-Hispanic Whites.
- Variation in care persisted across the urban-rural continuum in 2014-2016, especially in access to care and care coordination.

Looking Forward

The National Healthcare Quality and Disparities Report (QDR) continues to track the nation's performance on healthcare access, quality, and disparities. The QDR data demonstrate significant progress in some areas and identify other areas that merit more attention where wide variations persist. The number of measures in each priority area varies, and some measures carry more significance than others as they affect more people or have more significant consequences. The summary charts are a way to quantify and illustrate progress toward achieving accessible, high-quality, and affordable

[14] Throughout this report and its appendixes, "Blacks" refers to Blacks or African Americans, and "Hispanics" refers to Hispanics or Latinos. More information is available in the Reporting Conventions section of the Introduction and Methods.

care at the national level using available nationally representative data. The summary charts are accessible via the link below.

This report shows that while performance for most access measures did not change significantly over time (2000-2014), insurance coverage rates did improve (2000-2016). Quality of healthcare improved in most areas but some disparities persist, especially for poor and low-income households and those without health insurance.

U.S. Department of Health and Human Services (HHS) agencies are working on research and conducting programs in many of the priority areas—most notably opioid misuse, patient safety, effective treatment, and health disparities.

Link to the full report:

https://www.ahrq.gov/sites/default/files/wysiwyg/research/findings/nhqrdr/2017qdr.pdf