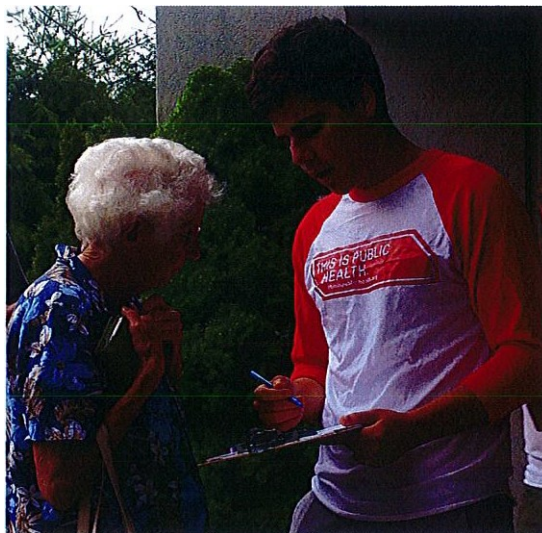




Community Health Needs Assessment

Final Report

October 2016



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Preface

The Affordable Care Act (ACA) requires that all 501(c)(3) hospitals, like the Meadville Medical Center and Titusville Area Hospital, must conduct a community health needs assessment (CHNA) and adopt an implementation strategy to meet identified community health needs at least once every three years. The ACA specifies that the process of completing a community health needs assessment must include:

1. **Collecting** input from persons who represent the broad interests of the community served by the hospital;
2. **Publishing** the findings of the community health needs assessment so they are available to the community at large; and
3. **Developing** and **implementing** a strategy to meet the needs identified in the assessment.

Executive Summary:
Findings from the 2014-2015
Community Health Needs Assessment (CHNA)

Throughout 2014-2015 researchers completed a community health needs assessment in Crawford County, the geographic area supported by the Meadville Medical Center and the Titusville Area Hospital. This research process included a review of hospital and public health surveillance data as well as the collection of community perceptions data and a community-wide survey focused on individual health and well-being.

The findings of this multi-year research project illustrate that **the health challenges within Crawford County are systemic and community-based**. Community health needs that were identified include:

- Limited access to fresh and affordable produce;
- Limited access to safe and affordable places to exercise;
- Limited number (less than 10 percent) of adults who have a primary care physician;
- Low rates of cancer screening; and
- Environmental hazards in the home that are associated with poor health.

These needs highlight the challenges a rural community faces. These challenges are exasperated in Crawford County where a large proportion of individuals are living below the poverty line and the majority of residents over 18 years of age do not have a post-high school degree.

Work to address these barriers should focus on:

1. Improving access to and affordability of fresh fruits and vegetables yearround;
2. Improving infrastructure to allow for more physical activity among residents;
3. Increasing cancer screening access and education among adults, particularly those who do not have a primary care physician; and
4. Developing strategies to improve the overall and individual socio-economic status within Crawford County.

Community Health Needs Assessment

SUMMARY- OCTOBER 2016

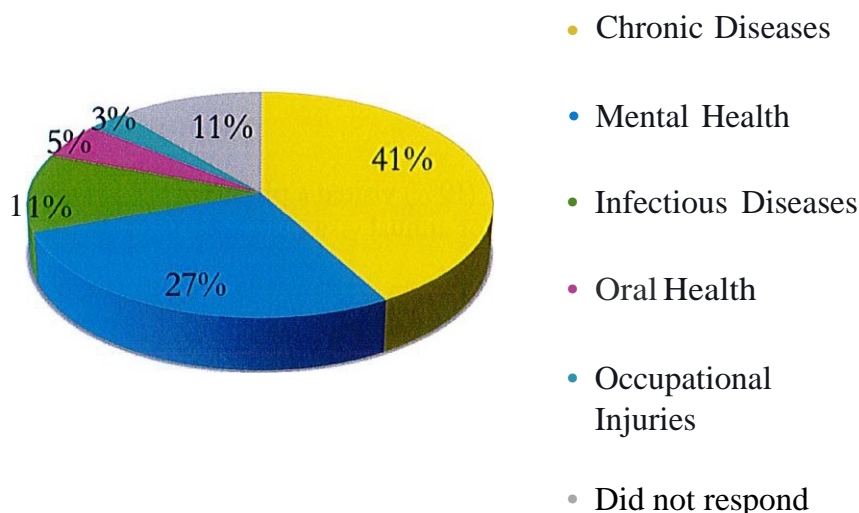
The Community Health Needs Assessment (CHNA) is a project to assess the health in Crawford County, PA. This multi-year project aims to:

collect, analyze, distribute, and use valid and reliable quantitative and qualitative data to improve community health.

The project (2013-2016) included four phases of data collection: (1) an assessment of community perceptions of health; (2) a review of public health surveillance data; (3) a review of emergency room admissions at the Meadville Medical Center; and (4) a community survey.

Community Perceptions

Priority Health Concerns



Participants were asked to identify the root causes for concern and provide suggestions for improving community health.

The top three causes for concern:

1. Obesity
2. Poverty
3. Substance abuse

The top three proposed improvements:

1. Affordable health care
2. Promotion of healthy lifestyles
3. Improvements & access to public facilities

Public Health Surveillance Data

Causes of Death in Crawford County, PA

1. Heart disease
2. Cancer
3. Cardiovascular disease
4. Chronic lower respiratory disease

Most Common Reportable Diseases

1. Cancer - breast, prostate, colon, uterine
2. Sexually transmitted infections - chlamydia & gonorrhea
3. Vaccine-preventable disease - pertussis & varicella (chickenpox)

Meadville Medical Center Emergency Room Data

Categorization of ER admissions data from the MMC 2011-2014:

Diagnosis Category	Number of Admissions	Percent of Admissions
Pain	59,885	29.5%
Infectious diseases	31,096	27.8%
Injury	23,370	20.9%
Mental health	5,498	4.9%
Oral health (including dental pain)	4,359	3.9%
Chronic diseases	1,481	2.4%
Women's health	1,763	1.6%

Community Survey

During the summer of 2015, 1009 adults in Crawford County completed the CHNA survey. The survey focused on access to health care, cancer screening, nutrition, household hazards, and barriers to health. From the survey, we learned:

- Only 77 (7.6%) of respondents reported having their own doctor. Of these 77 individuals, the majority (73) visited his/her doctor each year.
- Among the 931 respondents without a physician, approximately 191 (19%) visited a physician annually. 514 individuals (54%) used walk-in clinics (Med-Express) for annual visits.
- Among adults 50 years of age and older, only 390 (55%) reported getting the recommended cancer screening tests.
- 144 (14.4%) of the respondents smoking cigarettes or chewing tobacco. Among the smokers, 67 (46%) reported that they attempted to quit smoking during the past year.
- 768 respondents (79%) reported being willing to eat more fruits and vegetables if they were more accessible and affordable.
- The following household hazards were ranked as the most important causes for concern:
 1. Clutter
 2. Mold
 3. Cold
 4. Leaks
 5. Lack of kitchen appliances
 6. Lead paint

NOTE: Respondents who OWN their home were more likely to report a lack of kitchen appliances and cold compared to renters.

Introduction

The Titusville Area Hospital (TAH) is located in Titusville, Pennsylvania (Figure 1). The TAH is a 25-bed acute care hospital. The population served by the TAH includes the residents in eastern part of Crawford County, PA and surrounding Counties including Forest, Venango, and Warren. Crawford County is a rural community located 90 miles north of Pittsburgh, PA and 40 miles south of Erie, PA. Approximately 17 percent of the population in Crawford County lives below the poverty line; less than 20 percent of adults have completed a Bachelor's degree in spite of the fact that 87 percent have completed high school; and nearly 18 percent of adults are senior citizens. The city of Titusville has approximately 5,400 residents. The city of Meadville, the Crawford County Seat, is home to approximately 13,000 residents as well as TAH affiliate hospital, Meadville Medical Center, Allegheny College, and city, county, and state government offices. The median home value in Crawford County is \$100,400 (in 2013). This is 61 percent lower than the median home value in Pennsylvania.



Figure 1: Geographic location of Titusville, PA home to the Titusville Area Hospital. Demographic data about Crawford County was found online through the U.S. Census Bureau (<http://www.census.gov/quickfacts/table/PST04S215/42039>, http://www.city-data.com/county/Crawford_County-PA.html and <http://www.census.gov/quickfacts/table/PST045215/4248360/accessible>).

Project Goals and Results

The CHNA project was guided by three overarching principles:

1. Developing community partnerships;
2. Developing a mixed methods protocol to collect both qualitative and quantitative as well as perception and individual health data from a representative sample of the community; and
3. Disseminating valid and reliable results.

We spent nearly a year developing a standardized project methodology. Details of the methodology used for the 2015 CHNA were published in the journal *Health* and can be accessed online at <http://file.scirp.org/pdf/Health2015051311174273.pdf>.

The research team divided the CHNA project into two stages, which included analyses of publically available data and key informant interviews followed by a community-wide survey. This two-stage approach was necessary because the publically available data and key informant interviews only provided data on a population level; the survey allowed us to gather individual-level health data.

Results from the first stage of research have been published in the following peer-reviewed journals.

The article *Is Perception Reality? Identifying Community Health Needs When Perceptions of Health Do Not Align with Public Health and Clinical Data* (available online at [http:// smjournals.com/ community-medicine/current-issue.php#](http://smjournals.com/community-medicine/current-issue.php#)), illustrates that both individual perception of health in Crawford County and public health surveillance data show chronic diseases to be a priority health concern. There was a large perception that mental health is a community health need; however, surveillance data identified sexually transmitted infections and vaccine-preventable diseases are community health priorities.

This article concludes that chronic diseases and mental health are of the greatest concern. Crawford County residents also believed obesity, poverty, and lack of affordable health care were important risk factors associated with community health needs. Data from the MMC ER admissions showed that the majority of health emergencies in the community can be attributed to pain, infectious diseases, and injuries. Chronic diseases were the cause of the majority of deaths in our community and sexually transmitted infections, cancers, and two vaccine-preventable diseases were the top reportable diseases in the Meadville community.

A comparison of the perceptions survey data and ER admissions shows that acute issues treated at the MMC ER are not perceived to be the most important community health issues. Only 11% of the residents identified infectious diseases as the leading community health concern; however, nearly a third of all ER admissions were for infectious diseases. The ER data show that chronic diseases, including cancer, are rarely treated in the hospital ER (only 2.4% of all admissions). The data also show that the ER is rarely used by individuals seeking treatment for chronic diseases or mental health concerns.

The fact that only 30% of patients admitted to the ER had private health insurance aligns with the perception that poverty is a leading risk factor for poor community health and that providing affordable health care would improve community health. We hypothesize that community member's associate access to affordable health care with having private health insurance. Additionally, poverty,

along with the other two highest perceived risk factors, obesity and substance abuse, are each associated with increased rates of chronic diseases and mental health diagnoses. Eight of the top 10 leading causes of death in the city of Meadville were chronic diseases. The finding that four of the top 10 reportable diseases (according to the PA Department of Health) were different types of cancers further supports and aligns with the perception that chronic diseases are a priority community health concern. However, the fact that two of the leading causes of death and six of the top 10 reportable diseases are infectious in nature illustrates that there is a disconnect between community members' perceptions of health needs and what health data illustrates. It is unclear how community members determine what a community health need is. The data show that what individuals are seeking care for at the MMC ER is not associated with perceptions of community health. Both the reportable diseases data and the ER admissions among children highlighted the high prevalence of infectious diseases in the community. In future studies determining the difference in perceived health concerns between adults with and without children should be a priority.

The article *Seasonality of ER Admissions in Northwestern Pennsylvania: A Cross-Sectional Study* (available online at <http://file.scirp.org/pdf/OTEM2016062414471161.pdf>) shows that emergency room admissions for respiratory diseases are more common during the winter months (December - March). There is not seasonal variability of other diseases including cardiovascular, genitourinary, or neurological.

The article *Emergency Department Admissions for Dental & Oral Health Concerns in Rural Northwestern Pennsylvania* (available online at <http://file.scirp.org/pdf/OJEM2016033111010916.pdf>) illustrates that the overall rate of emergency department (ED) admissions for oral and dental health concerns has decreased over time (2004-2014). However, admissions for infections and dental caries are increasing over time. Individuals aged 19-38 were the most likely to use the ED for oral or dental health problems; as were individuals with private health insurance or those who were uninsured.

For the community-wide survey (which was conducted during the summer of 2015), the research team developed a new survey instrument to meet the needs of both MMC and TAH and to ensure a high response rate. Best practices for survey instrument development were prioritized to ensure a high response rate, including limiting the survey approximately 500 words and ensuring the survey was written at a 7th grade reading level or below. An initial list of 138 questions was compiled. The research team used a systematic elimination approach to shorten the survey to the final set of questions. In addition, the research team used focus groups to collect input about survey questions from community leaders and members. This final set of questions focused on five main themes: general health; insurance and access to health care; physical activity/ nutrition; household hazards; and barriers to leading a healthy life.

During the summer of 2015, student researchers from Allegheny College collected survey responses from individuals living in Crawford County. To ensure that a representative sample of individuals was surveyed, the researchers varied the time and location of survey collection. A sample of at least 850 individuals was needed to ensure that the study was appropriately powered. In the end, 1005 adults over the age of 18 living in Crawford County were surveyed.

The sample of individuals completing the survey was fairly representative of the general population in Crawford County. As seen in the data below, the sample that completed the survey was predominantly female; had health insurance; and had completed a college degree.



	Female	Male
Participants	75.6%	23.4%
Crawford County	51.1%	49.9%



	Have Health Insurance
Participants	97%
Crawford County	86.2%



	Own Home	Rent Home
Participants	71.9%	28.1%
Crawford County	73.7%	26.3%



	HS /TradeSchool	College Degree +
Participants	95.4%	51%
Crawford County	86.8%	18.7%

Community Health Needs Assessment Survey Results

Below are the results of the CHNA survey that was administered in-person during the summer of 2015. The results are organized by the five themes of the survey instrument. In several instances, the research team stratified the results by a demographic characteristic to illustrate specific health inequities and needs that exist in Crawford County.

General Health

Survey Question	Number (%) YES responses
Do you have your own doctor?	77 (7.6%)
Do you get a regular check-up? Among those with a doctor...	191 (19.1%) 73 (7.3%)
Do you smoke?	144 (14.4%)
Have you ever been recommended for a cancer screening test?	390 (55%)*

* Among adults aged 50 and over.

There was a strong association between individuals not having their own doctor and reports of not being able to pay for doctors' visits ($p < 0.0001$). Specifically, individuals who reported not having their own doctor were 3.4 times more likely to report not being able to pay for their medical care than those who have their own doctor. Similarly, those who reported not having their own doctor, were less likely to have completed post-high school education ($p = 0.03$). Individuals without a doctor, were also more likely to be uninsured or receiving government assistance ($p < 0.001$).

We hypothesize that the small percentage of adults over 50 years of age receiving a recommendation for a cancer screening test is tied to the small proportion of individuals with their own doctor. Due to the design of the survey, we cannot prove a causal effect; however, we believe the two are tied together. Therefore, any cancer screening communication and education programs need to be conducted outside of the traditional doctor's office in order to be effective.

More than 80 percent of survey participants reported visiting a dentist for preventative care during the past two years. The remaining 20 percent reported not visiting a dentist during the past five or more years.

Among the smokers, 46 percent report that they have tried to stop smoking during the past year. Most of the smokers that tried to quit were unsuccessful. The most common reason for being unsuccessful was that "it is too hard to quit."

Insurance & Access to Healthcare Services

In addition, the survey asked participants about their satisfaction with the health insurance they have as well as how and when they access the medical system. Among the respondents, greater than 90 percent reported that their insurance (both private and government-supported) allowed them to get the medical care that they needed. However, 12.6 percent of the respondents reported that they were unable to pay for a doctor's visit or monthly insurance fees.

More than 95 percent of the respondents reported that when they do visit a doctor they follow the treatment plan prescribed. However, only 44.3 percent of those who completed the survey reported that they actually visit a doctor when they get sick. The majority of respondents stated that they are more likely to self-diagnose than to visit a doctor for a sick visit.

The vast majority of participants (93%) reported that they have access to a car to travel to and from medical visits.

Physical Activity and Nutrition

When respondents were asked where they get the most physical activity, 41 percent reported they were most active while completing household chores; 30 percent reported personal exercise; and 15 percent at work. These findings provide further support to our conclusions about barriers to leading a healthy life in Crawford County (see below). Having the time and finances to visit or afford a gym membership is a key barrier to leading a healthy lifestyle in Crawford County according to survey respondents.

We found that most individuals living in the community reported that they buy their food at a local grocery store; however the majority of individuals completing the survey reported not eating the recommended number of servings of fruits and vegetables each day. It should be noted that these reports of fruit and vegetable servings were made during the summer months when farmers markets, local farm stands, community gardens, and grocery stores have an abundance of fresh fruits and vegetables. During the winter months when access to affordable fresh fruits and vegetables is limited, we assume that consumption of fruits and vegetables among those living in Crawford County decreases significantly.

Survey Question	Number (%)
1. Where do you get most of your food?	
Restaurant/ fast food	48 (4.8%)
Food pantry	29 (2.9%)
Grocery store	894 (89.3%)
Farmers market	30 (3.0%)
2. Servings of fruit do you eat per day?	
None	95 (9.5%)
1-2 servings	736 (73.5%)
3+ servings	170 (17.0%)
3. Servings of vegetables do you eat per day?	
None	42 (4.2%)
1-2 servings	724 (72.1%)
3+ servings	238 (23.7%)

Eighty percent of respondents reported that they wanted and were willing to eat more fruits and vegetables, but acknowledged that in order to do so the produce would need to be more accessible and affordable.

Household Concerns and Hazards

Survey respondents were asked if they had any of the following household hazards in their homes: lead paint, clutter, cold, mold, or water leaks. Additionally, they were asked if their house is missing any major kitchen appliances, such as a refrigerator, freezer, stove, or oven.

The following shows how many people indicated they had one of the household hazards. Participants were able to report that they had more than one household hazard present in their home. In total, more than half of the survey participants reported having at least one household hazard that was negatively impacting their health.

	Number (%) Reporting hazard
Lead paint	39 (4.1%)
Clutter	240 (25.2%)
Cold	107 (11.2%)*
Mold	123 (12.9%)
Leaks	98 (10.3%)
Lack of kitchen appliances	56 (5.9%)*

* Both cold (as a household hazard) and a lack of basic kitchen appliances were reported more often by owners than renters.

These results illustrate that both renters and homeowners are in need of assistance making improvements to their homes in order to improve health. The lack of kitchen appliances ties to the results about nutrition. Without proper equipment to store or cook food, individuals cannot be expected to buy, prepare, and eat fresh fruits and vegetables.

Barriers to Leading a Healthy Life

The survey included two open-ended question that addressed barriers to leading a healthy life. The first question asked about individual barriers. Responses to this question clearly show that a lack of time and money (42.2%); lack of access to both healthy foods and places to exercise (33.3%); and personal choices/a lack of motivation to be healthy (24.6%) are the leading individual-level barriers to leading a healthy lifestyle.

The second open-ended question asked respondents to name the biggest challenge for the community as a whole to be healthy. More than a quarter of the respondents (25.6%) identified poverty as the largest contributor to poor community health; 21.3% identified a lack of fresh and affordable fruits and vegetables; and 17% identified the lack of opportunities for physical activity in

the county with numerous noting that the design of cities/ towns (specifically a lack of sidewalks) prohibited physical activity. Rounding out the top five challenges to creating a healthy community in Crawford County were poor health care access, including a lack of services for mental health and obesity prevention, as well as a lack of access to care and inadequate availability of physicians; and poor education of individuals living in the county.

These responses from survey participants clearly illustrate **the health challenges within Crawford County are systemic and community-wide**. Fewer than one-quarter of individuals completing our survey reported lacking motivation or a desire to lead a healthy lifestyle. Community-wide problems - including poverty, lack of access to fresh and affordable produce, and the costs (both financial and time) associated with getting exercise - were the key findings of our work to identify health needs.

The needs that were identified highlight the challenges a rural community faces when a large proportion of individuals are living below the poverty line and the majority of residents over 18 years of age do not have a post-high school degree.

Work to address these barriers should therefore focus on:

1. Improving access to and affordability of fresh fruits and vegetables year round;
2. Improving infrastructure to allow for more physical activity among residents;
3. Increasing cancer screening access and education among adults, particularly those who do not have a primary care physician; and
4. Developing strategies to improve the overall and individual socio-economic status within Crawford County.