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# A New Vision for Rural Health in Washington

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Rural Health Innovation Accelerator Committee  
*A sub-committee of the Health Innovation Leadership Network*

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May 12, 2017

## Current situation

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Jacob and Michael are both native Washingtonians, both are in their mid-20s, and both love the outdoors. They are quite similar in many respects, with one main distinction that has impacted the course of their lives. Jacob is from a small rural town in eastern Washington, and Michael lives in Seattle.

Jacob struggles to find work as he grew up in near poverty and never completed any formal education. Due to the stress of his life, he battles depression and he smokes. He has trouble dealing with health care issues because there is limited access to health care providers in his home town.

Michael, on the other hand, graduated from a four-year university and has steady work. Michael did have a short bout of depression, but he was able to access a therapist and get the support that he needed.

In general Jacob is:

- More likely to be food insecure than Michael.
- More likely to become obese and get diabetes than Michael.
- More likely to be uninsured than Michael.
- Less likely to have access to homecare and hospice services.
- Less likely to have access to a primary care physician, a mental health specialist, and a dentist than Michael.
- More likely to cost the health care system and his community more over his lifetime.

While this may be a fictitious story, it is a common one in many communities. Jacob is more likely to die younger than Michael simply due to the fact the Jacob is from a small town in a rural community. The question is, do we in Washington State believe that our ZIP code should determine our health, or do we believe that everyone should be able to live anywhere in our state and have an equal opportunity to live a healthy life?

## Rural realities

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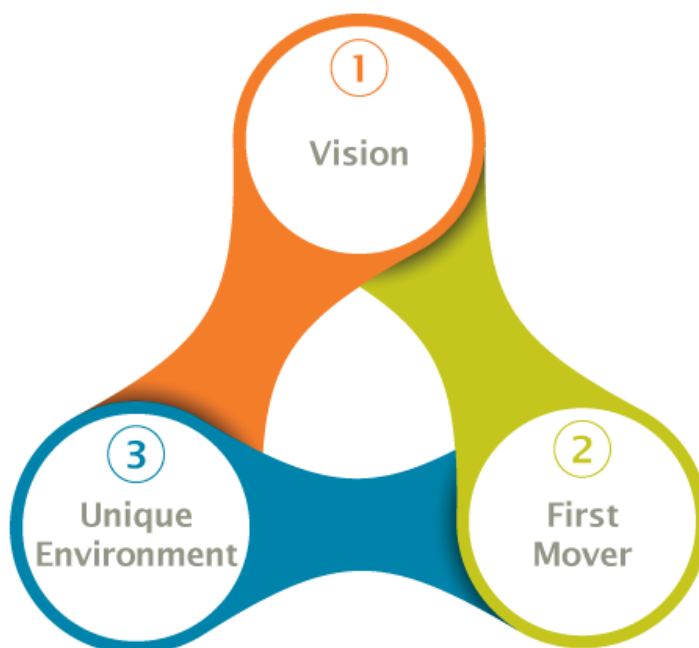
Residents in rural communities are, as a group, older and sicker than residents in urban areas. They have higher rates of obesity and substance abuse. At the same time, they have less access to health care and as a result their conditions are often diagnosed later with more serious findings. To address this problem, access to quality health care must be increased and sustained in rural areas of our state. This includes health risk assessments, prevention, and wellness programs.

### *Problem statement:*

*The sustainability of rural health care delivery depends on fundamental transformation and must consider the unique nature of rural and isolated constituents and scarce resources. The transformation must pragmatically embrace health resource availability and redesign the system with enhanced patient engagement, innovative health care interventions and population health strategies, all leveraging modern technology platforms.*

### **Rural Health Innovation Accelerator Committee (RHIAC)**

Comprised of entrepreneurs and thought leaders from the public and private sector, the Rural Health Innovation Accelerator Committee (RHIAC) believes that the state of Washington is able to address this problem because we here in Washington have a clear vision of the problem, a culture of innovation with first-movers in health care, and a unique environment made up of innovative companies, strong research universities, and a progressive health care community.



## Vision

We have the vision of where we need to concentrate efforts and resources, the first of three pillars needed for system change. The RHIAC is a diverse group of committed statewide leaders who specialize in rural health care delivery. Participants have led efforts upstream of health care interventions, for example in areas of social service or housing, and include local technology industry experts with experience and passion for innovation.

In 2016 the RHIAC produced a body of work that captures the state of rural health care in Washington, emblematic of national issues on this topic. The committee also put forth seven areas of development opportunity to create transformative change for rural Washingtonians receiving health care. Please see “Background information and facts” in the appendix to read more about the state of rural health care.

## First-mover mentality

Washington State and its respective state agencies, the Health Care Authority, the Department of Health, and the Department of Social and Health Services Administration, are first-movers nationally in bringing about transformative health care change, historically and in recent years through the Healthier Washington initiative. Directed and guided by Governor Jay Inslee’s office and the Washington State Legislature, Healthier Washington promotes systemwide change through achievement of the Triple Aim of better health, better care, and lower costs.

Healthier Washington has shepherded contractual integration of physical and behavioral health through fully integrated managed care (FIMC), Accountable Communities of Health (ACHs), state financed value-based purchasing, and

movements including the use of patient decision aids and health care practice transformation. Mirrored in Washington's technology innovation sector, Washington continues to lead by example.

Our innovators invented the defibrillator, the Scribner shunt, the portable dialysis machine, Doppler ultrasound, and bone marrow transplant. Seattle possesses strong global health care and life sciences sectors. Because of Washington's diverse business climate, we can affect change through competitive market forces, and our health care leaders are eager to innovate. Washingtonians are also very collaborative by nature and in that spirit, efforts such as the Dr. Robert Bree Collaborative and the Washington Health Alliance convene and successfully bring communities together to solve critical health challenges.

### **Washington's unique environment**

Washington can claim seven Fortune 100 companies and two of the top five most valuable companies in the world by fourth quarter 2016 market capitalization, Microsoft and Amazon. Seattle is the fifth best city to launch a startup according to *Small Business Trends*, ninth according to CNN rating, and is the sixth most educated city in the country. Washington is the undisputed cloud computing capital of the world, and has the second highest adjusted technology salaries (just behind Austin, Texas, and ahead of San Francisco) according to Forbes in 2016. Washington also consists of an envious cadre of consumer-focused businesses headquarters: Starbucks, Amazon, Nordstrom, Costco, Alaska Airlines, and REI. The potential to use the incredible talent base of the most customer-focused companies in the world can dramatically impact the health care industry if public and private health leaders can figure out how to put them to work.

Washington is poised to harness these advantages over every other state in the nation and should seek to put our technology and customer service talent base to work on intrinsic health care problems, not just for those located in and around populous areas and pockets of innovation across the state, but in those regions that are remote and require innovative thinking. Solving for rural health here in Washington will have national and global health implications; a potential value creation that can write the business case for partnership. The RHIAC included technology innovators by design, and this mini-experiment of evaluating what public-private matches could be made on the RHIAC was a great start.

Our committee believes the breakthroughs for Washington may not come from the institutional players of health care (payers, providers, and government institutions) but in part from Washington's unique environment of backyard companies. You will read throughout this document that in addition to encouraging and incentivizing these businesses to be brought into the work of the committee, we believe that Washington should borrow private sector and entrepreneurial approaches to testing concepts, rapid prototyping, and continuous cycles of improvement, rigor and the discipline of failing fast.

## Opportunity for innovation

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Washington State is an emerging national leader for Health Information Technology, digital health, and health care services companies. Washington's Department of Commerce and the Cambia Grove published a first-of-its-kind report about the innovation in our region in 2015.<sup>1</sup> The RHIAC believes that the business case is real for Washington business leaders, innovators and policy advocates to invest in rural health.

Apart from Washington's entrepreneurial endeavors, many of the large technology firms of Seattle are growing vertical teams dedicated to health care solutions. Industry leaders like Providence Health & Services and Cambia Health Solutions have venture capital-type investment teams and digital health incubation efforts in place. Innovators can rapidly move from concept to implementation with these types of players helping to create a local sandbox for exploring ideas.

One home-grown technology example is the Puget Sound's undisputed status as the cloud technology capital of the world; there is an amazing utility proposition to servicing the rural health community right in our backyard. Besides the security and speed of service, a large value proposition of adopting cloud technology is the removal of capital intensive technology infrastructure. Rural health providers do not need to maintain large server systems, freeing up real estate and hardware costs. This example is just one opportunity for big and small technologists to get involved in rural health. The barrier is not that technologists are not paying attention or that they don't care, but rather a good case to invest time and resources has not been made to this group. There is a significant opportunity for value creation that is a win-win.

In the near-term, there are two main areas of focus for policy leaders and health advocates to support rural health transformation:

1. Support creation of public-private partnerships: The use of community level data and technology services by local providers has the potential to birth novel solutions for rural health issues illustrated in this document.
2. Work with the technologists: A major learning in the RHIAC was that solutions that work in one rural area may be so specific to local needs that portability and scalability of successful work may not always be the end goal. Instead, the focus for policy leaders and health advocates should be to borrow heavily from Washington technology firm practices to quickly innovate and create. The committee feels that the creation of forums that seek out the raw ingredients for change adoption for rural initiatives, supported by micro-investments and data reporting, result in success.

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<sup>1</sup> See "2015 Report on Health Care Innovation in Washington State" located at <https://www.cambiagrove.com/WAHealthcareEconReport>.

Leveraging rural health consortia or other existing venues could serve as a platform to build such forums.

The types of tests and pilots articulated are likely to be too small to be implemented through such entities as the Accountable Communities of Health (ACHs); however, successful pilots that have the ability for spread and scale could eventually be advanced through these vehicles. The committee felt that low investment, bottom up, flexible pilot programs that give significant leeway to the local providers of care have the best chance of success.

In the longer-term, to create true health system transformation across Washington's rural communities, there must be a broader systemwide policy investment that serves as the foundation for innovation. These policy investments speak to a culture of collaboration, reimbursement to reward for success, and regional differentiation. The ultimate outcomes of such policies being a system that is positively reinforced and self-fulfilling.

## Virtuous cycle of improvement

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As it has been noted, there are significant opportunities for Washington to create lasting change across rural communities. The RHIAC identified two ways to promote systemic rural transformation, (1) establish a top down mandate that forces system compliance to a new approach, or (2) establish policy constructs that reinforce the opportunity presented by system transformation and create an environment of collaboration. Clearly, aligned with the tenets of Healthier Washington, the most likely approach to create lasting change is to adopt the second method.

The notion of creating policies that reinforce opportunities under system transformation means the system will be incentivized through success. Incentive structures that reward through success in turn encourage demonstrated viability, and ultimately result in a virtuous cycle. The committee is of the belief that policies can create a chain of innovations that lead to successful outcomes and reinforce one another in a positive manner, resulting in a feedback loop that mitigates detrimental outcomes. Policies that result in a virtuous cycle must embrace several key components.

First, policies must foster a culture of collaboration across payers and providers, and across sectors. Not only must there be a willingness to host rural-focused conversations among payers and providers, but these conversations must span across public and private sectors, including technology sectors. As already noted, Washington possesses unique attributes that contribute to the opportunity statement for health innovators. Setting up the environment in an advantageous



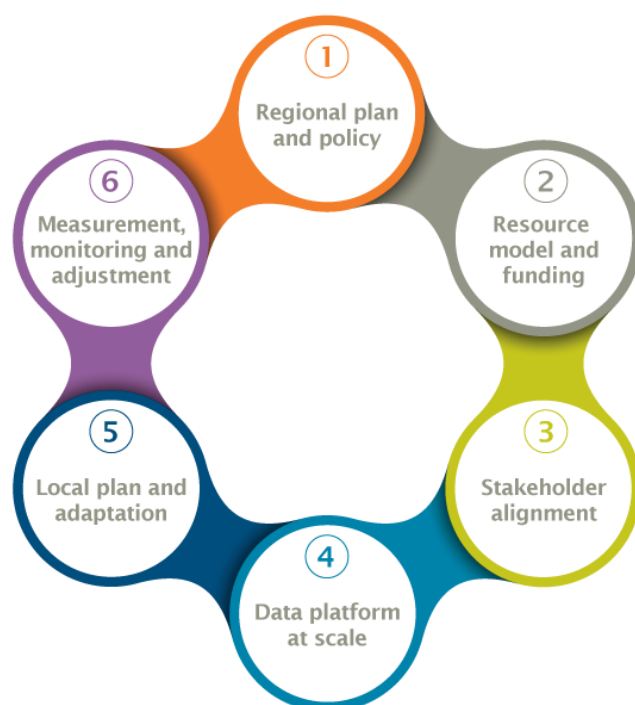
way where all parties can convene and collectively work to address rural-specific issues is fundamental to creating systemic change.

Second, following the trend of value-based purchasing, policies need to recognize and reward business models that allow for new approaches of delivery and reinforce integrated care. Current fee-for-service payment structures do not encourage or support innovation, and as a result there are limited pockets of innovation with limited applicability due to financing constraints. Ignoring the upfront investment that is required to implement a new innovation, there must be a sustainable mechanism that supports new innovations on the longer-term. This kind of structure strengthens the impetus to invest and encourages new business models.

Third, policies should support and embrace regional differentiation; what may be virtuous in one region or community may not be virtuous in another. Collaborative efforts and innovations must be built from within rural organizations out, and customized to fit regional needs. Policies should support and help identify work that cuts across common health denominators and geographic regions. This implies that while there is overarching structure to policies, there should be enough flexibility such that rural organizations can adapt and modify approaches to support local needs. Strategies for implementation of new innovations should meet the unique needs and conditions of the region or local community.

## Basic framework for health system transformation

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The formal content of this document presents the opportunity for Washington State to transform rural health delivery in a systemic way, and suggests an avenue to achieve this is through a virtuous cycle. As rural health issues are complex, the committee has thought through a basic mechanism to establish the types of change that are seen as necessary for rural communities. This framework maps closely to the establishment of a virtuous cycle and expands upon necessary elements for practical implementation of new innovations. This basic framework is founded on six core elements that help to build upon a virtuous cycle:

1. Regional plan and policy
  - The regional plan and policy represent the political will to carry out the new innovation.
2. Resource model and funding
  - The upfront cost of the innovation must be addressed, and a sustainable funding mechanism must be identified.
3. Stakeholder alignment
  - Internal and external stakeholder alignment is required to champion the vision and objectives around the innovation.
4. Data platform at scale
  - Data is required to support implementation, and scalability of data is required to support spread of the innovation.
5. Local plan and adaptation
  - Taking a large scale approach to these policies leads to the ability to locally adapt the innovation to community needs.
6. Measurement, monitoring and adjustment
  - Measurement, monitoring, and adjusting the model in rapid succession allows for timely spread and scale of effective models.

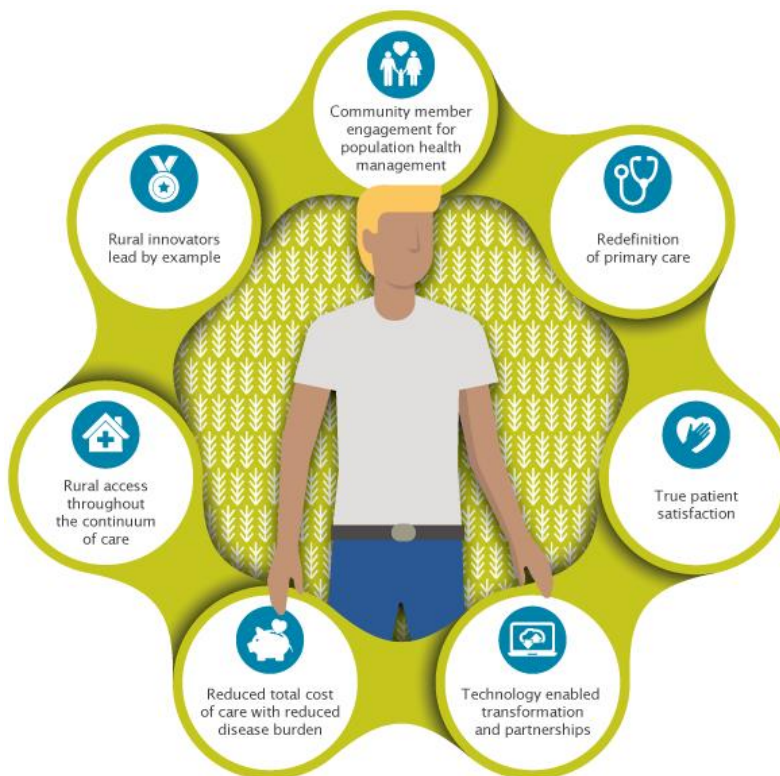
The intent of this model is to identify the necessary elements for successful implementation of a new innovation, and outline how a model developed at the local level could be expanded to other regions.

## **The case for equity**

Over the course of 2016, the RHIAC wrestled with the distinctly complex issues of rural health delivery and inequity across rural regions as compared to their urban counterparts. In the case of Jacob versus Michael, as aligned with the mission and vision of Washington's state health agencies and the goals of Healthier Washington, the RHIAC believes that all Washingtonians should have an equal opportunity to live a healthy life. In consideration of this goal, the RHIAC developed seven core initiatives that define equity across rural communities.

## Initiatives to define rural health

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Guided by the RHIAC's problem statement for rural health delivery, the committee defined seven key initiatives with the goal of achievement by 2022. These initiatives focus on the core drivers that would help to create health equity in rural communities.



**The health conditions and risks of all rural community members are determined so they can actively participate in achieving their health care goals, and so that each community member's health conditions and risks can be aggregated to determine optimal population health strategies.**

Optimal health is only achieved with the active participation of the patient. If a patient is aware of their health conditions, and knows the disease outcomes for which they are at risk, the patient can actively partner with their health care provider to achieve optimal wellness. This is a goal for all patients but is particularly important for patients in rural communities where access to treatment, once a disease process has progressed, may be less available. To drive the patient's interaction with their health care provider and in order to support appropriate care plans, access to timely data is required.

As data on the health status of individuals in a community is determined, the data needs to feed into a repository that can be used to stratify and group patients according to risk for progression in specific disease processes. Proposals for a Washington State Clinical Data Repository, if implemented, can be a tool for such population health assessments. Once categories of disease risk are established and their prevalence determined, strategies can be created for clinical and/or behavioral interventions to increase wellness of entire population groups. This is a key mechanism for increasing health and well being while at the same time decreasing cost of care.

A population-based strategy for clinical and behavioral health intervention is beneficial in all populations, not just rural populations. But the tools and resources for implementing such an approach in the rural environment are largely lacking at present. Innovative approaches to acquiring this data are needed and will naturally depend on the effectiveness of primary care delivery in the rural setting.



**Primary care is redefined to include virtual care, care teams, and alternative settings convenient for patients. The goal is for all rural community members to have a relationship with their primary care team and to engage with the health care system at least every 24 months. Specialty care is triaged and favors virtual care delivery.**

The traditional model of primary care delivery where patients are seen in a one-on-one encounter with a primary care physician is not currently meeting our primary care needs in rural communities. The reasons for the failure of this model include the following:

- The primary care physician is the most expensive practitioner to deliver this care and in many cases their extensive medical training is not needed for the primary care encounter.
- Physicians tend to locate in more urban settings. It is difficult to attract and retain primary care physicians in rural communities.
- Primary care clinics are expensive to build and maintain, and they are often inconvenient and time consuming for patients to visit.

The obstacles to primary care delivery can be addressed by innovative approaches to primary care delivery, such as the use of a care team. Care teams include other providers such as nurse practitioners and physician's assistants, working in collaborative relationship with a physician. Under the physician's supervision, the care team can deliver appropriate care to more patients at a lower cost, and often at a distance from the physician through telemedicine. These primary care delivery models are compatible with delivery of care in settings that are much more convenient to the patients, such as a department store or pharmacy, or in

the patient's home where consultation with the physician can occur on their smart phone, tablet or computer.

Non-physician members of care teams are often more common in rural settings and can provide the continuity relationship with patients that are necessary to maintain consistent engagement by patients with the health care system. These models of care are also applicable to mental health care, and with referral for specialty care, which can also often be delivered via telemedicine in the care teams setting, as well as referrals for dental and other care.



**Patient satisfaction is not just with primary care, but for what the patient sees as their issues, and is measured at the point of service to ensure that the patient is satisfied. Primary care team engagement with the patient is a minimum.**

More innovative delivery of primary care, chronic care monitoring, and other ongoing interactions with the health care system, will increase patient satisfaction. It is also much more likely to stimulate patients to actively engage in managing their own health risks and/or chronic conditions, and improve their overall health and well being. Without engagement, none of these beneficial results are consistently realized. Patient engagement is required, and this requires a positive encounter with the health care system.



**Technology enables the achievement of system and transformational goals and is supported through pervasive strategic partnerships.**

The successful implementation of care teams and virtual primary care encounters requires robust technology that is inexpensive to acquire, simple to operate, and convenient to deliver. We have some of the leading technology companies in the world in the state of Washington, including Amazon, Microsoft, GE Health Care, and Philips to list a few. In addition, there are strong universities and research institutions spread across Washington. We need to create a climate that encourages these companies to innovate in ways that benefit the rural communities in our state by providing the technology platforms for the innovative care deliveries described above, and new technologies that are yet to be envisioned.



**Total cost of care is reduced by addressing the disease burden and ensuring outcomes are on par with an urban setting.**

In addition to expensive care delivery models, the cost of health care is also driven by the burden of disease. This is true across all populations, including rural

populations. The steps outlined above will serve to identify disease risk categories and allow population health strategies to bring down the overall burden of disease. This not only decreases overall expenditures on health care by decreasing need, it also improves quality of life and productivity of a population. Recognizing that a certain level of care should be delivered locally, strengthening the rural primary care system can help to manage disease burden and lower the cost of delivering care.

As part of a comprehensive approach to population health, the social determinants of health also need to be addressed in rural communities. Access to housing and healthy food, which is directly dependent on employment and economic well being, as well as the absence of domestic or other personal traumas, all contribute to the health of individuals in a community. Resources and strategies are needed to address these important needs that contribute to health and well being. Implementation of these initiatives will reduce the cost of care in rural communities to a level similar to that found in urban centers.



**Rural community members have options and a large network of providers that encompass the continuum of care.**

The implementation of innovative models of care, with technology that allows connection to larger centers with access to specialty care, will contribute to broader access to multiple types of care (i.e. different specialties and elective care) as well as broader choice in primary care. Patients need a continuum of care over their lifetime as needs change with circumstances and aging. Attaining access to a broad array of health care options is part of a successful delivery model in rural communities.



**Rural organizational thought leaders in Washington State support and spur colleagues to innovate.**

Political will and a mechanism for sustained collaboration are needed to successfully achieve the initiatives above, and to continue to improve the health care delivery system in rural places. Collaboration and innovation only occur under circumstances that encourage the implementation of improvements to the system. Positive encouragement mechanisms may include policies that facilitate change and economic rewards aligned with improvements in patient health and enhanced savings in the health care system. If possible, culture change training, project and program management, and the like should be included as resource support to enhance successful honest brokering over time. Perceptions of entrepreneurs and technologists as “vendors” rather than helpful partners must be overcome.



## Impacts of lost opportunity

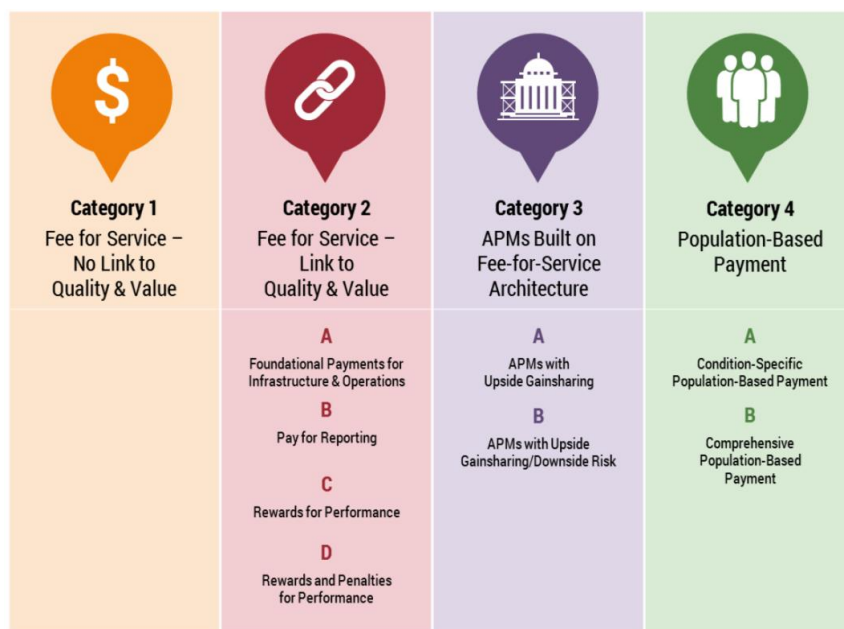
Nationally, rural providers are struggling to remain open and deliver care. Based on the University of North Carolina's FLEX Monitoring Team's financial stress analysis, critical access hospitals (CAHs) are struggling to sustain essential services in their communities. A number of factors contribute to this condition.

Nationally, closed rural hospitals had:

- Lower operating and total margins
- Significantly lower liquidity
- High debt levels
- Lower utilization
- Lower staffing.

An analysis of the relationship between operating margins and market factors found that unprofitability increases with the proportion of residents over 65, proportion of households in poverty, lower population density, and increased with distance to the nearest 100-bed hospital. While the 24 other CAH states had 45 closures during the 2005-2017 period and 120 rural hospitals have closed overall, Washington experienced only one CAH closure over the same time frame.

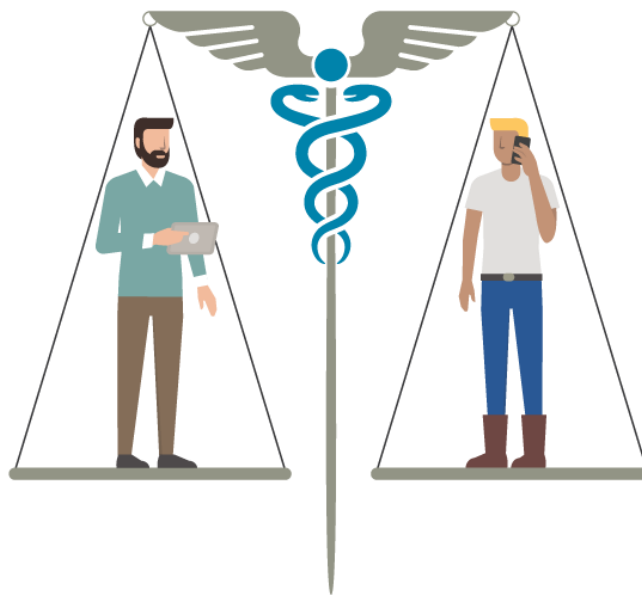
The challenges faced by rural providers differ from those faced by urban providers. Living closer to the margin, rural providers have less flexibility to absorb risk and support the transition to new models of care. It is difficult for rural providers to recruit and retain staff due to isolated conditions and the stresses of increased accountability. Per capita income is lower, unemployment is higher, and poverty is greater in rural regions than in urban areas. Geographic isolation poses challenges to the delivery of services and makes access to care difficult.



\*Source: “APM Framework (At-A-Glance)”, Alternative Payment Framework (APM) Final White Paper, <http://hcp-lan.org/workproducts/apm-whitepaper.pdf>

Solutions have been proposed by national legislators, the Rural Emergency Acute Care Hospital Act, policy advocates, and the June 2016 MedPAC report, but broader system approaches remain elusive. In parallel, there are trends that continue shifting Medicare and national markets toward the Triple Aim. Attempts to repeal and replace the Affordable Care Act have very little impact on the fundamentals. The Health Care Payment Learning and Action Network (HCP LAN) framework outlines payment models that will qualify as alternative payment methodologies under Medicare Access and CHIP Reauthorization Act (MACRA). These national trends signal movement toward value-based purchasing, where quality is attached to payment.

While the challenges are considerable, the impact of not taking advantage of system momentum to innovate, and capitalize on the desire to develop sustainable solutions for rural health delivery would result in maintaining status quo inequities. The signals demonstrate that systemic change is required in rural health delivery, and as described in this document, there is a unique opportunity for Washington State to lead.



## Call to action

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The RHIAC sought to lead innovative efforts and specific projects throughout the course of 2016, and soon discovered the complex challenges of rural health innovation. While rural Washington faces distinct challenges, a clear discovery in this process is a recognition of the unique opportunity presented to lead rural health innovation. Combined with the fact that we are in the middle of a timely confluence of resources and interest, Washington is positioned to leverage resources through public and private partnerships to create systemwide change, and serve as a beacon for rural health system transformation and true health equity across rural and urban areas.



## Supporting information

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### Acknowledgements

Healthier Washington seeks to build healthier communities through a collaborative, regional approach, ensure health care focuses on the whole person, and improve how we pay for services in order to achieve the Triple Aim of better health, better care and lower cost.

Key to success in achieving Healthier Washington's aims is the public-private Health Innovation Leadership Network (HILN), comprised of providers, business, health plans, consumers, community entities, governments, tribal entities, and other key sectors to accelerate the initiative's efforts. Transformative, lasting changes require focused and collaborative engagement of the public and private sectors working toward mutual goals.

In addition to HILN's overarching role as accelerators of culture change and Healthier Washington ambassadors, Healthier Washington initiated Accelerator Committees to focus on specific and timely efforts that directly impact and drive toward the achievement of Healthier Washington's measures of success. This work was developed through a public/private partnership over the course of 2016. Contributors to this work are:

#### *Co-champions:*

- Nicole Bell, Executive Director, Cambia Grove
- Andre Fresco, Administrator, Yakima Health District

#### *Committee members:*

- Jacqueline Barton True, Director of Rural Health Programs, Washington State Hospital Association
- Dawn Bross, President, Rural Health Clinic Association of Washington
- Ralph Derrickson, President and Chief Executive Officer, Carena Inc.
- Daryl Edmonds, President, Amerigroup Washington Inc.
- Laura Flores Cantrell, Health Equity Lead Strategist, Washington Dental Service Foundation
- Linda Gipson, Chief Nursing Officer, Whidbey Health, Whidbey General Public Hospital District
- Candace Goehring, Director of Residential Care Services, Department of Social and Health Services
- Mark Johnston, Director of Global Business Development, Health Care and Life Sciences, Amazon Web Services
- Eric Moll, Chief Executive Officer, Mason General Hospital and Family of Clinics

- Brian Myers, Vice President of Rural Health & Capacity Building, Empire Health Foundation
- Carlos Olivares, Chief Executive Officer, Yakima Valley Farm Worker Clinic
- Ken Roberts, Vice Dean for Academic and Community Partnerships, Elson S. Floyd College of Medicine, Washington State University Spokane
- Philip Skiba, Health Care Consultant
- Mark Stensager, Washington Health Benefit Exchange
- Karina Uldall, Medical Director of Behavioral Health, Virginia Mason
- Keith Watson, President, Pacific Northwest University of Health Sciences

## Committee information

The Rural Health Innovation Accelerator Committee was convened to discuss and stimulate the investment in rural transformation, and accelerate rural health innovation. The mission and vision of the committee were:

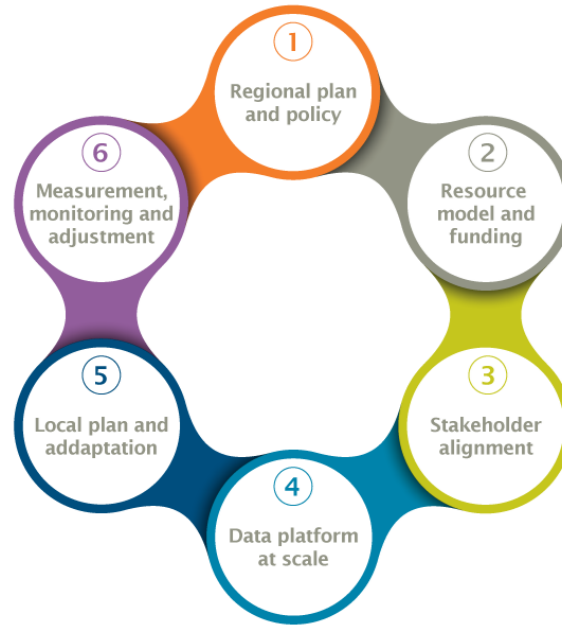
**Mission:** Accelerate the uptake and spread of value-based payment and delivery models in the state's rural communities, and influence the uptake of rural health innovations that support these models.

**Vision:** Connect and draw linkages with Washington's entrepreneurs and health innovators to drive rural population health and build sustainability for Healthier Washington initiatives.

## Basic framework for health system transformation

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The formal content of this document presents the opportunity for Washington State to transform rural health delivery in a systemic way, and suggests an avenue to achieve this is through a virtuous cycle. As rural health issues are complex, the committee has thought through a basic mechanism to establish the types of change that are seen as necessary for rural communities. This framework maps closely to the establishment of a virtuous cycle and expands upon necessary elements for practical implementation of new innovations.



The following basic framework outlines the necessary elements that would support system change in rural regions. The constituent parts of this framework build the foundation for broader system change in rural communities and support adaptive refinement of innovative initiatives.

## 1. Regional plan and policy

The first element that must be in place is the regional plan and policy that represents the political will to carry out the new innovation. This element speaks to the policy decisions that are made on state and national platforms that empower local leaders and give direction on how to achieve change in both the near-and long-term. While these policies may not be solely guided by the public sector, they serve as the foundation to build from, and there must be alignment across regions on policy decisions.

The policy decisions that are set forth at this level determine how new innovations will be resourced and will guide the strategies for bringing them to implementation. Plans can be developed from policy decisions, and support the basic framework for implementation.

## 2. Resource model and funding

With the regional plan and policy in place, the second element of the framework that is to be addressed are funding mechanisms that are required to support the new innovation. There are two key components that must be addressed to fully establish appropriate resourcing: (1) upfront capital investment to support the basic infrastructure components of the new innovation, and (2) the sustainability component that ensures the investment will be supported long-term.

Resourcing speaks not only to the tools and technological resources itself, but the programmatic, educational, technical, and additional supports identified as necessary for implementation. These kinds of investments must be furnished at the onset of implementing the new innovation. Additionally, as the innovation takes hold and is implemented there must be sustainable mechanism of financing. The financing model must account for integrating the new innovation into either the current business model or identify resources that would support the service outside of the existing business model.

### **3. Stakeholder alignment**

With the policy support structures in place and resourcing identified, the next foundational element is to create stakeholder alignment around the innovation. The goal is to create stakeholder support for the vision and objectives, and to garner support toward the initiative's success. Establishing agreement on the vision and objectives is central to success and requires strong organizational leadership.

Despite gaps in creating effective policy and resourcing, Washington State has been a leader and possesses resources that would support the implementation of additional innovation. The more pervasive and difficult gap to close is the internal will and stakeholder alignment that supports a culture of change and innovation. This implies that organizational leaders must cultivate team support around the vision, and focus energy on the importance of transformation. Organizational leaders drive the vision and create alignment on the mission to mobilize stakeholders around the innovation and bring implementation to reality. In closing this gap, it allows for the team to capitalize on the opportunities that currently exist.

The key elements that need to be addressed to create stakeholder alignment are:

- Leadership;
- Vision; and
- A roadmap so providers and organizations feel comfortable making the leap.

### **4. Data platform at scale**

A core element of this framework is to ensure that data is accessible, sharable, and sufficiently robust to support implementation of a new innovation. The scope and scale of available aggregated data will determine the ultimate scalability of the innovation. The end result being that large scale data solutions are required to create systemwide change in rural health.

There are multiple approaches that can be put to use, but to the basis must be a scalable data platform that integrates vital information across platforms and data that is sufficiently refined to drive client care. This data needs to be rich enough to grasp patient risk and practice variation. Aggregated data that spans across

disparate system information helps to guide interventions and the most appropriate intersection between the client and the delivery system.

There are two levels of data that need to be established. The first is high-level information that serves to meet the reporting requirements and supports regional and state policy decisions. These types of data include such things as quality metric reporting, demographics, aid category, and financial benchmarks. The second is a local ability to repurpose these data into actionable strategies that improve the health of clients and quality of care. This means cutting aggregate data into community- and patient-specific information that can be used to drive care. Innovations such as telemedicine serve as complementary components to this infrastructure.

The availability of timely data allows rapid cycle innovation and agile spread and scale of innovative health solutions that work. It also significantly cuts down on the upstart cost of innovating. Instead of creating pockets of innovation where one-off solutions are developed, led by those visionaries that have pulled together their own solutions, a platform that allows for widespread innovation would have broader impact.

## **5. Local plan and adaptation**

The previous elements establish the foundation for local planning and adaptation. They set the stage for rapid cycle innovation and implementation. Local providers can build off of the foundational infrastructure to create customized solutions and implement them with quick turnaround and proof of concept. They also allow for community-level customization of initiatives, while at the same time setting the stage for spread and scale of successful interventions.

## **6. Measurement, monitoring and adjustment**

The last vital component of this framework is appropriate measurement and data analysis. There must be a mechanism to measure and quickly adjust the innovation based on near-term objectives. In succession, the innovation must be measured, monitored and adjusted. Measurement at this level also allows for regional adaptation of the innovation. If an innovation proves effective, this step also allows for the spread and scale to other regions, and by virtue this step breaks the trend of isolated pockets of innovation.

## **Actionable solutions to address 7 initiatives**

Recognizing the challenges faced by Washington rural health populations and the required resources to create system-wide change, the RHIAC has proposed several high level conceptual approaches to address the seven initiatives for rural health:



### ***Community member engagements for population health management***

Place a strong emphasis on annual wellness visits to align with quality reporting by Medicare managed care organizations. Additionally, Medicare pays an enhanced rate for these annual visits. This ensures the health conditions are documented, and care gaps (e.g. colonoscopies, mental health screening, and mammography) are addressed. Collecting records of multiple health conditions is critical for risk adjustment.

Patient engagement in their health care outcomes is key. Two approaches commonly used are trained community volunteers and registered nurse care coordinators. The use of trained community volunteers requires a modest investment and could be achieved through grants.



### ***Redefine primary care***

Allow mobile units to be licensed as rural health clinics, which would focus on care gaps (e.g., screening) based on demographic criteria to engender earlier diagnosis.

Create an application that allows rural community members to access virtual care and patient records from smart phones.

Leverage remote monitoring devices and centralize data analysis, for conditions such as diabetes.



### ***True patient satisfaction***

Through an annual wellness visit or through care coordination (nurse or community volunteer), have providers track “readiness to change” based on responses to a few basic questions. The Department of Health should have staff with Masters of Public Health trained in this area and should develop statewide standards.



### ***Technology enabled transformation and partnerships***

Consider licensing non-traditional locations for medical homes where a community gathers (e.g., schools or churches).

Co-locate clinics within schools for pediatric and family medicine. In remote rural areas, combining resources and assets could allow for very creative solutions (for example, using a school bus system for community transportation).



### ***Rural access throughout the continuum of care***

From a Managed Care Organization focus, increase the network adequacy standards for rural markets. Implementation of such an initiative would require increases in the current workforce. State increases in J-1 visa slots for primary care physicians working in rural counties would help to meet this need.



### ***Rural innovators lead by example***

Share resources across remote rural communities to develop effective Community Health Needs Assessments to help prioritize strategic improvement communities to develop effective Community Health Needs Assessments to help prioritize strategic improvement.

## **Broader policy recommendations**

Throughout the course for RHIAC discussions several core policy recommendations emerged. The following statements represent central components that serve to create a virtuous cycle of innovation.

### ***Innovation***

Collaborative frameworks will generate innovations toward the improvement of health care access and delivery in rural communities. Innovative ideas can arise from many sources but usually require industry partners to produce and deliver. We need to develop policies that encourage and empower industry.

### ***Collaboration***

Successfully addressing the health care needs of rural Washington State requires a culture of collaboration and organizational structures that facilitate collaboration. The goal is the creation and implementation of policies that give rise to a cycle of successful health care transformation. One such collaborative structure is the Health Innovation Leadership Network that brings together thought leaders from the health care system, industry, academics, nonprofits, and government agencies. Additional collaborative frameworks are needed to facilitate ongoing cycles of improvement in health care delivery as technology advances and demographics change. These collaborative networks must include partners in rural communities that can inform change by identifying challenges.

### ***Data consideration***

Washington State is moving toward potential data solutions. It is broadly recognized across sectors that the interface with health care data needs to be greater accuracy, richness and interoperability. However, an area often underrepresented from a policy perspective is the role of data acquisition and use.



Committee members are appreciative of the comprehensive data sets that inform broader policy decisions and drive health care purchasing. Conversely, there must be a recognition that aggregated data must be functional at regional and local levels. Attribution and division of data elements at local levels are necessary to help inform provider and patient interaction, and are essential in driving patient outcomes.

Second, it is important to distinguish rural capacity and ability from that of larger provider networks. By and large, rural providers operate in isolated networks and possess limited resources and bandwidth to properly extract and analyze data elements. While expectations of certain levels of data capacity are required for rural providers, these expectations must take into account the rural provider's limited ability to process data.

## Background information and facts

### *Current reality*

A 2015 estimate puts the state population at 7,170,351 people with 720,337 living in rural Washington (USDA-ERS). There are 90 hospitals in Washington (Kaiser, 2014). The state has 39 hospitals identified as Critical Access Hospitals (Flex Team, 10/2016). There are 119 rural health clinics in Washington (CMS, 2016) and 28 federally qualified health centers provide services at 291 sites in the state (NACHC, 2015).

Some of the key differences in rural and urban demographics are summarized in the following table:

Demographic	Urban	Rural
Per capita income	\$49,610	\$38,515
Poverty rate	13.1%	17.8%
Unemployment rate	5.5%	7.1%
No high school	9.5%	12.2%

Table 1. Demographic Differences in Washington Residents Based on Rurality  
<https://www.ruralhealthinfo.org/states/washington>

### *Financial*

- 120 rural hospitals closed in the past 11 years
- 673 are vulnerable to closure (1/3 affecting 11 million people nationwide)
- CAHs represent 30 percent of acute care hospitals but less than 5% of Medicare payments
- Wage-based reimbursement strategies with Medicare and Medicaid disadvantage rural areas that have lower wages
- Variability in bond and levy capacity for bricks and mortar/equipment

### ***Clinical considerations/challenges***

- Rural residents are later to diagnosis with more serious findings
- Rural residents are older, sicker, poorer, and have less education
- Deaths from accidental injury are 50 percent higher than the same injuries sustained in urban areas with trauma resources
- Opioid and methamphetamine use per capita is higher
- Avoidable deaths in rural health
  - 25,000 from heart disease
  - 19,000 from cancer
  - 12,000 from accidents
    - Drive faster in rural areas
    - Wear seatbelts less often
    - Rural EMS units typically serve large and sparsely populated areas. The significant distances they must travel mean that it may take EMS personnel longer to arrive at the scene of the emergency, which can have a significant impact on patient outcomes, including survival rates
    - Reliance on volunteers becoming increasingly problematic
    - Local providers unwilling to perform the duties
    - Inability to pay a medical director
    - No physician, nurse practitioner, or physician assistant in the area
    - Local providers not qualified to perform duties
  - 11,000 from lower respiratory illnesses
    - Higher use of tobacco smoking and smokeless use
    - Higher exposure to environmental toxins
  - 4,000 from stroke
- Higher levels of obesity
  - Lack of nutritional education and access to nutritionists
  - Fewer physical education classes in school/fewer wellness facilities
- Limited access to hospice/homecare services
  - Reimbursement issues and low volumes
  - Distance/travel
  - Federal regulatory and policy requirements, such as the requirement for a face-to-face visit for recertification of a hospice patient
  - Relationships with other organizations, including competition for resources and patients
  - Technology issues, including the lack of available broadband and cell service
- Mental health
  - From 2004 and 2013, small towns/cities (micropolitan) and rural counties experienced a 20 percent increase in suicide rates while large, central metropolitan counties displayed a 7 percent increase

- In 2013, the suicide rate in rural counties was 17.6 deaths per 100,000 compared with large, central metropolitan counties at 10.3 deaths per 100,000
- Lack of understanding and knowledge of mental illness, sometimes even among health care staff
- Prejudice toward people with mental health disorders, often based on fear and unease
- Secrecy about mental illness in the community and general hesitancy to seek care
- Oral health
  - Less dental insurance coverage
  - Less fluoridation in use
- Pharmaceutical care
  - Rural pharmacies typically pay more to drug manufacturers per prescription and sell a relatively low volume of medications, so the resulting profit can be very low
  - Mail order may not be an option related to technology constraints and benefit of education from a pharmacy provider is lost in the large elderly population
  - Between March 2003 and December 2013, 490 rural communities lost their only retail pharmacy