Ensuring Health Across Rural Minnesota in 2030

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RESOURCE CENTER

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Contents

1. Executive Summary

The National Rural Health Resource Center (The Center) partnered with The College of St. Scholastica (The College) to conduct a study with funding from the Mayo Foundation for Medical Education and Research that examines trends and disruptors within the rural health care environment that will influence access to affordable, quality health care across rural Minnesota in 2030. The study examines current trends and, in parallel, what disruptors may occur that could affect community members' access to quality, affordable care in rural areas. The goal of this study was to create a road map to inform policymakers and health care stakeholders across Minnesota of potential disruptors that, through elevated and focused rural health policy, may positively improve the rural health care environment.

Realizing a health care system where the three attributes of access, affordability, and quality are available in rural Minnesota communities is complex and requires a systems approach. This study invited participation from a wide variety of subject matter experts and was structured on a concept of influencing change that kept the vision of access, affordability and quality in the forefront. Throughout the design and implementation process, the vision served as a guidepost to orient learning, discussion, and prioritization of ideas.

A literature review identified several trends in rural communities, including increasing diversity, aging of the population, rising health care costs, lack of internet connectivity, slow integration of technology and networks, and closings and mergers of hospitals and clinics. Hospital and clinic closings and mergers. Major disruptors — actions that can affect current trends in rural health — found in the literature review include growing consumer focus on convenience and cost, innovation in value-based models, new technology supplanting traditional services, increasing financial pressures, global integration and interdependence in pandemics, and climate change.

Composite simulated rural community profiles were developed into four case studies to focus discussion and apply disruptors and projections. Characteristics that differentiated the four case-study communities included sociodemographic, community infrastructure, health status and risk factors, health care resources and infrastructure, and quality-of-life attributes. An environmental analysis of data describing characteristics and trends in rural communities gave context and provided reference data. The environmental scan analyzed measures related to access, affordability, and quality of health care for rural communities.

A virtual Rural Health Summit gathered 14 rural health subject-matter experts to describe a shared vision for rural health in 2030, identify anticipated trends, discover disruptors that would influence health in rural Minnesota, and assess potential impact of these disruptors on access to affordable, quality care. Participants represented included primary and specialty health care, mental and behavioral health care, critical access hospital and clinic administration, emergency medical services, rural policy, quality improvement, technical assistance, and foundations.

The Summit identified a vision: Care in rural Minnesota in 2030 must **be affordable, designed around the whole person, include services for wellness and illness, and be delivered collaboratively with technology and interoperability.**

Summit participants also identified key disruptors that will influence rural health in the next decade:

- Consumer-driven options to access health care using nontraditional avenues;
- Dramatic, focused social investment within rural communities to address health disparities through social determinants of health and to build community connections;
- Increased attention on rural health vulnerability as exposed by the COVID-19 pandemic;
- Innovative rural population health care and payment models that ensure viable health services within rural communities and address financial pressures;
- New technologies integrated into health care that supplant or support traditional care;
- And telehealth technology, payment and regulations that enable care providers to interact virtually with patients and community members.

Trending rural historical characteristics metrics helped focus recommendations. Key metrics of social determinants included education, employment, household income and mental health provider access. Projected financial scenarios of the composite community profiles assumed a change from the current fee for service (FFS) health care payment system to a rural health global budget, combined with a shared savings model across all payers for reducing total patient cost of care, allowing for investment in community health and wellness. This model is a combination of current and recommended federal payment innovations.

A number of assumptions were made for stable population and market share for the financial projection model. The FFS and global budget with shared savings and

investment in health and wellness (GB+SS+I) assumptions were applied to each of the four case-study communities.

All four composite community profiles showed the following financial projections:

- Under current conditions, operating margins deteriorate as health care expenses are assumed to continue to rise and exceed increases in payment;
- And under a simulated global payment and shared savings model projection, for a 10-year period, all margins improve; and all experience investment in community health. Three of the four profiles see net savings generated from the total population health spend.

The project's recommendations align with the key disruptor themes and provide Minnesota policymakers, stakeholders and change leaders with a convincing assessment of decisions, activities and resources needed to enable the 2030 vision of health care in rural Minnesota. They address all disruptors and will positively affect the financial projections and demographic trending as well.

The recommendations:

- **Ensure access to telehealth, home-monitoring and other emerging technologies in health care.**
    - Maximize the strength of, and access to, universal broadband and Wi-Fi coverage in rural areas.
    - Partner with other rural community providers in long-term care, public health and emergency medical services to ensure access to a wide range of virtual care services.
    - Remove regulatory barriers to access telehealth including limited payment for telehealth services.
    - Improve investment for rural access to innovative technology solutions.

  Since the onset of the COVID-19 pandemic, health care providers in rural communities have seen a massive increase in telehealth visits for patient care. The US Department of Health and Human Services reports that between mid-March and mid-August 2020, 36% of people with Medicare FFS received a telemedicine visit (CMS, 2020). Access to this volume of telehealth services was made possible through temporary waivers and flexibilities instituted at both the federal and state levels. Policymakers must examine the data on the effects of these temporary changes on health care delivery and assess the need to permanently remove regulatory barriers to virtual care.

- **Create policies and payment structures based on quality outcomes and patient experience and efficiency for nontraditional sources.**
    - Seek efficiencies that allow rural clinics, including certified rural health clinics, community health centers and fee for service, to compete with newer nontraditional sources of health care delivery, such as walk-in and retail clinics, and national virtual care portals and apps.
    - Promote and fund collaboration strategies between traditional and nontraditional providers that improve access to both in-person care and virtual care in underserved communities, and ensure a full range of services from primary to complex care is available in rural areas.

- **Focus social investments in rural communities to address health disparities and build community connections.**
    - Support community coalitions addressing social determinants of health.
    - Foster health equity through elimination of systemic racism.
    - Create public and private funding opportunities to proactively prepare for population health becoming a bigger part of traditional health care.
    - Encourage shared accountability for population health and interoperability among providers.
    - Promote community-level quality measurement that tracks progress towards the goals for population health, building upon community health needs assessments.
    - Include value-based incentives in future payment models to address disparities within communities and among providers and to improve population health initiatives.
    - Provide stable federal and state funding for public health in rural areas.

  The need for this focus has become painfully apparent in the response to the COVID-19 pandemic. Projections of current trends to 2030 suggest that rural populations will experience an increased rate of poor or fair health.

- **Address rural health vulnerability, especially in response to the impact of the COVID-19 pandemic.**
    - Greater collaboration is needed to ensure pandemic preparedness, effective response, and financial recovery.
    - Promote greater interoperability of health care information and support essential public health services for a coordinated and effective response in any public health emergency or natural disaster.

- Provide loan forgiveness, time extensions and additional pandemic-related funding to help rural facilities adjust to post-COVID-19 realities in health care.
- Extend expanded telehealth reimbursement, investment in broadband, and regulatory waivers are needed while regulatory agencies determine how and whether changes should be continued or adapted once the pandemic is over.
- Provide additional funding for COVID-19 testing sites and new funding to prepare for vaccine distribution in rural communities.
- Address recent initiatives for rural health improvement in the five prevalent chronic health disease categories as identified through US HHS Administration with technical assistance and local, regional, and state-by-state grants.
- Continue efforts to expand insurance coverage and invest in technology to ensure better preparedness to respond to future pandemics.
- Recognize the effects of climate change on vulnerable populations in rural Minnesota to foster proactive preparation.
- Foster collaboration among providers and sectors to reduce community vulnerability and promote a systems approach to health care that acknowledges the trend toward interdependence within society that was revealed in the literature review.

- **Expand innovative and flexible population health care and payment models that address financial pressures, promote population health, and ensure viable health services within rural communities.**
  - Provide a mix of new payment models that include a cost-based environment in the design.
  - Continue critical access hospital reimbursement, safety net programs, such as Rural Health Clinics and Community Health Centers (FQHC) that address workforce shortages.
  - Increase rural Medicaid reimbursement while piloting and implementing value-based payment models such as shared savings and global budgets that address low volumes and the need to focus on investments in community and mental health.
  - Develop rural clinics' transition to value-based payment models with support for quality reporting.
  - Create opportunities that allow rural facilities to move toward new value-based models without substantial financial risk. New models for payment are needed to build rural leadership capacity, expand investment in collaboration between clinical care, public health, and community agencies.

Financial projections reveal that without a change in the payment models, rural health organizations across the state will have negative net income. These projections demonstrate that the financial status of health care facilities in each of the four case studies would improve significantly with a new value-based model of global budgeting that shares revenue, moderates risk, and promotes savings through investments in community health and wellness.

Implementation of all recommendations will require a multi-pronged approach involving policy and regulatory changes, private and public funding, and leadership at all levels focused on improving health across rural communities in Minnesota.

2. Purpose, Objectives, and Background

A. Project Purpose

The National Rural Health Resource Center (The Center) partnered with The College of St. Scholastica (The College) to conduct a study with funding from the Mayo Foundation for Medical Education and Research that examines trends and disruptors within the rural health care environment that will influence access to affordable, quality health care across rural Minnesota in 2030. The goal of this study was to create a road map to ensure health across rural Minnesota by impacting potential disruptors through elevated rural health policy.

Partners within this project played diverse roles representing a broad range of expertise in rural health, health care quality, data analysis, data modeling, financial modeling, value-based and historical fee-based payment models, research, leadership, facilitation and group process design, and meeting logistics, see Appendix 1.

B. Project Design

The process of envisioning a health care system where the three attributes of access, affordability, and quality are available in rural Minnesota communities is complex and requires a systems approach. Acknowledging this complexity, the project was oriented toward participation from a wide variety of subject matter experts and structured on a concept of change that kept the vision in the forefront. Throughout the design and implementation process, the vision served as a beacon to orient learning, discussion, and prioritization of ideas.

The project design was made up of four primary components:

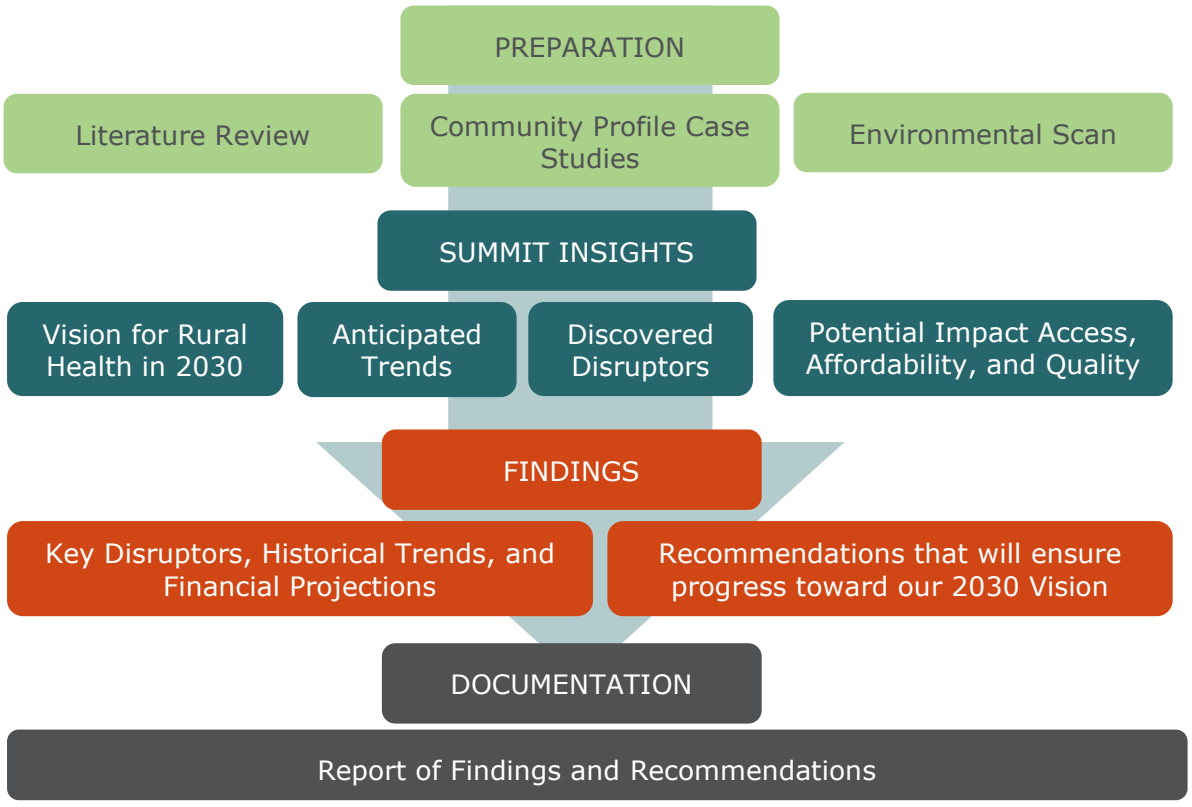
Preparation: The team gathered information through a **literature review** of trends and disruptors currently influencing and affecting health in rural communities across the nation, specifically Minnesota and developed four case-study **community profiles** to inspire ideas and focus discussion. In addition, **environmental analysis** of national, state, and regional data describing characteristics and trends in rural communities was created to help set context and provide reference data.

Summit insights: The Rural Health Summit gathered rural health subject matter experts to describe a shared **vision for rural health in 2030**, identify **anticipated trends**, discover **disruptors** that will influence health in rural Minnesota, and assess **potential effects** of these disruptors on access to affordable, quality care.

Findings: Analysis of Summit insights identified **key disruptors** influencing health in rural Minnesota, trended **historical characteristics**, projected **financial scenarios**, and articulated **priority recommendations** for policymakers and change leaders.

Documentation: This **report of findings and recommendations** was created for Minnesota policymakers, business leaders, communities and health care providers.

Diagram 1: Illustration of Project Design



C. Report Purpose and Audience

To create a useful and readable report with policymakers and change leaders in mind, this report tells the story of rural health in Minnesota, illustrates a vision for 2030, and outlines what is needed to focus and act on over the next 10 years to achieve the vision. The project team recommends that policymakers and change leaders use this report to identify opportunities to implement Summit participants' recommendations as well as opportunities for further study. This will ensure the forecasted trends are shifted by leveraging the power of disruption to reach the 2030 vision for rural health in Minnesota.

Appendix 2 is the methodology section that can be used to replicate this study, plus information gathered, analyzed and synthesized throughout the study to formulate and inform each next step. The complete literature review and each of the four community profiles are included in a separate appendix. A listing of the environmental scan data sources, findings from the Summit and background information on the risk analysis each have an appendix for reference. Background information and descriptions of the historical trend forecasting and financial projection assumptions as well as projected results for each of the community case studies to 2030 are also in the appendices. Finally, the recommendations identified at the Summit are organized by the six key disruptors.

3. Understanding Today and Imagining Care in 2030

A. Literature Review Summary

An extensive literature review was conducted by the project team as a starting point to better define the scope and content of the project. The full review is included in Appendix 3, including all references. After careful review of sources and discussions with the project team, several trends and disruptors were identified. This work provided a framework for testing some assumptions and discovering new information. Later, this information was used to design the Rural Health Care Summit. Summit participants were provided the literature review as preparation for Summit discussions to ensure uniform and shared understanding of the current state of health care.

Trends and disruptors identified in the literature review include:

Trend themes: A trend is usually understood as a general direction in which something is continuing, developing, or changing.

- **Increasing diversity and aging population.** Minnesota rural residents account for 27% of the overall population, with an estimated 8% living in isolated areas. Residents of the overall rural population are older, being twice as likely as urban residents to be age 80 or older. The household income of residents of small towns and isolated rural areas in Minnesota are 2.3% and 1.4%, respectively, above the overall Minnesota median income. Cultural and ethnic diversity and immigration have contributed to significant changes in the labor force.
- **Increasing health care costs.** Public health insurance rates in rural areas are generally higher than in urban areas, including out-of-pocket costs. This exacerbates affordability and delays medical care.
- **Expanding connectivity and broadband access.** Connectivity issues, such as broadband ranges in rural areas being as low as 38%, compared to 96% in urban areas. This creates a gap in access to health-related information as well as real-time health data, diagnostics, monitoring, and prescriptions.
- **Continuing integration of technology into health care solutions.** Integration and support for health care solutions has been consistent over the last few years, including more information being shared more easily. The challenge continues to be how to leverage technology more effectively.
- **Increasing partnerships, networks, and mergers in health care.** Organizational partnerships continue to emerge to contain costs, consolidate resources, reduce competition, and react to new market entrants. These partnerships can range from simple collaborations to full mergers and acquisitions.
- **Continuing shortages of workforce in health care.** Rural areas employ more people in agriculture and government, experiencing lower wages, lack of job creation, and retirements. The health service sector can be a solution to employment generation, but positions are hard to fill as health care professionals at all levels find it difficult to relocate to rural areas.
- **Progressing toward integration of Behavioral Health with Primary Care.** Behavioral Health has seen increased integration into traditional health practices as stigma related to mental illness has decreased. However, the challenges are availability of behavioral health professionals, perceptions of confidentially, misuse of medications, and limited intervention capacity.
- **Recognizing the effects of social determinants on health and wellness.** Care continuity and primary care are the best approaches to healthy communities. Health and wellness need to be addressed though broader awareness of social factors, community engagement, and systemic change.

Disruptor themes: Disruptors are events that can affect current trends, require a change in thinking, and alter how we respond to or participate in change.

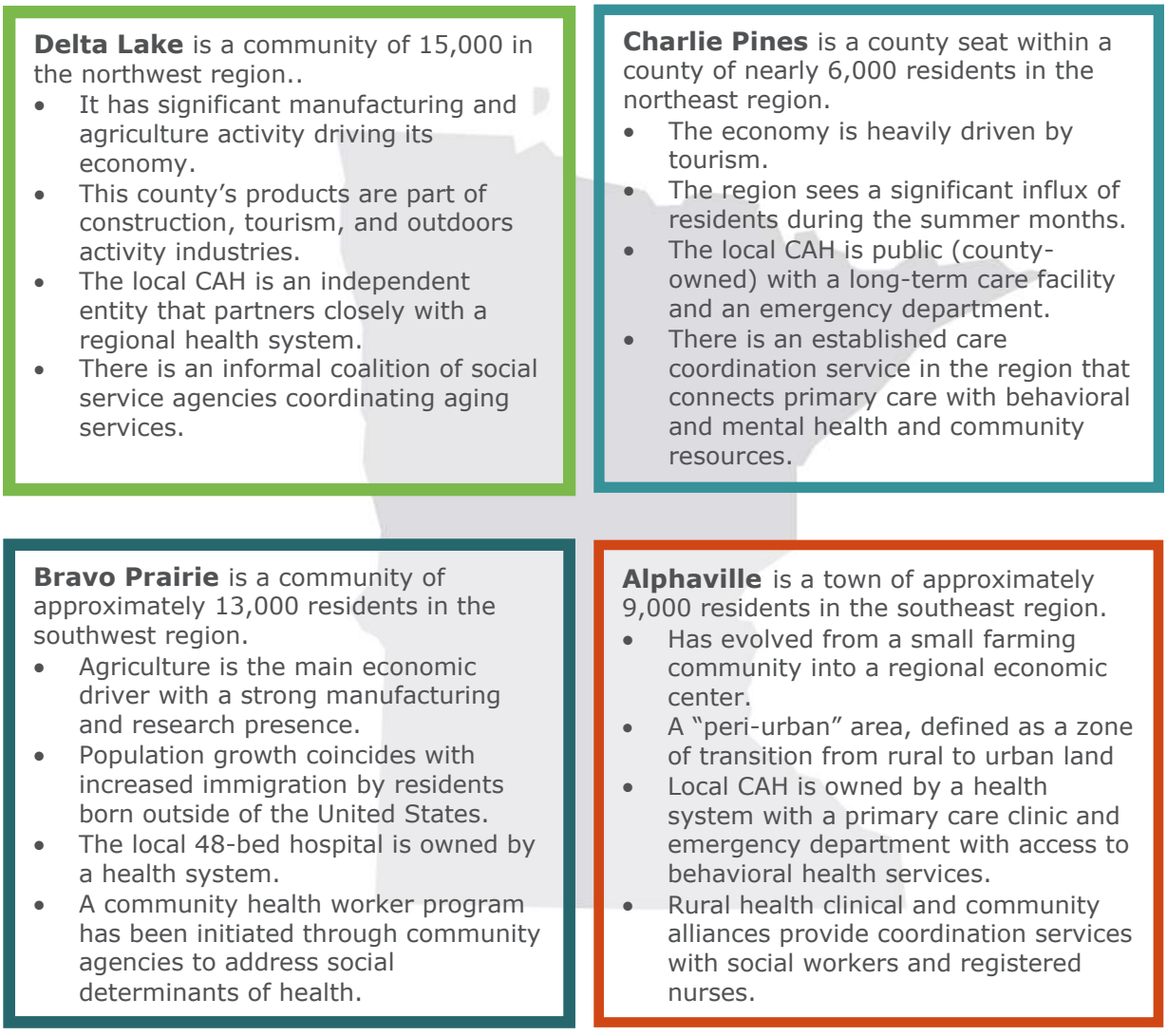
- **Health care consumers are focused on lower cost and convenience.** Consumer behavior is adapting to new retail and technology entrants choosing lower-cost and more convenient care. This will continue to increase competition and stress hospitals that find it difficult to keep afloat.
- **Innovation and value-based payment models drive new care models.** Three interdependent outcomes comprise the Triple Aim: Improved care for individual patients, improved population health, and reduced cost of care. Medicare and Medicaid have taken the lead to create solutions, such as Accountable Care Organizations, global budget, "basket of care" initiatives, and the Integrated Health Partnership.
- **New technologies are supplanting traditional care services.** Expanded telehealth technologies have been fostered by the COVID-19 crisis and hold the promise of greater connectivity with rural populations. This also may supplement or supplant traditional brick and mortar facilities as they face the risk of closure and service reduction. Artificial intelligence holds promise of improved diagnostics, image sharing, surgical robots, and research.
- **Financial pressure is affecting decision-making and the future of health care facilities.** Financial accountability has generated greater interest from Medicare, Medicaid, and private insurance payers. While a focus on quality, outcomes, and operational efficiencies are desirable goals, many rural hospitals find it hard to survive. They also rely more on Medicare and Medicaid payer mix, widening the financial viability gap.
- **Changing roles are providing care in new ways.** New health care professions are emerging as new ways of delivering care are implemented, including integrated care teams, health coaches, community paramedics, and navigators. Hospitals in good financial health can be a solution to generating employment within communities. The effects of artificial intelligence in health professions remains unclear.
- **Leadership in health care leadership must address the complex and adaptive system.** Health care organizations are known for being incredibly complex. This high level of complexity requires leadership and systems that are adaptable, flexible, and dynamic. For example, the Baldrige Performance Excellence Framework is being used in many health care organizations as a systems-thinking approach.
- **There is global integration and interdependence.** Systemic, complex thinking, and problem-solving approaches will be needed to address "wicked problems" such as climate change that increasingly and dramatically affect health care. The COVID-19 pandemic is a clear example

of a disruptor affecting an interconnected world, with ramifications seen in health care systems, communities, and governments.

B. Four Case-Study Communities in Minnesota

Simulated model community profiles were designed to both focus and stimulate Summit participants' thinking about trends and characteristics that support and pose challenges to access, affordability, and quality. The four distinct simulated community profiles, created as case studies for this project, describe "composite" communities based on real communities in rural Minnesota and are supplemented with additional data compiled from multiple sources. Below are brief descriptions of each community to provide a snapshot of how they represent rural Minnesota:

Diagram 2: Four Minnesota Community Profile Case Studies



Characteristics that differentiated the four case-study communities included sociodemographic, community infrastructure, health status and risk factors, health care resources and infrastructure, and quality-of-life attributes. Each of the four profiles is included in Appendix 4. A description of the community selection methodology is available in Appendix 2b, Table 2, and a listing of data sources used to create the profiles is included in Appendix 2c, Table 3.

Summit participants studied the community profiles, providing them with a picture of the current environment and helping them to imagine the future of health care in 2030. This is the hard work of articulating the functional and operational, or formative, imperatives of health care of the future. With the imagined, or desired future, of health care in mind, Summit participants identified trends and characteristics of each community considered most relevant to the vision, and ultimately discovered disruptors with the strongest potential to act upon these trends and characteristics.

C. An Environmental Scan

An analysis of current data relevant to Minnesota rural health was conducted to describe access to affordable, quality care. This analysis was carried out as a scan of the current environment to identify unique characteristics or differences in health care for rural Minnesota. This environmental scan focused on the four case-study communities and compared these distinct and representative communities to rural communities across Minnesota and the US. While many measures were evaluated in the environmental scan, the analysis narrowed to measures most closely related to access, affordability, and quality of health care for rural communities.

A listing of data sources is included in Appendix 2c, Table 2. The environmental scan data for each of the four community profiles is included within the individual profiles, see Appendix 4. US Census 2017 Core Based Statistical Area (CBSA) is used for the purpose of the environmental scan to designate “either” and “Micro” counties as "Rural."

Access

Two measures represented the access dimension of rural health care. These measures are broadband connectivity and health insurance coverage. Broadband connectivity provides access to health care information and is critical to offering telemedicine and other forms of virtual health care. The median broadband coverage for Minnesota rural counties is 66%, which is slightly higher than the median coverage of 63% for counties across the US.

- While Charlie Pines and Alphaville benefit from near 100% broadband coverage, many rural communities do not have widespread access to broadband.
- Bravo Prairie has 79% broadband coverage, but Delta Lake has only 53% coverage.

The second access measure is a direct measure of the percentage of population under age 65 who do not have health insurance. Nationally, the median uninsured population for rural counties is 11%, while the median uninsured population of Minnesota rural counties is 6%.

- Although Alphaville (5%) and Delta Lake (6%) is near the state median, Bravo Prairie (10%) and Charlie Pines (8%) were higher.

Both broadband and health insurance access demonstrate disparities between rural counties across Minnesota. While the median access measures for rural Minnesota are more favorable than median measures of all US rural counties, broadband and health insurance access can be improved.

- Broadband access in communities such as Delta Lake (53%) will struggle to support new innovations in health care, and communities such as Bravo Prairie are already struggling to gain access to health insurance (10% uninsured).

Affordability

Affordability of health care was measured by both the costs for insurance coverage and the average health care spending. Due to the proprietary nature of private insurance,

the analysis looked at publicly available data on the premiums for nonemployee health insurance coverage (ACA plans) and annual Medicare spending.

The analysis found uniform ACA insurance premiums across the four communities, all of Minnesota, and in the US. Insurance premiums were consistently offered at a rate of 0.8% of the median household income. This rate fluctuated between 0.81% and 0.82% among the four communities.

The second affordability measure evaluated Medicare spending among the counties and compared spending to Minnesota and national spending averages. The spending comparison data compares counties statewide and nationally. These comparisons include rural and metro counties.

- Annual Medicare spending in the four communities ranged from $8,001 (Alphaville) to $8,827 (Delta Lake), but all four communities were still below the Minnesota average of $9,126 and the national average of $10,096.
- Post-acute care spending in Charlie Pines ($1,923) was higher than the Minnesota ($1,131) and national ($1,631) averages, and ambulance spending in Delta Lake ($210) was higher than the Minnesota ($80) and national ($134) averages.
- Inpatient and outpatient costs were more consistent across communities, but there were some differences. Inpatient spending in Delta Lake was 25% higher than the national average, and outpatient spending in Alphaville was 15% higher than the national average.

Quality

There are several measures of health care quality. In this analysis, preventable stays, patient recommendations and timeliness measures were evaluated across the four communities and compared to Minnesota and national averages.

Preventable hospital stays are the number of days per 100,000 Medicare enrollees for ambulatory care sensitive conditions. Fewer preventable days is an indicator of quality health care.

- Although Charlie Pines and Bravo Prairie were below the state (6,015) and national (4,368) averages, Alphaville (7,292) surpassed these averages.
- The outlier among these communities was Delta Lake (11,923), which was 173% over the national average.

Using the HCAHPS survey results, patient satisfaction was measured based on several attributes. One of these measures was the patient's willingness to recommend the health care facility.

- This recommendation measure ranged from 86% favorable recommendations for Bravo Prairie to 93% for both Delta Lake and Alphaville.
- These results are similar to the average recommendation rate for Minnesota (90%) and the US (88%).

Timeliness of health care is also a quality measure. The median time an emergency room patient waits for admittance for inpatient care (admit time) and the median time an emergency room patient waits before discharge (depart time) are two common timeliness measures. Although Minnesota facilities have a 23% higher admit time (123 minutes) than the national median time (100 minutes), rural communities have shorter wait times.

- These shorter admit times ranged from Charlie Pines with 49% shorter times (51 minutes) than the national median time to Delta Lake with a 74% shorter admit time (26 minutes).
- Depart times in Minnesota (53 minutes) and the four communities (85-121 minutes) were all shorter than the national median time of 141 minutes. In general, admit times were much shorter than depart times.

D. Rural Health Summit: An Overview

The purpose and design of the Rural Health Summit, see Diagram 2 below, was to bring rural health subject matter experts together to share their perspectives and insights, answering the questions:

- *What vision do we imagine in 2030 for health care in rural communities across Minnesota?*

- *What trends do we anticipate observing over the coming 10 years?*
- *What key rural health disruptors will affect access to quality, affordable care in rural Minnesota over the coming 10 years?*
- *What recommendations will ensure that key disruptors act on the anticipated trends and move health care toward our 2030 vision?*

The Rural Health Summit included rural health leaders with diverse roles, perspectives and expertise (see listing of Rural Health Summit Participants in Appendix 2f, Table 4). Most participants represented a Minnesota perspective, but some came with a national point of view. Represented areas of expertise included primary and specialty health care, mental and behavioral health care, critical access hospital and clinic administration, emergency medical services, rural policy, quality improvement, technical assistance, and foundations.

Pre-Summit preparation was an important component of the study, to inform the participants and provide a uniform understanding of current data and observations. Summit participants read through and reflected on the literature review, an environmental scan, and their assigned rural Minnesota community profile. This time of study and reflection provided participants time to integrate common information with their personal knowledge, perspectives, and expertise. During the **Summit**, participants imagined the future of rural health in 2030, identified critical trends and possible disruptors to those trends when reaching for the vision, and analyzed the likelihood of disruptors and the potential effect on access, affordability, and quality of care in 2030. In the **Post-Summit** phase, participants continued to leverage their knowledge, perspectives, and expertise to formulate recommendations for policymakers and change leaders at the community, state, and national level of decision-making.

Diagram 2: Rural Health Summit Design

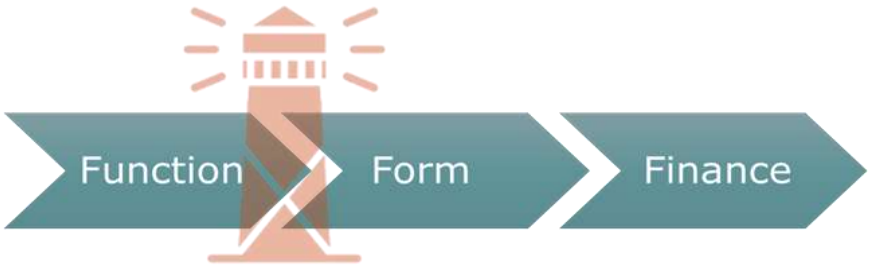
The 2030 vision of health care in rural Minnesota, identified during this project, articulates the functional and formative imperatives of health care. It acts as a beacon through the complexity of interrelated and interconnected trends, characteristics, disruptors and recommendations to light a path that can be difficult to follow.

E. Vision of Care in 2030

During the Summit, participants were asked to describe what having access to affordable, quality care in 2030 would look like for rural communities across Minnesota. A summary of the responses to this discussion follows*, listed in alphabetical order, based on the first word of the description.*

- Affordable to all community members
- Cradle-to-grave care
- Health defined to include illness and wellness
- Oriented around the community member
- Partnerships across sectors
- Rewards good health
- Seamless data sharing
- Team-based care
- Technology tools used to our advantage
- Viable health care system
- Whole-person care

This step, identifying the vision, acts as a beacon as ideas are transformed into projects and processes, and as decisions are made within the complex system of health care. As Stroudwater, one of the study partners says, "We want to have a payment system that pays for the function of the system and the form that is put into place to achieve that function." Translating to our Summit design, our vision will inform the implementation of structure and processes, and that is what we are paying for.



F. Anticipating Trends and Discovering Disruptors

A trend describes a general direction in which something is continuing, developing, or changing, and a characteristic is a descriptive trait or quality. During the Summit, participants drew from the literature review, the four community profiles, and their own

experience to identify key trends that will help or get in the way of progress toward the vision they created.

The trends identified by Summit participants *are listed in alphabetical order, based on the first word of the description:*

- Access to broadband
- Access to primary care
- Coalition activity
- Community infrastructure challenges
- Economic viability
- Focus on social determinants
- High-cost health insurance
- Increasing cost of health care
- Low operating margins
- Multiple noninteroperable electronic health record (EHR) systems
- Silos of stakeholders
- Use of telehealth

G. Identifying Six Key Disruptors

Disruptors are events that can affect current trends, require a change in thinking and alter how we respond to or participate in change. Once key trends were identified, participants then worked to identify the disruptors most likely to affect the trajectory of those trends in ways that promote achievement of the 2030 vision.

The six key disruptors *are listed below in alphabetical order by the first word of the disruptor phrase:*

- **Consumer-driven options to access health care** using nontraditional avenues.

  In the past decade, there have been significant changes in health care information and access due to technology with patient portals, mobile apps, and electronic visits. Also, new modes of care are now prevalent through retail store clinics, online pharmacies and emergency care separate from a community hospital, clinic or health system. These modes of care may not be regulated or certified in current structures of state and federal rules, but younger consumers are seeking convenient, affordable care, often through technology. This will continue to increase competition and stress hospitals that find it difficult to keep afloat.

- **Dramatic, focused social investment within rural communities** to address health disparities through social determinants of health and build community connections.
  Currently, rural public health and social services vary by state infrastructure and funding. Communities with lower levels of economic stability, education, employment, social and community safety will continue to have poor health outcomes without support. Local collaboration is critical in emergencies, pandemics and for ongoing chronic care management in vulnerable populations.

- **Increased attention on rural health vulnerability** as exposed by the COVID-19 pandemic.
  Financial distress is significant in rural hospitals and was exacerbated by the pandemic. Other challenges, such as limits on telehealth reimbursement, broadband and COVID testing sites, have been targeted in COVID-19 funding and regulatory waivers. Recent initiatives for rural health improvement at the federal level have been identified through the Trump Administration.

- **Innovative rural population health care and payment models** that ensure viable health services within rural communities and address financial pressures.
  Medicare and Medicaid have taken the lead to create solutions, such as Accountable Care Organizations, global budget, "basket of care" initiatives, and the Integrated Health Partnership. While a focus on quality, outcomes, and operational efficiencies are desirable goals, many rural hospitals find it hard to survive. They rely more on Medicare and Medicaid payer mix, which widens the financial viability gap. Value-based health care payment models have not addressed low volumes and other challenges for redesign of rural health care delivery.

- **New technologies integrated into health care** that supplant or support traditional care.
  Technology may substitute delivery from traditional brick and mortar facilities. Although mobile or telehealth delivery offers convenience and safety during the COVID-19 pandemic, it changes traditional access points for primary and mental health care from rural providers. Artificial intelligence holds promise of improved diagnostics, image sharing, surgical robots, and research.

- **Telehealth technology, payment and regulations** that enable care providers to interact virtually with patients and community members.

Expanded telehealth technologies have been fostered by the COVID-19 crisis and hold the promise of greater connectivity with rural populations. Additional modes of access through audio, mobile and flexibility in originating sites of care are now reimbursable and accepted by patients and providers, though many are temporary during the COVID-19 emergency. Many modes require internet speeds not consistent in rural areas.

H. Assessing Potential and Impact of Disruptors

During the Summit, participants assessed each of the disruptors by estimating the likelihood of the disruptor occurring and, if the disruptor were to occur, the effect it would have on access, affordability and quality of rural health care. Level of agreement among the Summit participants was measured as well.

Assessing Likelihood

Based on the results of the disruptor risk assessment (Table 1), participants had a high degree of agreement that the following disruptors will likely occur and are expected to influence anticipated trends and move the rural health care system toward access to affordable, quality care. Participants demonstrated over 90% agreement that these three disruptors are **highly likely** to occur:

- **Consumer-driven options to access health care**
- **Innovative, rural population health models**
- **Telehealth technology, payment, and regulations**

The participants were mostly in agreement (83%) that there is a **low likelihood** of **dramatic, focused social investment within rural communities** occurring.

Assessing Impact

In addition to evaluating the likelihood of the disruptors, the participants also evaluated the impact each disruptor would have on access, affordability, and quality of rural health care. The average effect across all factors, access, affordability, and quality is included in Table 1 below. The results from this assessment provided both the level of impact of the disruptor and the level of agreement among the participants. There was a high level of agreement (Table 1) that improved access to rural health care is most likely to be influenced by the three disruptors:

- **Telehealth technology, payment, and regulations**
- **Consumer-driven options to access health care**
- **Dramatic, focused social investment within rural communities**

Because these were deemed most likely to have a high impact on improved access to health care in rural communities, efforts to improve access to health care should be focused on leveraging these three disruptors.

Affordability of rural health care also was assessed. While there were several disruptors that may have influence over affordability, the participants demonstrated a high level of agreement, with 100% agreement with only one disruptor: **New technologies integrated into health care**. There was a moderate level of agreement among participants, 73%, that both **telehealth technology, payment, and regulations,** and **dramatic, focused social investment with rural communities,** may also influence affordability (Table 1).

Regarding impact on quality of rural health care, the participants had a high level of agreement (80%) with one disruptor: **Dramatic, focused social investment within rural communities**. There was little agreement with the remaining disruptors (<= 70%) with these other disruptors having only a moderate or low impact on the quality of rural health care (Table 1).

Overall, Summit participants had the highest level of agreement that **dramatic, focused social investment within rural communities** would impact health in rural communities across Minnesota over the coming 10 years.

Table 1: Rural health summit participant input, assessing potential likelihood and impact of disruptors

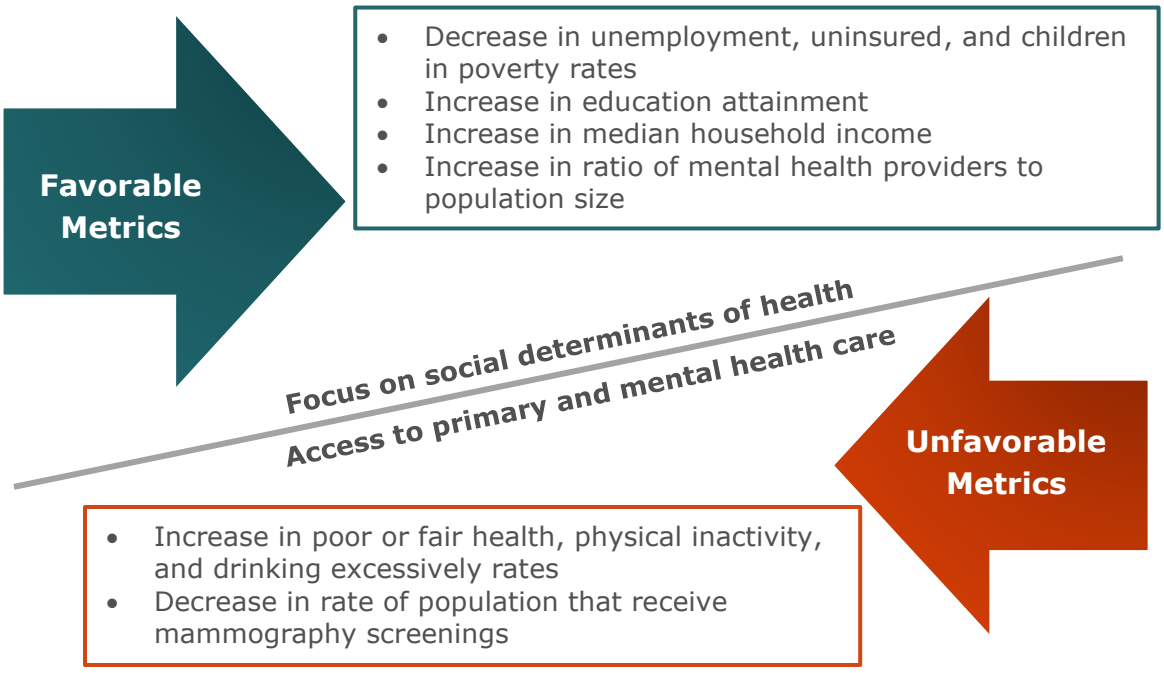
Key Disruptor	Likelihood		Impact						Overall Impact
	Likeli-hood Rating	% Agree ment	Impact Rating	% Agree ment	Afford-ability Rating	% Agree ment	Quality Rating	% Agree ment	% Agreement
Consumer-driven options to access health care	High	**100%**	**High**	**89%**	High	70%	Low	70%	76%
Dramatic, focused social investment within rural communities	Low	83%	**High**	**78%**	High	73%	**High**	**80%**	77%
Increased attention on rural health vulnerability	**High**	67%	Moderate	9%	High	69%	Moderate	33%	**37%**
Innovative, rural population health care and payment models	High	**92%**	High	70%	High	62%	Moderate	27%	53%
New technologies integrated into health care	High	67%	High	64%	**High**	**100%**	Moderate	27%	64%
Telehealth technology, payment, and regulations	High	**91%**	**High**	**100%**	High	73%	Moderate	10%	61%

4. Historical Health Trends for Predicting 2030

A. Historical Trends

The future of rural health care as it pertains to access, affordability and quality can be illustrated using historical data. The County Health Ranking data, a Robert Wood Johnson Foundation program, is published annually and describes the health of nearly every county in the US Data is available related to health outcomes, health behaviors, availability and quality of clinical care, socioeconomic factors, and the physical environment. Using data from 2011-2020, an analysis was conducted to estimate the health of rural communities in Minnesota in 2030. Results are included in Appendix 2j, Table 5. In this report, specific county health ranking data was analyzed using a trending model, based on trends identified by Summit participants, to observe or monitor progress toward the vision for 2030 health in rural Minnesota. Two trends that Summit participants identified as important to watch and work toward influencing over the coming 10 years are **focus on social determinants of health** and **access to primary and mental health care**. (See the full listing of Summit participant-identified trends described earlier in this report.) Diagram 3, below, illustrates several metrics that can be considered as favorable or unfavorable to specific trends. These metrics provide an opportunity to see the impact of the disruptors as recommendations are implemented — aiming for a 2030 vision of access to affordable, quality care.

Diagram 3: Illustration of County Health Ranking Minnesota Trends to 2030



With these two trends in mind, Diagram 3 illustrates specific metrics that describe the anticipated 2030 health environment without disruptive changes. For example, the trend projections illustrate favorable metrics with:

- decreases in the rates of unemployment
- decreases in uninsured community members
- decreases in children in poverty
- increases in the level of education attained
- increases in median household income

Possible unfavorable metrics include:

- increases in the percentage of people with poor or fair health
- increases in the percentage of people who are physically inactive
- increases in the percentage of people who drink alcohol excessively
- lower than average percentages of women who receive mammography screenings
- higher than average percentages of people who drive alone to work

The model for 2030 also suggests that no changes are expected to occur with certain metrics, including the following:

- Changes in demographics: race, ethnicity, age
- Ratio of primary care providers to population size
- Percentage of people who graduate from high school
- Number of violent crimes

B. Trend comparison, rural to urban

Rural projections for 2030 also were compared to projections for urban communities in order to identify similarities and differences between the two. This comparative trend data that illustrates health in 2030 may provide insights or direction for targeted interventions and activity. Urban counties were defined using CBSA definitions for micropolitan or metropolitan. A model comparing urban and rural counties was constructed using the same metrics and a multiple linear regression model.

In 2030, rural counties in Minnesota are predicted to have higher rates and values than urban counties in these county health ranking metrics:

- Poor or fair health
- Physical inactivity
- Preventable hospital stays

- Children in poverty
- Motor vehicle crash deaths
- Percentage of residents 64 years old and older
- Percentage of residents living in a rural area
- Percentage of American Indian or Alaskan Native residents

Rural counties are predicted to have lower rates and values than urban counties in these health ranking metrics:

- High school graduation
- Percentage of residents with some college education
- Violent crimes
- Median household income

When considering these trends and the disruptors that likely will affect their trajectory in 2030, the question becomes, "What are the recommendations, policies, decisions and projects that will enable the disruptors to do their job, influencing trends that move us toward our vision?"

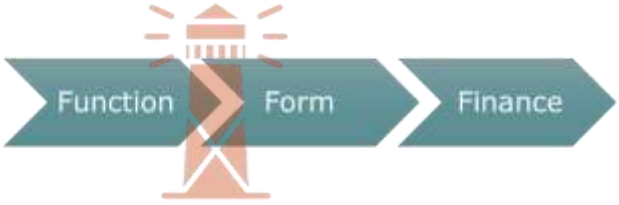
5. Financial Projections that Reach Toward 2030

A. Introduction

To change the current FFS health care payment system, the ideal health care system must be imagined and articulated. The vision of rural health care in 2030 across Minnesota will act as a beacon for all of the remaining decisions. Saying this another way, the functional and formative imperatives of the ideal health care system inform the design of a financial system.

Through the work of this project, the functional and formative imperatives have been discerned, describing the 2030 vision for rural Minnesota communities as access to affordable, quality care:

- Care for illness and wellness
- Provide care that is oriented around the community member



- Whole-person care
- Cradle-to-grave care
- Seamless data sharing
- Partnerships across sectors
- Affordable to all community members

Key disruptors, the actions, events and decisions that affect the health care system also can be described as market influences. These significant influences must be acknowledged when developing a financial project model. One influence is substitution of historical health care delivery, such as primary care and outpatient care now offered through retail urgent care centers and online laboratories. This example of substitution taking place today demonstrates two of the disruptors: **New technologies integrated into health care** that supplant or support traditional care and **consumer driven options to access health care** using nontraditional avenues.

B. Financial Projections for Four Case Studies

To assist in describing the components of a financial model within this report, a differentiation is drawn between "sick care" and "health care." For this report and discussion, "sick care" is defined as the care currently received through the FFS model and includes care focused on illness, such as acute, ambulatory, and chronic care. "Health care" is defined as the care provided for wellness and prevention, addressing social determinants and generally oriented around the whole person. The current FFS system precludes meaningful investment in health care, as it is designed to deliver sick care. This is not sustainable financially. **The vision for rural Minnesota health includes care for illness and wellness, care for the whole person, care from cradle to grave, care that is oriented around the person, and care that is affordable to all community members.** This vision describes the optimal function of care. It requires both patient access to high-quality sick care and investment in health and wellness activities, programs, and infrastructure.

To pay for the desired and optimal system of care, the financial projection modeled in this report is based on a **rural health global budget combined with shared savings across all payers for reducing total patient cost with an investment in wellness.** A global budget payment system maintains a predictable and steady revenue stream, so a local health system can maintain access to high-quality sick care while investing in community health. A shared savings incentive payment provides the funds to invest in health care.

C. Model Assumptions

The following list of assumptions describes the financial projection model. The base case (FFS) and global budget with shared savings and investment in health and wellness (GB+SS+I) assumptions were applied to each of the four case-study communities.

For additional background information on the financial model, projection assumptions and approach, a recorded presentation by Eric Shell and Dan Given, Stroudwater Associates, is available at this link: Ensuring Health Across Rural MN in 2030: Financial Model and Projections. See Appendix 6 for presentation slides.

Transition from FFS to GB+SS+I over 10 years

- Years 1 and 2 are a transitional period with all-payer, cost-based payment.
    - Assumes an average all-payer, cost-based payment of 90% of costs unless current patient revenues exceed the 90% payment of costs.
- Years 3 through 10 are an all-payer global budget based on prior year revenue with calculated shared savings, using total cost of care plus health and wellness investment.

Key assumptions for years 1 through 10

- Local health care inflation factor of 3%
- FFS reimbursement price increase of 2%
- No growth in FFS utilization
- Attribution population for all-payer, cost-based payment: 90%
- Total service population and yearly growth are unique to case community
- Global budget annual increase of 3%
- Shared savings activity starting at 3% and increasing to 12% over 10 years
- Health and wellness investment of shared savings: 50%

Definitions

- Total Healthcare Spend Per Beneficiary assumed Minnesota per capita spend trended forward to 2017 at Healthcare Inflation Assumption Growth
- Local Healthcare Spend per Beneficiary unique to case: (Local Health System Net Patient Revenue / Total Service Population

Sources of Financial Data for Projections

- FY 2017-2018, based on the Medicare Cost report data
- FY 2019, based on Medicare Cost Report Data if available; otherwise, trended forward
- FY 2020, based on trended Medicare Cost report data with COVID-19 impact offset by CARES Act funding
- FY 2021-2030, global budget revenue based on trended historical data

D. Financial Projection Highlights

The following financial projections are based on the four case-study communities. The results, shown in Table 2, illustrate the effect of a value-based payment model, global budgeting and shared saving incentives on the financial stability and viability of different rural health care systems.

- All cases under Base Case projections: Margins deteriorate, as health care expenses are assumed to continue to rise and exceed increases in payment. For Bravo Prairie, the negative annual net income is an unsustainable outcome, decreasing from a loss of $5.6M to a loss of -$13M over the projected 10 years.
- All cases improve margins within the Global Payment and Shared Savings with Investment in Health model. Three of the four representative communities have positive net incomes by the final year of the projection.
- All case studies include an investment in the health and wellness of their communities, which illustrates significant opportunity for sharing revenues with collaborative partners.
- Bravo Prairie, if investing slightly less than model assumption of 50% of shared savings, would see a positive net income by the end of year 10.
- The smallest representative community, Charlie Pines, with stable revenues with the Global Budget and a collaborative investment in community health achieves a positive net income by the 10th year.

Table 2: Comparison of Four Case Studies with 2030 Financial Projection Results

	Delta Lake	Charlie Pines	Bravo Prairie	Alphaville
State Region	Northwest	Northeast	Southwest	Southeast
Community Size	15,000 residents	6,000 residents	13,000 residents	9,000 residents
Hospital type	CAH	CAH	PPS	CAH
Hospital ownership	Independent	County	Health system	Health system
Other available care services	A primary care clinic, long term care facility small surgery unit, emergency department	A long-term care facility and an emergency department	Surgical services are offered onsite, as are emergency care, home care and hospice	An independent primary care clinic with integrated services encompassing both physical and behavioral health

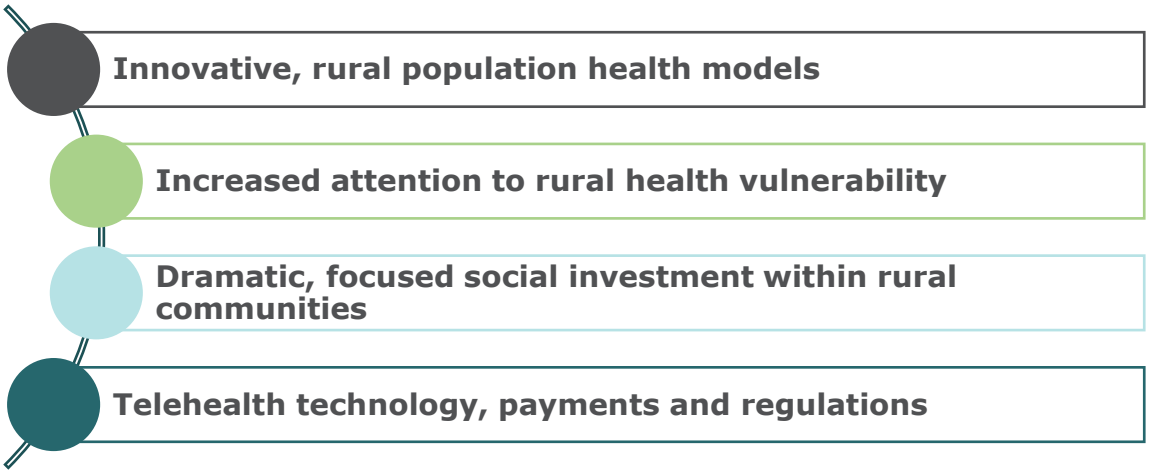
	Delta Lake	Charlie Pines	Bravo Prairie	Alphaville
Current Annual net income 1-year prior start of projection	**$4.6M**	**-$1.7M**	**-$5.6M**	**-$ .9M**
No change in payment system Projected net income Year 10	**+$.9M**	**-$4.8M**	**-$13.0M**	**-$3.5M**
Global Budget with Shared Savings Projected net income Year 10	**+$10.5M**	**+$.35M**	**-$.9M**	**+$4.2M**
Year 10 Projected Investment in Community Health and Wellness	*+$5.5M*	***+$1.3M***	***+$4.8M***	*+$4.3M*

6. Recommendations

Recommendations provided in the next section are intended to offer **guidance on ways the trajectory of these trend metrics can be shifted** by leveraging the power of the disruptors to achieve their impact while aiming for the vision of health in rural Minnesota. The Summit participants identified these recommendations based on the disruptors.

A. High-priority disruptors and recommendations

Summit participants identified four of the six key disruptors that most need a targeted effort to ensure they do the job of influencing or affecting trends to reach the vision of rural health in 2030. Listed in priority order:



Based on these identified disruptors that need targeted influence to occur, Summit participants then selected four recommendations for policymakers and stakeholders as their highest priorities for investment of time and resources:

- **Expand investment in collaboration between clinical care, public health, and community agencies.**
- **Provide models and funding for preparedness collaboration, including data sharing and public health**
- **Transition to value-based payment structures that share revenues, moderate risk, and improve health.**
- **Continue critical access hospital reimbursement and safety net programs to ensure rural access**.

B. Full Recommendations from the Summit

The six key disruptors were used to organize the following list of 30 recommendations. These recommendations were developed with syntax and affinity diagram analysis of a total of 157 recommendations gathered from all Summit participants, see Appendix 5. Recommendations for community, state and national leaders will promote achievement of the vision of access to affordable, quality care in rural Minnesota in 2030 through their impact on key disruptors.

Consumer-Driven Options to Access Health Care

- Create policies and practices that set high standards for nontraditional sources.
- Educate about downsides of nontraditional sources.

- Ensure that the right perspectives are included in the planning and evaluation process.
- Focus planning and funding on care that must be available close by and in person.
- Foster and pursue partnerships with nontraditional sources.
- Remove barriers to technology-based health care delivery and support.

Dramatic, Focused Social Investment within Rural Communities

- Create a new baseline of health for all citizens.
- Create public and private funding opportunities and value-based incentives to address disparities that affect health.
- Ensure universal broadband in Minnesota.
- Establish community coalitions to address social determinants of health.
- Improve public health funding.
- Invest local resources on priorities focused by community health needs assessment plans.

Increased Attention on Rural Health Vulnerability

- Collaborate locally in pandemic preparedness, response and financial recovery.
- Continue critical access hospital reimbursement and safety net programs to ensure rural access.
- Increase rural Medicaid reimbursement.
- Provide forgiveness or more time for federal pandemic loans and payments.
- Provide forgiveness and other incentives to encourage rural health care workforce.
- Provide models and funding for preparedness collaboration, including data sharing and supporting local public health.

Innovative Rural Population Health Models

- Build rural leadership capacity in health care workforce.
- Consider Medicaid and Medicare patients in decisions.
- Create opportunities to find innovative solutions to meet demand for care.
- Expand investment in collaboration between clinical care, public health and community agencies.
- Position for a long-term perspective of investment.

- Transition to value-based payment structures that share revenues, moderate risk and improve health.

New Technologies Integrated into Health Care

- Facilitate technology to increase connections to care providers.
- Improve investment in telehealth technology solutions.
- Provide internet availability for Medicaid patients.

Telehealth Technology, Payments, and Regulations

- Continue expansion of telehealth, including primary, intermediate, and complex care as well as preoperative and postoperative telehealth visits.
- Maximize the strength of and access to broadband.
- Partner with other rural community providers to ensure access to a wide range of telehealth services.
- Regulate telehealth services for payment that is equal to in-person care and remove impediments to access, such as state licensure and credentialing.

C. Policy Recommendations

The project's 30 recommendations provide Minnesota policymakers, stakeholders, and change leaders with a credible assessment of decisions, activities and resources needed to enable the 2030 vision of health care in rural Minnesota. Implementation of these recommendations will require a multipronged approach involving policy and regulatory changes, private and public funding, and leadership at all levels focused on improving health across rural communities in Minnesota.

- **Ensure access to telehealth, home-monitoring and other emerging technologies in health care.**
    - Maximize the strength of, and access to, universal broadband and Wi-Fi coverage in rural areas.
    - Partner with other rural community providers in long-term care, public health and emergency medical services to ensure access to a wide range of virtual care services.
    - Remove regulatory barriers to access telehealth including limited payment for telehealth services.
    - Improve investment for rural access to innovative technology solutions.

Since the onset of the COVID-19 pandemic, health care providers in rural communities have seen a massive increase in telehealth visits for patient care. The US Department of Health and Human Services reports that between mid-March and mid-August 2020, 36% of people with Medicare FFS received a telemedicine visit (CMS, 2020). Access to this volume of telehealth services was made possible through temporary waivers and flexibilities instituted at both the federal and state levels. Policymakers must examine the data on the effects of these temporary changes on health care delivery and assess the need to permanently remove regulatory barriers to virtual care.

- **Create policies and payment structures based on quality outcomes, patient experience, and efficiency for nontraditional sources.**
    - Seek efficiencies that allow rural clinics, including certified rural health clinics, community health centers and FFS to compete with newer nontraditional sources of health delivery, such as walk-in and retail clinics, and national virtual care portals and apps.
    - Promote and fund collaboration strategies between traditional and nontraditional providers that improve access to both in-person care and virtual care in underserved communities and ensure a full range of services from primary to complex care is available in rural areas.

- **Focus social investments in rural communities to address health disparities and build community connections.**
    - Support community coalitions addressing social determinants of health.
    - Foster health equity through elimination of systemic racism.
    - Create public and private funding opportunities to proactively prepare for population health becoming a bigger part of traditional health care.
    - Encourage shared accountability for population health and interoperability among providers.
    - Promote community-level quality measurement that tracks progress towards the goals for population health, building upon community health needs assessments.
    - Include value-based incentives in future payment models to address disparities within communities and among providers and to improve population health initiatives.
    - Provide stable federal and state funding for public health in rural areas.

The need for this focus has become painfully apparent in the response to the COVID-19 pandemic. Projections of current trends to 2030 suggest that rural populations will experience an increased rate of poor or fair health.

- **Address rural health vulnerability, especially in response to the impact of the COVID-19 pandemic.**
    - Greater collaboration is needed to ensure pandemic preparedness, effective response, and financial recovery.
    - Promote greater interoperability of health care information and support essential public health services for a coordinated and effective response in any public health emergency or natural disaster.
    - Provide loan forgiveness, time extensions and additional pandemic-related funding to help rural facilities adjust to post-COVID-19 realities in health care.
    - Extend expanded telehealth reimbursement, investment in broadband, and regulatory waivers are needed while regulatory agencies determine how and whether changes should be continued or adapted once the pandemic is over.
    - Provide additional funding for COVID-19 testing sites and new funding to prepare for vaccine distribution in rural communities.
    - Address recent initiatives for rural health improvement in the five prevalent chronic health disease categories as identified through US HHS Administration with technical assistance and local, regional, and state-by-state grants.
    - Continue efforts to expand insurance coverage and invest in technology to ensure better preparedness to respond to future pandemics.
    - Recognize the effects of climate change on vulnerable populations in rural Minnesota to foster proactive preparation.
    - Foster collaboration among providers and sectors to reduce community vulnerability and promote a systems approach to health care that acknowledges the trend toward interdependence within society that was revealed in the literature review.

- **Expand innovative and flexible population health care and payment models that address financial pressures, promote population health, and ensure viable health services within rural communities.**
    - Provide a mix of new payment models that include a cost-based environment in the design.
    - Continue critical access hospital reimbursement, safety net programs, such as Rural Health Clinics and Community Health Centers (FQHC) that address workforce shortages.
    - Increase rural Medicaid reimbursement while piloting and implementing value-based payment models such as shared savings and global budgets

that address low volumes and the need to focus on investments in community and mental health.
- Develop rural clinics' transition to value-based payment models with support for quality reporting.
- Create opportunities that allow rural facilities to move toward new value-based models without substantial financial risk. New models for payment are needed to build rural leadership capacity, expand investment in collaboration between clinical care, public health, and community agencies.

Financial projections reveal that without a change in the payment models, rural health organizations across the state will have negative net income. These projections demonstrate that the financial status of health care facilities in each of the four case studies would improve significantly with a new value-based model of global budgeting that shares revenue, moderates risk and promotes savings through investments in community health and wellness.

7. Conclusion

This report informs rural health stakeholders, including policymakers, of key trends and disruptors within the rural health care environment that will influence access to affordable, quality care across rural Minnesota through 2030. The result of a comprehensive study, this road map is presented with strategic policy recommendations to promote and ensure health across rural communities.

The study included an environmental scan of data, a literature review of trends and disrupters, and a Summit of key informants to identify the vision of health, as well as disrupters and recommendations. Demographic and financial modeling through 2030 identified priorities that rural stakeholders and policymakers should focus on to achieve rural health that is accessible, affordable and of high quality. Policy recommendations outline the key strategies required to support rural health through likely disrupters.

We encourage the broad dissemination of this report to share this innovative approach to analysis of current trends and identifying key disruptors in the future of rural health care. The identified disruptors and projections are applicable to small rural hospitals, rural health clinics and communities. The recommendations may be applied nationally and at the state level by policymakers, state offices of rural health, other national rural health technical assistance centers and associations. This will ensure the disrupters are considered and leveraged to reach the 2030 vision for rural health in Minnesota.

8. Acknowledge Disclaimers and Limitations

Throughout this project and report, there are disclaimers and limitations to be acknowledged. These are meant to provide the reader with insights on the study approach when applying this information for making decisions or replicating this project elsewhere.

This study had a focus on identification of trends and disruptors but did not focus on identifying systemic connections among them. Regardless of the thoroughness of planning, many factors in a dynamic system produce unexpected consequences, both beneficial and adverse.

- Data gathering and analysis:
    - Some ratings of the impact and likelihood of factors were inconsistent and, therefore, could not be reported with any certainty. Future research and monitoring in these areas could be warranted.
    - Due to the unique perspectives offered by the Summit participants, as subject matter experts, these ratings were not expected to be consistent for every factor.
- The pandemic and use of online conferencing did not permit the informal discussion of issues that face-to-face Summits enable. This may have limited the depth or range of discussion of some factors.
- The recommendations, presented confidently, represent our best understanding of trends and disruptors at this time. Given the dynamic and interactive nature of these factors, the recommendations should be revised as needed as influencing factors change over time.