WYOMING COUNTY 
TRENDS AND IMPACTS REPORT

COMMUNITY HEALTH 
RELATED NEEDS 
AND SERVICES

2008 THROUGH 2016

WILLIAM F. THIEL FUND 
COMMUNITY FOUNDATION 
FOR GREATER BUFFALO

OCTOBER 2017

HMS ASSOCIATES, GETZVILLE, NY
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A. Overview

The Thiel Fund has been and continues to be dedicated to addressing the health related needs of Wyoming County residents. Since 2007, the Fund administered by the Community Foundation for Greater Buffalo has awarded approximately $2,960,000 to local organizations serving at least one out of three Wyoming County residents.

Comprehensive community health needs assessments were commissioned by the Community Foundation for Greater Buffalo to identify priority needs and guide Thiel Fund grant making decisions for 2008 through 2017. Technical analyses for these assessments addressed all residents regardless of income levels or culture, unlike many community health assessments which focus extensively on the needs of low income populations.

The assessments, as well as this report employed both Western New York and statewide benchmarks to distinguish between needs related to the county’s rurality versus its presence in the regional Western New York health care services system. Analyses prepared by HMS Associates were fortified by extensive community engagement with the community-at-large through focus groups, interviews and internet based surveys as well as the input of the Wyoming County Health Roundtable, which was created partly in response to the assessment process itself.

This trends report or chart book includes data on different multiple year periods determined by the availability of different years within the audited data set. Trend lines are present in many exhibits to demonstrate the direction, increasing or decreasing, of the data point and likewise potential for increasing or decreasing need. This report also expands earlier analyses by citing data and analyses on county residents covered by original Medicare, i.e., the elderly and disabled, populations of special interest identified at the Wyoming County Health Forum of October 2015. Traditional Medicare claims based analyses on the prevalence of chronic disease and hospital inpatient and emergency room services use identify the unique needs of this population. Additionally, the costs for services or “premium” for Wyoming County Medicare patients provide perspectives on local costs for care or health care system “value”, a key dynamic in today’s evolving health care environment.

The major purpose of this report or chart book is to present data and analyses which identify:

- Trends or changes in needs and services use of Wyoming County residents over the last several years
- Insights on future needs based on those trends
- Thiel Fund impacts
B. Executive Summary

Key Trends and Insights

County Residents

The actual make-up of County residents is a major factor in assessing the health care needs of the community. The number of people or population determines the ideal size of a responsive health care system. The growth or decline of the population accordingly influences the need for expansion or contraction in health care services capacity. There are several other factors indicative of the county’s make-up which influence health care needs. Age and sex, income and educational level, birth and death rates, and health care coverage are other key factors.

Fundamentally, the non-institutional population of the county is declining and is projected to decline from 40,791 in 2016 to 39,300 by 2022. Most age groups will experience a decline with the exception being people between the ages of 55 and 74. In 2015, the number of deaths, 398, exceeded the number of births, 369, by 8% or 29 people, a trend which is projected to continue. Hence population growth in the future will likely be driven by people moving into the county. Poverty or low incomes and the associated need for enabling health care services will especially affect two groups in the future: the elderly and people without a high school education. The percentages for those groups have grown. Health care coverage has improved over the period studied and is expected to have resulted in improved access to health care services. It is difficult to determine exactly how much of this improved coverage is related to past changes in national and state health care coverage policy and, in this era of uncertainty, what the impact of future changes will be.

Maternal and Child Health

The health care needs of the county are also heavily influenced by care available to women of child-bearing age. Consistent with the finding on lower birth rate, women in most age groups are having fewer babies, the exception being women between the ages of 25 and 29. On the positive side, teen pregnancies continue to decline, going from 40 in 2008 to 17 in 2015 and the county’s teen pregnancy rate is among the lowest in Western New York and similar rural counties in New York State. Negative or increasing trends were noted for out-of-wedlock pregnancies for women 25 to 29 years of age and lack of access to prenatal care by women 20 to 24 years of age. Births to women covered by Medicaid increased and there was a corresponding decline in births to women covered by commercial insurance. Yet this is considered to be a function of expanded Medicaid coverage rather than a change in poverty or low income levels in the county.
Overall Health and Lifestyles

The county’s death rate for all causes has been increasing, going from 702 deaths per 100,000 people (age/sex adjusted) in 2009 to 799 deaths in 2015, an increase of 14%. That rate is unremarkable for Western New York but high in comparison to similar rural counties in the state. A rising number of deaths of county residents was found for three distinct major causes of death: Chronic Lower Respiratory Diseases, related to airflow blockage and breathing-related problems such as emphysema, chronic bronchitis, and in some cases asthma; All types of Accidents, including unintentional injuries, falls, poisonings and motor vehicle traffic deaths; and Cerebrovascular Disease or stroke. Death rates due to cancer were relatively unchanged with minimal changes in deaths due to Diabetes Mellitus or Pneumonia. Deaths due to Disease of the Heart declined, however. For most causes, death rates were unremarkable in comparison to Western New York counties, but high for All Accidents and Diabetes in comparison to similar rural counties.

Opioid abuse has become a major health care challenge, especially as it pertains to the abuse of pain medication. Use of hospital-based services by county residents has increased over the past several years, with the highest increased rates of use occurring to people covered by Medicare. Death rates for both opioid and opioid pain medication abuse are similar to western New York and similar rural county rates. The county’s recent high rate for Neonatal Abstinence Syndrome (NAS), which occurs to infants born to women using legal or illegal opiates, includes hypersensitivity and hyperirritability, tremors, vomiting, respiratory difficulties, poor sleep, and low-grade fevers, should be examined more closely. On the positive side of the challenge is the county’s very low use of pain medication, 524.4 prescriptions per 100,000 people (adjusted rate), in comparison to other counties in the region and similar counties in the state. Pain medication prescriptions for drugs such as oxycodone, hydrocodone, codeine, morphine, and fentanyl are declining due to greater recognition of the problem. For Wyoming County, the number has declined from 26,634 prescriptions in 2014 to 23,926 in 2016, a reduction of approximately 10%. Even though prescription rates are declining, substitution of heroin for prescription pain medication is increasing due to heroin’s low cost and availability.

The Elderly and Disabled

Both the elderly and disabled require more health and enabling health care services than the general population. Both groups are covered by Medicare and a review of service use by those groups provides a unique perspective on their needs. The perspective is unique in that the data takes into account several different types of services and service needs of 3,900 original Medicare enrollees or 48% of all Medicare enrollees. Most importantly, it is based on the use of services regardless of where the service is provided, whether within or outside of the county, region or state. It also provides insights on how the needs of people with
low incomes, so-called “dual eligible” because Medicaid also helps to pay for services, differ from the higher income Medicare population. The data does not reflect the experience of Medicare enrollees participating in Medicare Advantage managed care plans.

Low income, dual eligible enrollees are sicker than the Medicare Only enrollees. One out of six or 16% are relatively healthy with no chronic condition, yet one out of four Medicare Only enrollees have no chronic condition. At the opposite end of the spectrum, 56% of dual eligible enrollees have 3 or more chronic conditions, yet 47% of Medicare Only enrollees have at 3 or more chronic conditions. These percents for multiple chronic conditions also point to the importance of care coordination services.

Of the twenty chronic conditions reviewed, ten affected at least 10% of the Medicare population. Two types of heart disease had the highest “average” rates: Hypertension (high blood pressure) and Hyperlipidemia (high cholesterol), 55% and 41% respectively. Diabetes, Ischemic Heart Disease (coronary artery blockage) and Arthritis had rates between 20% and 29%. Depression, Chronic Obstructive Pulmonary Disease (lung disease), Heart Failure, Chronic Kidney Disease, and Obesity had rates between 10% and 19%.

Rates were noticeably higher for those people with dual eligible status for six of the ten conditions, with major differences occurring for Chronic Obstructive Pulmonary Disease (100% higher), Depression (94% higher), Obesity (56% higher), Heart Failure (47% higher), Diabetes (23% higher) and Chronic Kidney Disease (19% higher).

Exhibit A. Wyoming County Medicare Enrollees Chronic Disease Rates

![Exhibit A. Wyoming County Medicare Enrollees Chronic Disease Rates](image-url)
Relative to Western New York counties and similar New York State counties, Wyoming County’s standing is noteworthy for several chronic conditions for the three-year average rate:

- It compares favorably for several conditions and for “healthy” dual eligible and Medicare Only residents in that its rate is among the best or lowest of those counties.
- It is low and compares well for dual eligibles with only one chronic condition to other Western New York counties.
- The county’s Diabetes rate is high and compares poorly with both Western New York and similar rural counties for the Medicare Only group of enrollees.
- Chronic Kidney Disease and Ischemic Heart Disease rates for the county are high in comparison to similar NYS counties for the Medicare Only group.

The use of hospital inpatient services for the original Medicare and dual eligible populations has improved, that is, the inpatient discharge rates have declined for most preventable and chronic conditions. The overall preventable discharges rate declined by 18% between 2012 and 2014 and the chronic preventable conditions discharge rate has declined even more, 28%, during that period. The acute preventable conditions discharge rate, however, has increased by 9%. The increase in the acute rate suggests that access to immediate care needs more may be more of a challenge than access to care for long term treatment for chronic diseases.

Rates have declined for Bacterial Pneumonia and Heart Failure as well, two preventable conditions which typically have high rates of hospital discharges.

The level of hospital emergency department use is seen as an indicator of the need for improved access to primary care and preventive health services. The emergency department use rates for the high need (3+ chronic conditions), dual eligible group are 75% higher than the high need Medicare Only population. This again is expected because of the problems in access to care that people with low incomes typically experience.

Total costs for all covered health care services, as one would expect, differ substantially by level of chronic care need and income level of enrollee or beneficiary. Costs for care used in this study refer to “risk-adjusted” costs, which are based on the complexity of the beneficiary’s medical problem and corresponding health care needs. Hence comparisons with other diseases or counties are more valid than comparisons based on costs or rates which treat all patients equally regardless of the complexity of their illness. Costs included are: Inpatient, Skilled Nursing Facility (SNF), Hospice, Home Health Agency, Outpatient (including emergency room care), Carrier (physician/supplier) and Durable Medical Equipment (DME).

The three-year average risk-adjusted annual cost for care for Wyoming County enrollees ranges from $4,399 for Medicare Only enrollees with no chronic conditions to $16,801 for dual eligible individual with 3+ chronic conditions.
Wyoming costs compare very favorably to Western New York counties for dual eligibles, having low expected costs for beneficiaries with no chronic condition, 1 or 3+ chronic conditions and seven of the ten high prevalence conditions. Comparisons for dual eligibles in Wyoming County to similar counties in New York State had similar findings for several chronic conditions.

Medicare Only comparisons with Western New York counties were markedly different, however, with high risk-adjusted costs for beneficiaries with 2 or 3+ conditions, and with two chronic conditions: Chronic Obstructive Pulmonary Disease and Obesity. Comparisons to rural NYS counties were similar for Pulmonary Disease and Obesity: both high, but low for Medicare beneficiaries with no condition or 2 conditions.

Costs of care differ by enrollee’s status and number and type of chronic conditions. Exhibit B depicts risk-adjusted costs for various levels of complexity of medical problems for Wyoming County for the most prevalent chronic conditions.

<table>
<thead>
<tr>
<th>Medical Problem</th>
<th>Medicare Only</th>
<th>Dual Eligible</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Condition</td>
<td>$4,399</td>
<td>$5,109</td>
</tr>
<tr>
<td>1 Condition</td>
<td>$6,431</td>
<td>$6,467</td>
</tr>
<tr>
<td>2 Conditions</td>
<td>$7,156</td>
<td>$9,375</td>
</tr>
<tr>
<td>3+ Conditions</td>
<td>$13,627</td>
<td>$16,801</td>
</tr>
<tr>
<td>Hyperlipidemia</td>
<td>$11,657</td>
<td>$15,069</td>
</tr>
<tr>
<td>Hypertension</td>
<td>$12,293</td>
<td>$15,481</td>
</tr>
<tr>
<td>Arthritis</td>
<td>$12,252</td>
<td>$16,403</td>
</tr>
<tr>
<td>Diabetes</td>
<td>$14,287</td>
<td>$17,246</td>
</tr>
<tr>
<td>Depression</td>
<td>$15,459</td>
<td>$17,975</td>
</tr>
<tr>
<td>Obesity</td>
<td>$16,982</td>
<td>$18,411</td>
</tr>
<tr>
<td>Ischemic Heart Disease</td>
<td>$14,859</td>
<td>$19,179</td>
</tr>
<tr>
<td>Chron. Obstruct. Pulmonary Dis.</td>
<td>$20,904</td>
<td>$21,191</td>
</tr>
<tr>
<td>Chronic Kidney Disease</td>
<td>$19,768</td>
<td>$23,448</td>
</tr>
<tr>
<td>Heart Failure</td>
<td>$23,181</td>
<td>$25,233</td>
</tr>
</tbody>
</table>

**Thiel Funded projects**

**Key Concepts**

Several key principles have guided the Thiel Fund grant making process administered by the Community Foundation for Greater Buffalo. First and foremost is the principle of balance. The overall effectiveness of health care is often linked to care provided by multiple organizations and health care providers, rather than an individual organization or practitioner.
The Thiel grants funding model supported by the Wyoming County community through the extensive involvement of county residents and the Wyoming County Health Care Roundtable was predicated on a “systems” or balanced approach to service development rather than concentrating on a specific disease or component of the health care system. An additional consideration was the principle that successful solutions in Wyoming County require participants who are heavily vested in Wyoming County, such as the organizations represented on the Roundtable. Thiel Fund Advisory Councils convened by the Community Foundation made recommendations on the types of projects.

**Awards and Projects**

Eight organizations were awarded a total of 55 grants amounting over $2.96M for the nine funding cycles (2007 through 2015/2016). Over the five year period studied, 2012 through 2016, the Infrastructure - Equipment Component was awarded 46% of Thiel funds for 8 different projects, Enabling Services received 26% of funds for 14 different types of projects, Services Expansion received 20% of funds for 5 different types of projects and Infrastructure - recruitment, retention, training received 7% of Thiel funds for 13 different types of projects. Two county agencies and six not-for-profit organizations have received funding during that period. These are listed below by component and major project type.

- **Enabling Services**
  - Crossroads House, Batavia, NY
  - Geneseo Migrant Center, Leicester, NY
  - Wyoming County Community Action, Perry, NY

- **Infrastructure - Equipment**
  - Oak Orchard Health Community Health Center, Warsaw, NY
  - Wyoming Community Hospital Foundation, Warsaw, NY
  - Wyoming County Office of Emergency Services, Warsaw, NY

- **Infrastructure - Recruitment, retention, training**
  - Western New York Rural Area Health Education Center, Warsaw, NY

- **Services Expansion**
  - Spectrum Human Services, Orchard Park, NY

**People Served**

Services reached up to an estimated one out of every three county residents each year. Over the five year period studied, the Infrastructure - Equipment Component served an average of 14,600 people, Enabling Services reached 5,800 people, Services Expansion served 500 people and Infrastructure - recruitment, retention, training reached 600 people. The large number of people served by equipment projects was due to the high numbers of Wyoming County
residents served by the Wyoming County Hospital each year and the impact of several equipment purchases over the multi-year period. The data on people served is a duplicate count. Some people were counted multiple times because they were served by different programs and by different organizations. Wyoming County residents served by year are depicted in Exhibit C.

2016 Special Projects

Care Coordination

The core of effective comprehensive systems of health and enabling health care services is care coordination. In 2015, the Wyoming County Health Roundtable identified care coordination as a new priority program which should be supported by Thiel funds. The Roundtable supported a Wyoming County Care Coordination Summit in 2016 with three objectives:

- Engage personnel of providers in Wyoming County
- Familiarize them with care coordination concepts
- Provide an opportunity to informally network with staff of other organizations
The 2016 Summit was a resounding success with 48 health and enabling health care services personnel from 24 Wyoming County organizations in attendance. Follow-up responses clearly demonstrated the impact and potential of the Care Coordination Summit for participants. Eight weeks after the event, participants were already starting to engage new partners by sharing information, ideas, and/or resources and establishing collaborations.

Selected impacts were:

- Participants averaged two “new collaborations” following the event and those participants with limited connections were now more active in the overall coordination network for Wyoming County.
- Participants indicated that they would possibly coordinate care with an additional 16 participants at the summit. The current average level of coordination contacts was 7.

The Care Coordination Summit was repeated in October 2017 and participants indicated again that the Summit was very helpful and a very good opportunity to network.

**Seniors Connect Project**

At the 2015 Wyoming County Health Care Summit held in Perry, NY, participants were asked to select a high priority need from a list of five needs identified earlier through a community internet survey. That high priority need was to be addressed by program provided by a Roundtable member through a special project grant of $2,500. The five needs were:

- Affordable Health Care
- Counseling/ mental health/ support groups
- Elder Health Care Options
- Positive Teen Attitudes funded through equipment
- Recreational Facilities

The Elder Health Care Option was selected and a program designed to address many aspects of the needs for the elderly - Senior Connect - was offered by the Wyoming County Community Action with assistance from the Wyoming County Office for the Aging and Youth Bureau. Sixteen seniors received portable touchscreen devices (i.e., tablets) through which they could access various internet resources and 8 hours of training. The participants viewed the program as very valuable and the need for follow-up at public access internet access sites such as the county’s libraries considered to be an important next step.
Summary

In conclusion, the health care needs of the county have changed over the past several years as a result of lower births rates, higher numbers of people between the ages of 54 and 74 with traditionally high health care services needs, increased impact of poverty, specific chronic disease and accidental death rates. Emerging health care needs in the future will be linked to changes in the county’s incoming new residents rather than population increases due to births which are now overpassed by the number of deaths. Like most communities, high rates of chronic diseases are present in the elderly and disabled covered by the Medicare program. Although the number of residents receiving emergency room or inpatient care for Opioid Abuse is low, the number has increased significantly.

On the positive side, several “healthy” trends were noted. Teen pregnancy rates and heart disease death rates have declined. The number of people without health care coverage has declined. Use of hospital inpatient services by Medicare enrollees has declined with low rates of use for most preventable health problems. Medicare costs of care for people with low incomes are comparable or low in some cases compared to similar communities.

Over the 2011 through 2016 funding cycles, Thiel funded programs reached on average an estimated one out of three county residents, funded eight different organizations which operated 55 different programs and were awarded a total of $2,960,000. Future Thiel funding priorities should take these trends into account as well as current and emerging policies on health care coverage through both private and public programs.
C. Detailed Findings

Detailed findings on trends are presented on three topics which include the needs of all Wyoming County residents; the need for, use and cost of health care services of elderly and disabled residents, and Thiel funded program impacts. Time period studied varies by data point, consistent with the availability of such data. Noteworthy needs potentially requiring further study in future assessments are those needs which compare poorly with other counties in Western New York, similar counties in New York State, or have shown negative trends over the time period studied.

The need for all residents section examines key demographic characteristics of county residents which influence the need for health care services, factors affecting births to Wyoming County mothers, and major illnesses.

Services need and use by the elderly and disabled section is a new unique feature of HMS Associates’ assessments. In part, it is presented due to the high interest in services to the elderly identified by participants at the Wyoming County Health Forum in October 2015 and is made possible by the availability of new techniques to study Medicare claims data. This analysis provides a vivid picture in many instances of the high health care needs of elderly and disabled residents and especially those with low incomes. This group of people is often referred to as “dual eligible” because the costs of their care are covered by both Medicare, through an employment insurance premium, and Medicaid, a federal and local tax supported program. This section not only describes the extent of chronic illnesses of original Medicare enrollees but also provides a picture of the costs of such care. Essentially it underscores the importance of primary and preventive health care services and enabling services needed by this group of county residents.

Funding levels, services, and people served through Thiel fund programs are summarized by component of the health care system addressed which includes service development or operation, infrastructure support for equipment or staff, or enabling services designed to increase access to needed services. This is illustrative of the balanced approach to Thiel grants over the past several years. There are no “magic bullets” in health care. A comprehensive system of preventive, acute and specialty care services as well as enabling services are required to meet the varied needs of the community.
a. Has the overall need for health care services changed?

I. County Resident Characteristics
   - Number of People
   - Age Group
   - Poverty Level
   - Educational Level
   - Births and Deaths
   - Health Care Coverage

II. Factors Affecting Births
   - Fertility Ratios
   - Teen Pregnancy
   - Out of Wedlock
   - Low Income Mothers
   - Prenatal Care

III. Major Illnesses
   - All causes of death
   - Major causes of death
     - Diseases of the Heart
     - Malignant Neoplasms
     - Chronic Lower Respiratory Diseases (CLRD)
     - Cerebrovascular Disease
     - Accidents (Total)
     - Diabetes Mellitus
     - Pneumonia
     - All other causes
   - Opioid Abuse
I. Characteristics of Wyoming County Residents

Number of People

The number of people in the County is projected to have declined from a high of 42,155 in 2010 to a low of 40,791 in 2016 (US Census). The projected linear trend line for the population is a decline of approximately 235 people per year as depicted in Exhibit 1. Wyoming County Population.

*Should this trend be correct, population loss will continue through 2022 with approximately 1,400 less people in the County by that time for a projected total population of 39,300.*

The population of Wyoming County is predominantly white. The number of minorities in the permanent residential population is very small and the accurate measurement of minorities within the seasonal worker population is challenging. Hence, typical health care disparities associated with minority populations are not extensively assessed in this report.

**Finding:** As the population declines, the need for health care services also declines. Yet this can be offset if high need populations, such as the elderly, actually increase.
Age Groups

A review of estimated changes by major age groups for 2003 through 2014 shows that the number of people under 54 declined, those 55 to 74 increased and people over 75 showed little change.

Finding: The large increases in the 55 to 74 years of age population are likely to continue. This indicates that overall need for services will remain constant as this counterbalances the overall loss of population.
Poverty

Poverty levels among county residents have increased by 434 people from 3,991 in the 2008 to 2012 five-year period to 4,425 in the most recent five year period studied, 2011 to 2015. The overall percent of people living below poverty has consequently increased from 10.5% to 11.8% for the periods studied or 592 people.

The increase occurred in all age groups, yet those 18 to 64 years of age were least affected. Poverty rates for the elderly were most affected, going from 6.1% to 8.4%, a 38% increase over earlier levels.

On the positive side, poverty is far less frequent in Wyoming County than in other Western New York counties or similar counties in New York State.

Finding: This indicates that there is an increased need for enabling types of services which have been shown to improve quality of life and population health such as transportation, nutrition, and social services, especially for the elderly.
Educational Attainment

All levels of educational attainment improved slightly for the five year periods studied. Lower level educational attainment, i.e., less than 12th grade with no diploma, declined slightly and high school graduates and bachelor’s degree attainment improved slightly.

Most notably however, people over 25 years of age with low incomes with less than a high school degree increased by 54%, going from 17.3% to 26.7% in the most recent period studied.

In comparison to other Western New York counties and similar counties in New York State, Wyoming County’s level of high school graduates compares favorably.

Finding: Economic and educational program needs, such as those provided by enabling services, have risen for people with low incomes and are expected to continue.
Births

The actual number of births for the period studied fluctuated from a high of 420 in 2009 to a low of 369 in 2015. The actual number of live births for 2015 was the low for that period, 369.

Although the actual number of births varied, the trend in live births to Wyoming County mothers has been declining by approximately 5 live births per year. Should this trend continue, there will be a projected 340 live births in 2022 to Wyoming County mothers.

Finding: The need for maternity services is declining.
Deaths

The actual number of deaths for the period studied fluctuated from a high of 398 in 2015 to a low of 329 in 2009. The actual number of deaths for 2015 was the high for that period, 398.

Although the actual number of deaths varied, the projected trend has been increasing by approximately 5 deaths per year. Should this trend continue, there will be a projected 410 deaths in 2022 to Wyoming County residents.

Finding: Increased deaths indicate a higher need for grief and bereavement support services as well as advanced care planning services.
Births and Deaths

Projected deaths will outpace projected births in the future and contribute to population loss and reduced need for health care services.

Finding: The resultant reduced need for overall health services will be both gradual and counterbalanced by an increased number of people between the ages of 55 and 74, who generally require more healthcare, consistent with the aging process.

Exhibit 7. Births and Deaths
Health Care Coverage

More Wyoming County residents have health care coverage than in the past. It is estimated that the rate of uninsured has declined from 9% of the civilian non-institutionalized population or 3,439 people in 2012 to 7.7% or 2,760 county residents in 2015. Major increases were seen in coverage by Medicare and Medicaid while commercial coverage declined over the period studied.

Finding: Increases in governmental coverage, that is, Medicare and Medicaid, will result in greater influence of care coordination and other quality of care programs. Those programs favor evolving value based health care services payment structures which shift payment for services from how much care is provided to how much good care is provided.
**TRENDS AND IMPACTS**

**ii. Factors affecting births**

**Fertility Ratios**

The all ages or overall fertility ratio, i.e., the number of live births per 1,000 female population 15-44, has been very similar over the years studied. Yet, fertility ratios for specific age groups are declining with the exception of women 25 to 29. The county’s fertility ratio for 2014, 153 live births per 1,000 women 25 to 29, was the highest for both the Western New York region and similar New York State counties.

**Finding:** Maintaining existing levels of reproductive health services are needed.
Teen Pregnancy

The actual number of teen pregnancies and the teen pregnancy rate has been declining for the period studied with the number of teen pregnancies reduced by more than 50%. The county’s teen pregnancy rate for 2015 was among the lowest of counties in Western New York and similar counties in New York State.

Finding: Existing levels of programming in reproductive health, parenting skills and health literacy should be continued in the county to help maintain these low (good) rates.
Out of Wedlock Births

The number of out-of-wedlock births has fluctuated over the period studied, going from a low of 122 to a high of 164. For 2015, there were 140 out of wedlock births and the overall trend for the period studied is increasing moderately but unremarkably.

Recognizing that the number of births is declining and the number of out-of-wedlock births is relatively stable, out-of-wedlock births percentages of total births by age group are increasing for all age groups, especially women in the 25 to 29 age group. The rate for that age group went from 18% of all live births in 2008 to 34% in 2015. For 2015, this rate was among the highest compared to Western New York counties and similar counties in New York State.

Finding: The need for support services for single moms in the 25 to 29 age group is increasing.

Exhibit 12. Out of Wedlock (OOW) Birth Rates by Age of Mother
Low Income Mothers

Births to women and families with low incomes who are Medicaid program eligible have risen during the period studied, going from 118 births in 2008 to 144 births in 2015. Conversely, births to women and families with commercial insurance coverage have declined, going from 262 in 2008 to 202 in 2015. Rather than changes in income, this pattern is considered to be related to increased access to Medicaid related programs through changes in eligibility requirements.

These statistics, that is the percent of coverage related to Medicaid and private insurance, compare very favorably to other counties in the Western New York region and to similar counties in New York State and are among the best rates for those counties for 2015.

Finding: Although Medicaid related coverage rates for live births are increasing, they are comparatively low. Health care and enabling services for low income families with young children should be maintained at least at current levels.
Prenatal Care

Rates for access to prenatal care during the first three months of pregnancy have fluctuated over the period studied. They have improved slightly for women between 25 and 34 years of age and declined slightly for women between 20 and 24 years of age. The linear trend has improved by approximately 5% for women 25 to 34 and declined by approximately 7% for women 20 to 24 years of age.

These rates compare very favorably with Western New York counties and similar counties in New York State.

Finding: Programs designed to encourage access to prenatal care for women 20 to 24 should be expanded.
iii. Major Illnesses

All Causes of Death

The number of deaths of Wyoming County residents has fluctuated over the period studied, going from a low of 329 in 2009 to a high of 398 for 2015. The most current number noted for 2015 was 398. The age/sex adjusted death rate has fluctuated accordingly, ranging from a low of 702 deaths per 100,000 population in 2009 to a high of 799 deaths per 100,000 people in 2015.

The corresponding trend lines depict an increase in both deaths and death rates over the period studied, implying that in the future, deaths of Wyoming County residents will continue to increase.
Wyoming County’s age/sex adjusted death rates have been similar to WNY county rates for the past twelve years. However, the County’s death rate compares poorly, that is, has been among the highest 25% of similar counties in the state.

Finding: Death rates for Wyoming County residents have increased over the past eight years. Recently, death rates for the County are high in comparison to similar counties in New York State.
iii. Major Illnesses - Major causes of death

Diseases of the Heart

The number of deaths due to diseases of the heart of Wyoming County residents has fluctuated over the period studied, ranging from a low of 69 in 2015 to a high of 100 for 2008. The age/sex adjusted death rate has fluctuated accordingly, from a low of 153 deaths per 100,000 population in 2011 to a high of 210 deaths per 100,000 people in 2008. The most current rate for 2015 was 178 deaths per 100,000 people.

Over the eight-year period studied, the linear trend for both deaths and the death rate has been declining with the age/sex adjusted death rate declining by approximately 20%. If this trend continues in the future, heart disease may continue to decline among county residents.
The County’s death rate for heart disease has been and continues to be unremarkable in comparison to other Western New York counties and similar counties in New York State.

Finding: If the downward trend in heart disease deaths continues, fewer county residents will die from heart disease in the future.
Cancer

The number of deaths of Wyoming County residents due to cancer has fluctuated over the period studied, from a low of 73 in 2011 to a high of 96 for 2015. The age/sex adjusted death rate has fluctuated accordingly going from a low of 144 deaths per 100,000 population in 2011 to a high of 197 deaths per 100,000 people in 2009. The most current rate for 2015 was 186 deaths per 100,000 people. Over the eight year period studied, the linear trend for both deaths and the death rate has been steady and unremarkable.

The County’s death rate for cancer has been and continues to be unremarkable in comparison to other Western New York counties and similar counties in New York State.

Finding: Cancer will continue to be a major cause of death of Wyoming County residents and may displace diseases of the heart as the number one cause of death in the future.
Chronic Lower Respiratory Disease

The number of deaths of Wyoming County residents due to chronic lower respiratory disease has fluctuated over the period studied, going from a low of 20 in 2009 to a high of 30 for 2015. The age/sex adjusted death rate has changed accordingly, from a low of 45 deaths per 100,000 population in 2009 to a high of 62 deaths per 100,000 people in 2014. The most current rate for 2015 was 60 deaths per 100,000 people. Over the eight-year period studied, the linear trend for both deaths and the death rate has steadily increased and is now the third highest cause of death of county residents.

The County’s death rate for chronic lower respiratory disease had been unremarkable in comparison to other Western New York counties and similar counties in New York State. Yet most recently, it is among the highest counties for both comparison groups.
Finding: Chronic lower respiratory disease has steadily increased as a major cause of death of Wyoming County residents. The most current rates for the last six years have been high in comparison to both Western New York counties and similar counties in New York State.
Cerebrovascular Disease

The number of deaths due to cerebrovascular disease of Wyoming County residents has fluctuated over the period studied, going from a low of 12 in 2008 to a high of 25 for 2011. The age/sex adjusted death rate has changed accordingly, from a low of 26 deaths per 100,000 population in 2008 to a high of 54 deaths per 100,000 people in 2011. The most current rate for 2015 was 38 deaths per 100,000 people. Over the eight-year period studied, the linear trend for both deaths and the death rate has been increasing by approximately 40%. If this trend continues in the future, deaths due to cerebrovascular disease will increase. The County’s death rate for cerebrovascular disease peaked in 2011 and fluctuated since that time.

Finding: Cerebrovascular disease deaths have steadily increased as a major cause of death of Wyoming County residents. Recently, the trend line has been high in comparison to similar counties.
Accidents - All Causes

The number of accidental deaths of Wyoming County residents has fluctuated over the period studied, going from a low of 5 in 2009 to a high of 25 for 2015. The age/sex adjusted death rate has varied accordingly, going from a low of 11 deaths per 100,000 population in 2009 to a high of 52 deaths per 100,000 people in 2015.

Over the eight-year period studied, the linear trend for both deaths and the death rate has increased by over 100%. If this trend continues in the future, deaths due to all types of accidents will increase.

For the most recent three-year period studied, death rates are high for both Western New York and similar counties.
Finding: The gradual rise in all accidental deaths should be examined by different causes of accidental death to determine if accident prevention programs should be expanded and target specific causes.

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Diabetes

The number of deaths of Wyoming County residents for diabetes has varied over the period studied, ranging from a low of 11 in 2008 to a high of 15 for 2011. The most current number for 2015 was 11, consistent with the low of 2008. The age/sex adjusted death rate has fluctuated, from a low of 23 deaths per 100,000 population in 2008/2015 to a high of 30 deaths per 100,000 people in 2011. The linear trend line for both the number of deaths and age/sex adjusted death rate are flat, indicating no substantive change over the time period studied.

However, the County’s death rate compares poorly, i.e., has been among the highest 25% of Western New York counties and similar counties in the state for most of the three year periods studied. For the most recent three-year period, the rate has dropped and is now unremarkable in comparison to Western New York counties.
Finding: The most recent decline in diabetes deaths for 2015 for Wyoming County residents may be indicative of increased comprehensive care and care coordination programs for this disease. These services should be continued.
Pneumonia

The number of deaths of Wyoming County residents due to pneumonia has changed over the period studied, ranging from a low of 4 in 2009 to a high of 10 for 2010. The most current number for 2015 was 7. The age/sex adjusted death rate has varied accordingly, from a low of 10 deaths per 100,000 population in 2009 to a high of 21 deaths per 100,000 people in 2010. The most current rate for 2015 was 15 deaths per 100,000 people.

The trend line shows that the number of deaths has increased but the age/sex adjusted rate is mostly unchanged for the period studied. Wyoming County age/sex adjusted death rates have been similar to both county comparison groups for the past twelve years.

Finding: No significant finding.
All other causes

The number of deaths of Wyoming County residents for all other causes has fluctuated over the period studied, ranging from a low of 95 in 2009 to a high of 119 for 2010. The most current number for 2015 was 118. The age/sex adjusted death rate has varied accordingly, from a low of 204 deaths per 100,000 population in 2009 to a high of 249 deaths per 100,000 people in 2010. The most current rate for 2015 was 248 per 100,000 people.

The trend line for both the number of deaths and age/sex adjusted death rates has increased by approximately 10% over the period studied. These increases are consistent with the increase in the overall deaths and death rates for all causes. Wyoming County age/sex adjusted death rates have been similar to WNY county rates for the past twelve years in most cases. The rate for the last three-year period is high, however, in comparison to similar counties in New York State.

Finding: High rates of other causes of death can contribute to lower rates for the major causes of death but further examination is considered to be unwarranted.
Opioid Abuse

Opioid Abuse has become a major problem in many communities throughout the nation. Health services use by Wyoming County residents also shows an alarmingly increasing trend in opioid related problems. Both hospital emergency room and inpatient use by Wyoming County residents has increased from 14 people in 2010 to 39 people in 2015, an increase of 25 people or 179%.

This increase varies by type of patient, with Medicare patients experiencing the highest increase between 2014 and 2015. This increase occurred in the use of hospital inpatient services, going from 6 in 2014 to 14 in 2015, an increase of 8 discharges or 133%. Medicaid patient use has also increased between 2014 and 2015 but the increase was for hospital emergency room visits, going from 8 in 2014 to 11 visits in 2015, an increase of 3 ER visits or 38%. Type of health care coverage analysis also showed that people covered by commercial insurance was high in 2010 but remained comparatively unchanged to people with other types of coverage.
Death rates for both opioid and opioid pain medication abuse are similar to western New York and similar rural county rates. The county’s recent high rate for Neonatal Abstinence Syndrome (NAS), which occurs to infants born to women using legal or illegal opiates, includes hypersensitivity and hyperirritability, tremors, vomiting, respiratory difficulties, poor sleep, and low-grade fevers should be examined, more closely.

On the positive side of the challenge is the county’s very low use of pain medication, 524 prescriptions per 100,000 people (adjusted rate), in comparison to other counties in the region and similar counties in the state. Pain medication prescriptions for drugs such as oxycodone, hydrocodone, codeine, morphine, and fentanyl are declining due to greater recognition of the problem. For Wyoming County, the number of opioid prescriptions has declined from 26,634 in 2014 to 23,926 in 2016, a reduction of approximately 10%. Even though prescription rates are declining, substitution of street drugs such as heroin for prescription pain medication, is increasing due to heroin’s low cost and availability.

Finding: Opioid Abuse is increasing in the county. The development of additional intervention program capacity should be considered.
b. Do the elderly and disabled have special needs in terms of types of illnesses, use of hospital services and cost of care?

i. Key Concepts

ii. Prevalence of Chronic Illnesses

iii. Preventable Use of Hospital Inpatient Services

iv. Use of Hospital Emergency Department Services

v. Cost of Care

I. Key Concepts

This analysis relies on Medicare services use data for all Wyoming County residents regardless of where care is provided. It is unique because it covers virtually all major types of services and service providers, not just those located in the county. Services included are Inpatient, Skilled Nursing Facility (SNF), Hospice, Home Health Agency, Outpatient (including emergency room care), Carrier (physician/supplier) and Durable Medical Equipment (DME).¹ As such, it is a comprehensive picture of service needs, use and costs of care for that group of people.

The period studied is 2012 through 2014 and most data is presented as a rate of use or share within a segment of the Medicare covered population. It covers fee-for-service “original” Medicare patients only and does not include the elderly or disabled enrolled in Medicare Advantage managed care plans, offered by private insurance companies approved by Medicare.

For Wyoming County, this means that the data covers 48% of all Medicare eligible consumers. For the period of the study, this amounts to 3,716 Wyoming County residents or approximately 48% of the 7,714 people covered by Medicare. This original Medicare rate was identical to the rate for Western New York counties and lower than the rate for similar counties. Similar counties had a rate of 59% of Medicare eligible people covered by fee-for-service original Medicare. This difference indicates that more people in Western New York and Wyoming County are enrolled in Medicare Advantage managed care plans than similar rural counties in New York State. More recent data for 2017 shows that the original Medicare coverage rate for Wyoming County residents has declined to 46% and Medicare Advantage (MA) enrollment in Wyoming County has increased to 54%. These rates are depicted in Exhibit 34. Medicare Coverage Enrollment by Type - Wyoming County.
Data and analyses are also presented on the original Medicare population alone and on “dual eligibles,” who are people covered by both Medicare and Medicaid due to low incomes. As noted earlier in this report, this is an important distinction because it provides a vivid picture in many instances of the higher needs of the elderly and disabled with low incomes, especially those with chronic illnesses. So-called health care enabling services such as transportation, housing, medical equipment needs, and nutritional programs are usually highly needed by this “dual eligible” group of people, given their income constraints.

II. Prevalence of Chronic Illnesses

Prevalence is a technical term used to describe the amount of illness in a community. It is sometimes an imprecise measure because in order for the illness to be counted or reported, someone has to record it. Additionally, some people with illnesses are not aware of their specific illness until they see a health care provider and are diagnosed. The measure of prevalence used in this study is very valid because it covers 20 chronic disease diagnoses.
made by all types of health care providers. It is not based solely on a particular provider or health care institution, but covers all providers regardless of where the diagnosis was made. Hence there are more opportunities for illness identification and diagnosis than one visit to a practitioner. The prevalence rate of a condition for a specific sub-population is the proportion of beneficiaries who are found to have the condition.

These chronic conditions are also analyzed in terms of the complexity of the beneficiaries' health care needs by assessing how many beneficiaries have zero, 1, 2, or 3+ chronic conditions. The number of chronic conditions indicates overall health and need for and use of health care services. The prevalence rate of a condition or a number of conditions for a specific sub-population is the proportion of beneficiaries who are found to have the condition or number of conditions.

The data shows that dual eligibles are sicker than other Medicare enrollees. Very few - only 16% of dual eligibles - do not have at least 1 chronic condition, compared to 26% of people with only Medicare coverage. Conversely, 56% of dual eligibles have at least three chronic conditions compared to 47% of Medicare only enrollees. Rates of chronic illnesses for 1 or 2 conditions are very similar for both groups. This data also shows how pervasive multiple chronic diseases or poor health is in the Medicare only population. As noted, almost one of two Medicare only enrollees, 47%, has at least three chronic diseases. This also sheds light on the complexity of providing health care services when numerous diseases need to be monitored and treated by specialists and primary care practitioners and the overwhelming importance of care coordination.

Exhibit 35. Conditions by Type of Medicare Beneficiary in Wyoming County depicts a series of data which illustrate the major difference between Medicare patients and Medicare patients with low incomes and their chronic care needs. From the low health care needs perspective, one out of four Medicare beneficiaries or 26% had no chronic condition for the period studied and are comparatively healthy but only one out of six or 17% of dual eligibles had no chronic conditions and are comparatively healthy. From the high health care needs and illnesses perspective, 47% of Medicare beneficiaries and 56% of dual eligible beneficiaries have at least three chronic conditions. From purely an income perspective, this means that people with lower incomes are much sicker than people with higher incomes. Their need for comprehensive care and care coordination underscores their need for enabling services which improve access to such services. It is interesting to note, however, that the rates for these two populations do not significantly differ for one or two chronic conditions.
Of the twenty chronic conditions measured, ten affected at least 10% of the Medicare population. Two types of heart disease had the highest rates: hypertension (high blood pressure) and hyperlipidemia (high cholesterol), 55% and 41% respectively. Diabetes, ischemic heart disease (coronary artery blockage) and arthritis had rates between 20% and 29%. Depression, chronic obstructive pulmonary disease (lung disease), heart failure, chronic kidney disease, and obesity had rates between 10% and 19%. Rates were noticeably higher for those people with dual eligible status for six of the ten conditions, with major differences occurring for chronic obstructive pulmonary disease (100% higher), depression (94% higher), obesity (56% higher), heart failure (47% higher), diabetes (23% higher) and chronic kidney disease (19% higher). Exhibit 36 displays these findings.
Relative to Western New York counties and similar New York State counties, Wyoming County’s standing is noteworthy for several chronic conditions for the three-year average rate:

- It compares favorably for several conditions and for “healthy” dual eligible and Medicare Only residents in that its rate is among the best of those counties.
- It compares well for only one chronic condition for dual eligibles to other Western New York counties.
- The county’s diabetes rate compares poorly with both Western New York and similar New York State counties for the Medicare Only group of enrollees.
- Chronic kidney disease and ischemic heart disease rates for the county are high in comparison to similar NYS counties for the Medicare Only group.
Finding: Noteworthy high diabetes rates are consistent with many other findings in the past for the county. Yet the rates were not remarkable for dual eligibles, indicating a pervasive population based pattern versus one related to low income factors.

III. Preventable use of hospital inpatient services

The use of hospital inpatient services for the original Medicare and dual eligible populations improved, i.e., declined for most preventable and chronic conditions but recently increased for acute preventable conditions. The overall preventable composite rate declined from - 5,542 discharges per 1000 beneficiaries in 2012 to 4,724 discharges in 2014 and the chronic composite rate declined from 3,557 discharges in 2012 to 2,558 in 2014.-The acute composite rate increased slightly and the decline in the overall and chronic rates are viewed to be indicative of an improved primary care capacity for the original Medicare population.
Relative to Western New York counties and similar New York State counties, Wyoming County’s standing is noteworthy for several preventable conditions for the 2014 rate, but none of the three-year rates were remarkable. For 2014, it compares poorly for the acute composite, urinary tract and chronic obstructive pulmonary disease/adult asthma rates. Although the overall composite rate is declining, it is high for Western New York.

Finding: Although apparently improving, expanded availability of primary and preventive health care services for preventable conditions should be explored.

IV. Use of hospital emergency department services

The level of hospital emergency department use is seen as an indicator of the need for improved access to primary care and preventive health services. The emergency department use rates for the high need, 3+ Conditions, dual eligible group are much higher than the high need Medicare Only population. The three-year average rate for the dual eligible is approximately 75% higher. This again is expected because of the problems with access to care that people with low incomes experience.
Moderate and low need populations, i.e., those with 1 or 2 conditions, have much lower use rates. Again, dual eligibles have higher use rates than the Medicare Only population.

From the Western New York and similar county comparative basis, the only noteworthy finding is that the Medicare Only low need group (1 condition) three-year average rate for Wyoming County is high for Western New York counties.

Finding: Emergency room use rates for both these populations are increasing but unremarkable in most instances.
V. Cost of care

Total costs for all covered health care services, as one would expect, differ substantially by level of chronic care need and income level of enrollee or beneficiary. Costs for care used in this study refer to “risk-adjusted” costs, which are based on the complexity of the beneficiary’s medical problem and corresponding health care needs. Hence, comparisons with other diseases or counties are more valid than comparisons based on costs or rates which treat all patients equally regardless of the complexity of their illness.

Costs included are: Inpatient, Skilled Nursing Facility (SNF), Hospice, Home Health Agency, Outpatient (including emergency room care), Carrier (physician/supplier) and Durable Medical Equipment (DME).

The three-year average risk-adjusted annual cost for care ranges from $4,399 for Medicare Only enrollees with no chronic conditions to $16,801 for dual eligible individual with 3 conditions. Cost of care increases by income level, that is, low income level, and number of chronic conditions.
Wyoming County residents’ risk-adjusted costs for care are noteworthy in several instances. Changes in costs between 2012 and 2014 vary by type and chronic care need. The largest cost increases were for dual eligibles with 1 or 2 chronic conditions, 16 and 21%, respectively. Other populations increases were below 7% and the percent change for the highest need group, dual eligible with 3+ conditions, was actually a reduction, -8%.

Wyoming costs compare very favorably to Western New York counties for dual eligibles, having low expected costs for beneficiaries with no chronic condition, 1 or 3 chronic conditions and for seven of the ten high prevalence conditions. Comparisons for dual eligibles to similar counties in New York State had similar findings for several chronic conditions.
Medicare Only comparisons with Western New York counties were markedly different however, with high risk-adjusted costs for beneficiaries with 2 or 3+ conditions, and for two chronic conditions: chronic obstructive pulmonary disease and obesity. Comparisons to rural NYS counties were similar for pulmonary disease and obesity: both high, but low for Medicare beneficiaries with no condition or 2 conditions.

Expected annual costs vary by type of chronic condition and type of beneficiary. Hyperlipidemia (high cholesterol) and other medical problems, had the lowest cost of care, approximately $11,657 for Medicare Only and $15,069 for dual eligible. The highest costs for care were for beneficiaries with heart failure and other medical problems, approximately $23,181 for Medicare Only and $25,233 for dual eligible.
Findings:

- Data on the costs of care for different levels of needs and chronic diseases clearly reflects the impact of chronic disease on Medicare premiums and the importance of preventive health care services as a mechanism to reduce costs and improve quality of life.

- The need for, use and cost of health care services by Medicare enrollees indicates selected improvements in primary and preventive health care services capacity in the area.

- Decreasing costs of care for the high need difficult to treat population are encouraging.
c. What have been the impacts of Thiel Funded projects?

i. Guiding principles

Several key principles have guided the Thiel Fund grant making process administered by the Community Foundation for Greater Buffalo. First and foremost is the principle of balance. Over the past twenty years, health experts have more widely recognized that comprehensive systems of health care services are needed to foster community health. This includes a system of coordinated promotive, preventive, diagnostic, curative, rehabilitative, and palliative health care services. The overall effectiveness of health care is often linked to care provided by multiple organizations and health care providers, rather than an individual organization or practitioner. This is especially true for chronic medical problems which require a wide variety of services over the life of the individual. As noted in the Medicare analysis, approximately 50% of people covered by Medicare in Wyoming County have at least 3 chronic illnesses.

The Thiel grants funding model, supported by the Wyoming County community through the extensive involvement of county residents on the Wyoming County Roundtable, is predicated on a “systems” or balanced approach to service development rather than concentrating on a specific disease or component of the health care system.

Three categories of projects were funded:
- Health Care Services
- Enabling Health Care Services necessary to assure access to needed services
- Infrastructure, such as public health, equipment, facilities, and health care personnel

An additional consideration was the principle that successful solutions in Wyoming County require participants who are heavily vested in Wyoming County, such as the organizations represented on the Wyoming County Health Care Roundtable. Thiel Fund Advisory Councils convened by the Community Foundation made recommendations on the types of projects. These principles are represented in Exhibit 44.
Exhibit 44. Local Providers Working Hand-in-hand to Address Complex Community Health Needs.

ii. Funding levels

Eight organizations were awarded a total of 55 grants amounting to over $2.96M for the nine funding cycles (2007 through 2015/2016). Projects were also supported by other sources of funding. Over the five-year period studied, the Infrastructure - Equipment Component was awarded 46% of Thiel funds, Enabling Services received 26% of funds, Services Expansion received 20% of funds and Infrastructure - Recruitment, Retention, and Training received 7% of Thiel funds. Proportions by year are depicted in Exhibit 45.
Two county agencies and six not-for-profit organizations received funding during that period. These are listed below by component.

- **Enabling Services**
  - Crossroads House, Batavia, NY
  - Geneseo Migrant Center, Leicester, NY
  - Wyoming County Community Action, Perry, NY

- **Infrastructure - Equipment**
  - Oak Orchard Health Community Health Center, Warsaw, NY
  - Wyoming Community Hospital Foundation, Warsaw, NY
  - Wyoming County Office of Emergency Services, Warsaw, NY

- **Infrastructure - Recruitment, retention, training**
  - Western New York Rural Area Health Education Center, Warsaw, NY

- **Services Expansion**
  - Spectrum Human Services, Orchard Park, NY

**iii. Services**

As noted earlier, the Thiel approach to funding favored the development of a comprehensive array of services rather than concentrating on a particular illness or type of service. Forty programs were funded over the past five-year period, illustrative of this approach. This robust array of programs is depicted in Exhibit 46 on the following page.
Exhibit 46. Thiel Funded Projects

- **Infrastructure - Equipment (8)**
  - Computed Radiography (CR) Processor
  - Computed Tomography (CT) Scanner
  - Digital Radiography
  - High Definition Laparoscopic Tower System
  - Olympus High Definition Narrow Band Imaging System
  - Omnicell Medication Dispensing System
  - SonoSite Ultrasound
  - X-ray Picture Archiving and Communication System (PACS)

- **Infrastructure - Recruitment, retention, training (13)**
  - Care Coordination Summit
  - Community Training Day
  - Interns Housing
  - Interns/Americorps
  - Life Sciences Learning
  - Mash Clinic
  - Medtech Camp
  - MyHealth Career
  - Pediatrician + Family Medicine
  - Puppet Shows

- **Service Expansion (5)**
  - Case Conferences
  - Case Management
  - Consultation
  - Curbside Consultations
  - Treatment sessions

- **Enabling Health Services (14)**
  - Brochures
  - Emergency Assistance - Housing
  - Emergency Assistance - Support
  - Eye Exams/Prevention Education
  - Hearing Tests
  - Interpretation
  - Medical Equipment
  - Medical Transportation
  - Oral/Optical Assistance
  - Pharmacy Assistance
  - Seniors “Get Connected” Internet Training
  - Special Food Items
  - Thiel House - Families
  - Transportation

iv. People Served

Services reached up to an estimated one out of every three county residents each year. Over the five-year period studied, the Infrastructure - Equipment Component served an average of 14,600 people, Enabling Services reached 5,800 people, Services Expansion served 500 people and Infrastructure - recruitment, retention, training reached 600 people. The large number of people served by equipment projects was due to the high numbers of Wyoming County residents served by the Wyoming County Hospital each year and the impact of several equipment purchases over the multi-year period.
The data on people served is also a duplicate count. This means that some people were counted multiple times because they were served by different programs and by different organizations. Wyoming County residents served by year are depicted in Exhibit 47.

v. 2016 Special Projects

Care Coordination

The core of effective comprehensive systems of health and enabling health care services is care coordination. Countless studies point toward the importance of case or disease management services provided by primary care practitioners as a major mechanism for improving health care outcomes and quality of care.

In 2015, the Wyoming County Health Roundtable identified care coordination as a new priority program which should be supported by Thiel funds. Most innovative care coordination
programs in health care emphasize some form of case or disease management, yet there is no uniformly accepted process. Hence the Roundtable decided to support a Wyoming County Care Coordination Summit in 2016 with three objectives:

- Engage personnel from Wyoming County organizations involved in care coordination processes,
- Familiarize them with care coordination concepts rather than a specific care coordination process or technique, and most importantly
- Provide an opportunity to informally network with staff of other organizations involved in care coordination processes.

The 2016 Summit was a resounding success with 48 health and enabling health care services personnel from 24 Wyoming County organizations in attendance. The Wyoming County Care Coordination Summit was attended by both seasoned and new professionals working as care coordinators in non-profit and community-based organizations and health care settings, serving predominately adults (including older adults) with various cognitive, developmental, physical, and mental concerns.

Most Summit participants were well-connected prior to the event, having called on other participants to share resources and/or engage in collaborations (current or past). Nevertheless, participants also indicated that they were interested in developing future collaborations. Follow-up responses clearly demonstrated the impact and potential of the Care Coordination Summit for participants both professionally and personally. Just eight weeks after the event, participants were already starting to engage new partners by sharing information, ideas, and/or resources and establishing collaborations.

Impact:

- Participants’ use of creative problem solving activities increased (81% agree), they became more aware of existing organizations that can be helpful to them professionally (89% agree), or personally (81% agree).
- Participants reached out to professionals that they had not interacted with previously (88.5% agree).
- Participants felt more capable as care coordinators (88.5% agree).
- Participants averaged two “new collaborations” following the event and those participants with limited connections were now more active in the overall coordination network for Wyoming County.
- One of the most interesting findings was that participants indicated that they would possibly coordinate care with an additional 16 participants at the summit. The prior average level of coordination contacts was 7.
The Care Coordination Summit was repeated in October 5, 2017 at the Valley Chapel in Warsaw, NY. Health care workers from organizations serving Wyoming County networked and shared information about their organizations and programs. The Keynote speaker was Fannie Glover from the Early Care & Learning Council who talked about generational poverty. And unspoken cues and habits and can exist between racial, ethnic, and economic groups. Participants also brought materials and brochures depicting their organization’s services.

An overwhelming majority of participants considered the Summit to be a very helpful source of information, a very important opportunity to network with colleagues and would attend future Summits. Participants noted that they would like to hear more from their colleagues about their respective roles, programs and services and identified potential topics for future summits including:

- Rural health
- Mental health
- “Special needs” friendly communities

Seniors Connect Project

At the 2015 Wyoming County Health Care Summit held in Perry, NY, participants were asked to select a high priority need from a list of five needs identified earlier through a community internet survey listing a total of 20 needs. That high priority need would then be addressed by a program provided by a Roundtable member through a special project grant of $2,500. The five needs were:

- Affordable Health Care
- Counseling/ mental health/ support groups
- Elder Health Care Options
- Positive Teen Attitudes funded through equipment
- Recreational Facilities

The Elder Health Care Option was selected and a program designed to address many aspects of need for the elderly - Senior Connect - was provided by Wyoming County Community Action with assistance from the Wyoming County Office for the Aging and Youth Bureau. Sixteen seniors received portable touchscreen devices (i.e., tablets) through which they could access the internet and various internet resources. They also received 8 hours of training on those devices and internet use skills. The participants viewed the program as very valuable and the need for follow-up at free internet access sites such as the county’s libraries is considered to be an important next step.
D. Technical Notes

a. Benchmarks

Two types of benchmarks were used to identify potentially problematic health care needs or services use. The first pertained to Wyoming County’s standing in regards to the eight rural or urban counties in Western New York. Those counties are listed below:

- Allegany
- Cattaraugus
- Chautauqua
- Erie
- Genesee
- Niagara
- Orleans
- Wyoming

The second pertained to the County’s standing relative to 12 similar rural counties in New York State based on the Eberts rural typology. Those counties are listed below:

- Columbia
- Greene
- Herkimer
- Livingston
- Orleans
- Schoharie
- Schuyler
- Seneca
- Washington
- Wayne
- Wyoming
- Yates

The Western New York comparison reflects the effects of the regional health system on needs and services. As a consequence, both rural and urban counties, which often differ significantly on socioeconomic conditions which influence needs and services use, are included in the comparisons. The Eberts comparison screens out the effect of socioeconomic conditions of urban counties, which may distort comparisons with rural counties. In both instances, values which were among the
poorest 25% of counties studied were considered to be reflective of potential priority needs.

b. Vital Statistics

The source for all vital statistics data is the New York State Department of Health. Various data sets were employed with the most recent set addressing Opioid Abuse. Analyses prepared by HMS Associates.

c. Medicare Claims Data

The primary source of the Medicare claims data is the United States Center for Medicare and Medicaid Services (CMS). Analyses include adjustments or methodologies by HMS Associates or other third parties.