

College of Health Sciences, University of Wyoming Rural Health Innovation Institute

Overview

The purpose of this initiative is to leverage the strong academic programs and key initiatives in the College of Health Sciences to address Wyoming's healthcare and economic diversity needs while becoming a national and international model for rural health innovation. Specifically, we propose to leverage four existing programs that are under strategic review by the University to create the Rural Health Innovation Institute (RHII). These programs include **1) Extension for Community Healthcare Outcomes (ECHO model™), 2) Wyoming Telehealth Network (WTN), 3) the Equality State Research Network (ESRN) and 4) the Wyoming Health and Bioscience Innovation Hub (Hub)**. Each of these programs align with the University's strategic plan and *Four Pillars*. Through their success, the University has gained international and national recognition, developed innovative solutions to Wyoming's healthcare challenges, and provided much needed resources to CHS faculty. By forming the RHII, we will encourage healthcare practitioners to practice in Wyoming and develop opportunities for high-school students interested in healthcare careers to engage with faculty and researchers to encourage attendance at UW. We will also provide opportunities for faculty to develop new areas of research and patentable healthcare products while accelerating the volume and diversity of the extramural research awarded to CHS. This will enhance the ability of the CHS to develop innovative and sustainable solutions to the healthcare challenges faced by the state.

Background

Wyoming's rural and frontier communities experience a number of serious health challenges¹⁻³. This includes provider shortages⁴, high levels of healthcare staff turnover and significant problems in recruiting new health workers². The problems are pervasive, affecting both specialist and primary care. As a result, Wyoming's residents have lower life expectancy and poorer overall health status³, lower *County Health Rankings* in areas such as behavioral health, morbidity and access to clinical care⁵, higher rates of risky health behaviors, limited financial resources, limited access to health care, poorer health care quality, insurance deficiencies and a weak public health policy environment^{1,6}. These challenges have only been exacerbated by the COVID-19 pandemic.

Unfortunately, many of the obstacles faced by healthcare providers and patients in rural areas are vastly different than those in urban areas suggesting that solutions that are developed for urban centers are not likely to be effective in rural communities⁷. For instance, economic factors, cultural and social differences, lack of public health education, lack of funding and the sheer isolation of living in remote rural areas all limit rural Americans' efforts to lead normal, healthy lives². In order to improve healthcare in Wyoming there needs to be more opportunities to develop our healthcare workforce capacity, more access to novel and innovative healthcare solutions that are designed for Wyoming, research that develops these ideas, and commercialization of these innovations to ensure broad access and financial diversification. The CHS is uniquely poised to address these challenges due to the broad range of clinical disciplines represented in the college, the interdisciplinary collaborations among our divisions, strong research, entrepreneurship and focus on Wyoming's unique needs. Moreover, the four existing programs outlined here are already doing this work, albeit, without a coordinated approach or stable funding.

Alignment with University of Wyoming Grand Challenges, Four Pillars, Land Grant Mission, and College of Health Sciences Strategic Plan

The University of Wyoming Strategic Plan: *Breaking Through 2017-2022* focuses on meeting *Society's Grand Challenges* and creating new opportunities for faculty and student leaders in addressing questions of great societal importance. Over the past years, five central UW grand challenge themes emerged including "Rural and health issues." More recently, the University has announced *Four Pillars* of becoming more digital, more entrepreneurial, more interdisciplinary and more inclusive. The RHII aligns with the university's strategic plan and the *Four Pillars*. The RHII will accelerate rural resilience by using innovative approaches, such as the ESRN, ECHO, Hub, and WTN to identify community needs,

College of Health Sciences, University of Wyoming
Rural Health Innovation Institute

leverage existing resources, identify appropriate strategies, and translate research to practice for addressing healthcare needs. Thus, we will build transdisciplinary capacity and bring entrepreneurial opportunities to Wyoming communities to help rural and frontier areas thrive in the coming years. We will leverage CHS, UW and community expertise in all areas of health and healthcare for addressing Wyoming well-being. Recognizing our heritage as the state's flagship and land-grant university, the RHII will enhance the state's economic and community development, while being a resource for the state. This transdisciplinary approach is rooted in the identification of state and community needs, application of new or evidence-based strategies for addressing the needs and economic development related to community health and healthcare. Further, the development of this institute aligns with the CHS strategic plan for:

- Serving as a resource for clinicians, practitioners, and teachers who seek information
- Conducting research to advance clinical practice
- Advancing health research capacity through strategic statewide partnerships
- Developing innovative health care solutions that improve healthcare quality
- Stimulating community health and economic stability via research, development, and healthcare policy
- Providing "practice-ready" practitioners, clinicians, and teachers to meet the state's workforce needs

The RHII will exemplify the mission of a land grant institution and become the model of rural health innovation for the nation and beyond.

Strategic Solution

Each of the CHS divisions focus on unique aspects of health sciences and each has excellent training programs that allow them to fulfill their teaching, research and service missions. Building on these fundamental programs, the college must now develop innovative initiatives to meet the economic and healthcare needs of our rural communities and confront the pervasive healthcare challenges faced by Wyoming residents. The divisions have tried to address these challenges individually. However, these efforts have tended to be intermittently funded and isolated. This approach has led to a number of programs that often have limited impact and reach. Further, many of these programs have duplicative elements that have limited interdisciplinary buy-in. This also limits the longevity of these programs as there is little focus on commercialization of the intellectual property developed. Finally, this restricts the ability of these projects to be inclusive of a wide range of stakeholders as they are often limited to a narrow segment of the population.

Fortunately, significant opportunities exist to pursue a more coordinated approach to healthcare innovation, entrepreneurship and research. We propose establishing the Rural Health Innovation Institute that is composed of several key programs within CHS, which are currently under strategic review by the University. This includes UW ECHO (ECHO), Wyoming Telehealth Network (WTN), The Equality State Research Network (ESRN) and The Wyoming Health and Bioscience Innovation Hub (Hub). The Institute will coordinate these programs to create a stable infrastructure and provide incentives for faculty and a diverse set of stakeholders. The Institute will support faculty and communities to engage in collaborative research and commercialization of intellectual property to meet rural health grand challenges in our digital age.

With this strategic investment in infrastructure, each of the divisions will continue to fulfill their educational missions and use the resources of the RHII to pursue innovative opportunities that align with the UW Strategic Plan and the *Four Pillars*. This includes new inter-departmental collaborations that provide access to critical resources and expertise that will enhance all phases of research (bench to bedside), commercialization of innovations and ensure greater inclusion of all stakeholders in this work. That is, this institute will be the infrastructure to accelerate rural health innovation, research, and entrepreneurship within UW. This initiative will attract new funders and partners in and beyond

College of Health Sciences, University of Wyoming
Rural Health Innovation Institute

Wyoming. The University will realize a return on its investment. As proof of concept, during the last three fiscal years, the Wyoming Institute for Disabilities leveraged \$1,004,886 of University funds to generate an additional \$14,320,982 of external funding. The RHII programs are described below with a focus on their key outcomes (e.g., research productivity, clinical reach and/or key innovations). See attached logic models (attachments A and B) for list of activities and outcomes.

Programs Under Strategic Review

The ***Wyoming Telehealth Network*** supports healthcare entities, providers, and specialists to implement best-practices and improve health outcomes for Wyoming residents, through professional development, collaboration, and leveraging of telecommunications technology. The network currently engages with 2,350 healthcare providers including specialties in primary care, mental health, allied health, public health nursing, diabetes educators, public health professionals and more. Faculty and staff represent the college and university on statewide committees to include the Wyoming Broadband Taskforce and Wyoming Healthcare Taskforce, legislatively mandated for healthcare improvement. The Network is a collaboration with the Wyoming Department of Health and state partners including the Wyoming Medical Society, the Hospital Association, and the Wyoming Primary Care Association. The CHS currently delivers and facilitates the delivery of interdisciplinary telehealth services to all counties in Wyoming. Telehealth services have been delivered by the CHS since 2012, and has expanded since the pandemic:

- 308,790 participants in 2020, increased from 20,787 in 2019
- 52,051 clinical meetings in 2020, increased from 1,286 in 2019
- 11,706,773 telehealth meeting minutes to date in 2020.

WTN also provides significant education and outreach to interdisciplinary health providers including hospitals, federally qualified health clinics, individual providers and community education and prevention specialists (e.g.: nutritionists and diabetes educators):

- Facilitation of the current 18 organizations and 148 participants in the Telehealth Consortium that is legislatively mandated
- Administration of HIPAA-secure telehealth platform for 1,944 active users (up from 404 last year)
- Completion of provider survey/needs assessment to inform state practice (attachments C)
- Technical assistance to 577 Wyoming telehealth providers from 28 counties
- Delivery of 23 webinars focusing on best practices in virtual health for 545 participants

Stable funding will permit the expansion of telehealth services offered by the College to include interdisciplinary care by pharmacy, nursing and social work faculty. It will also ensure that all providers in Wyoming have access to a University resource that allows them to provide services in a way that works for our state, and it will provide a resource to our students to develop their telehealth skills while being trained. Moreover, alignment with the other programs in this proposal will permit additional innovations and research that will allow for further innovations.

The ***Equality State Research Network (ESRN)*** is a statewide network committed to engaging in community-based research to improve the overall health of Wyoming residents. The ESRN incorporates community engagement, quality improvement, and scientific inquiry to improve health problems in Wyoming. Currently, priorities of the network include the studying the impact of COVID-19 on telehealth practices as well as the discipline specific outcomes related to direct service delivery. Initial key accomplishments in its first year of operations include:

- Startup funding from Patient Centered Outcomes Research Institute (PCORI): 2-year Eugene Washington Engagement Award (2019-2021).

College of Health Sciences, University of Wyoming
Rural Health Innovation Institute

- 4 extramural projects funded (remote physical therapy, opioid screening, Chronic Obstructive Pulmonary Disease, remote continuous glucose monitoring for diabetes), 2 SBIR grants submitted.
- 5 internally funded projects on COVID, Telehealth utilization, and patient telehealth experience.
- 2 Community Pilot Awards to support community-based practice research; A second round of funding is being announced soon. Existing awards have led to two publications from junior faculty, one grant and a newly formed partnership with a community organization.
- 4 papers published in inaugural year of operations.
- 30 members include 10 counties, 10 researchers, 3 providers and 17 community members.
- Existing resources: REDCap™ license available to support UW and non-UW partnerships, statistical and methodological technical assistance, community engagement expertise, recruiting network, and community-based practice research trainings.
- First annual ERSN Conference in partnership with the Wyoming Telehealth Network, Wyoming Rural Health Office, Wyoming Primary Care Association, and Wyoming Public Health Association.
- Outreach opportunities for high schools to engage students with healthcare research.

By including the ESRN in the RHII, there will be more commercialization opportunities of the research it conducts. There will also be less duplication of resources between it and the HUB. Further, there will be increased access to WTN and ECHO clinical communities that will enhance healthcare innovations and research, as well as a pipeline for students to engage with UW research. Finally, there will be a pipeline for communities to engage with UW in positive way that impacts their local communities.

The **University of Wyoming ECHO** program is a virtual professional development program based on video-conference technology (Zoom™). This model builds statewide capacity as evidenced-based practices evolve, and improves health care provider, patient and family outcomes. This allows providers to provide the services their patients and clients need locally, rather than referring them out of state. Current ECHO networks focus on improving outcomes for patients, students, families and providers' competencies related to mental health, primary care, school nursing, autism, early childhood and assistive technology (Attachment D). Project ECHO® is a global initiative and is one of 5 finalists for the 2021 MacArthur Foundation's 100&Change Award, a \$100 million award which will allow UW ECHO to expand its global reach.

UW ECHO key accomplishments since 2014 include:

- First site in the nation to translate ECHO model from health to education in 2014
- Federally funded National Training Initiative will training 16 states to replicate the ECHO model to support children and families impacted by the opioid crisis.
- ECHO interdisciplinary learning participants are from 45 states, D.C., and 4 countries
- Training provided to 16,095 unduplicated and 23,337 duplicated count of participants
- 1200 hours of professional development delivered in 801 sessions.
- UW ECHO - Superhub training to universities and organizations in 17 states.
- International ECHO collaborations with 4 countries: Macedonia, India, Kenya & Tanzania
- McMurray Foundation support of UW ECHO for Integrative Care: Primary Care and Mental Health through the UW School of Nursing.
- UW ECHO delivers ECHO for Student Health, in collaboration with Johnson and Johnson Rutgers University an interdisciplinary team of Wyoming School nurses

College of Health Sciences, University of Wyoming
Rural Health Innovation Institute

- Intercollege collaborations and interdisciplinary expertise provided by faculty from the with College of Education, Counselor Education, Special Education and Educational Leadership and College of Arts and Sciences- Psychology Clinic

Inclusion of UW ECHO in the RHII will allow practitioners in our state to practice at the top of their license. Moreover, connecting clinicians-in-training to ECHO while still at UW will make it easier to stay in Wyoming as they will be connected to a community of practice. Further, novel innovations, and research opportunities will be available due to the close connection to the ERSN and Hub.

The *Wyoming Health and Bioscience Innovation Hub* (the Hub)

The Hub mission is to grow the bioscience ecosystem in Wyoming to create bioscience jobs, provide internships and educational opportunities for Wyoming students, and attract commercial partners by focusing on entrepreneurship and partnering with local business councils. The Hub consists of 4 main components: SPARK-WY, WY Healthcare Innovation Living Lab, RIDEfor8 Ventures, and the Hub BioConnect (see attachment E).

- SPARK-Wyoming is an innovation center that serves clients who have projects in the early pre-clinical phase of product development. By connecting entrepreneurs and researchers with collaborators and resources through the SPARK-Global network (50+ university-based centers) innovation and commercialization is accelerated. Accomplishments include:
 - Funded 17 projects from four UW colleges, one community college, and nine start-up companies in five WY counties (\$3 million total).
 - Collaborating with ASCEND, SPARK-Calgary, SPARK-Mexico, and SPARK-CO to develop training and collaborative research projects
- Wyoming Healthcare Innovation Living Lab (WHILL) is a private, non-profit organization that works with ESRN to conduct outpatient-based clinical trials and evaluate practice innovations. WHILL tests and implements cutting edge, innovative technologies to advance healthcare in Wyoming and the world. Partnerships include: Biogen (global neuroscience company), Spiral Health (health screening technology firm), ProtoKinetics (gait analysis hardware to prevent falls in older adults), BurstIQ (blockchain data management company), Canary Speech (AI Speech recognition and screening platform) and Vision Systems (eye tracking based health screening company).
- RIDEfor8 Ventures is a private venture capital fund and investment firm focused on human and animal health start-up biotech companies centered in Casper WY. Core accomplishments include establishing the Casper Bio-Innovation Center, funding a start-up company and helping a medical device company relocate to Casper
- HUB BioConnect supports entrepreneurial projects to include support for pharmaceutical and bioscience companies in Cody, Jackson, Casper, and Laramie

Including the Hub in the RHII will provide a critical basic research component to the Institute. There will be reduced overlap with the ESRN and coordination of innovations. The entrepreneurial focus of the Hub will serve all programs listed here, and the CHS and University more broadly.

In conclusion, the College of Health Sciences, with strong academic programs and key initiatives, is strategically positioned to implement the RHII to address Wyoming's healthcare and economic diversity needs and become a national and international model for rural health innovation. By creating the RHII based on these four programs, we will be able to synergistically enhance the current activities that will accelerate the research conducted by our faculty, while creating more infrastructure to support practitioners in our state. Ultimately, this will improve the health and wellbeing of our residents, making the RHII a premier institute in our state and a model for rural health innovation nationally.

College of Health Sciences, University of Wyoming
Rural Health Innovation Institute

APPENDICES

Appendix A: Alignment with UW Four Pillars Diagram

Appendix B: Rural Health Innovation Initiative Logic Model

Appendix C: Telehealth Survey Reports

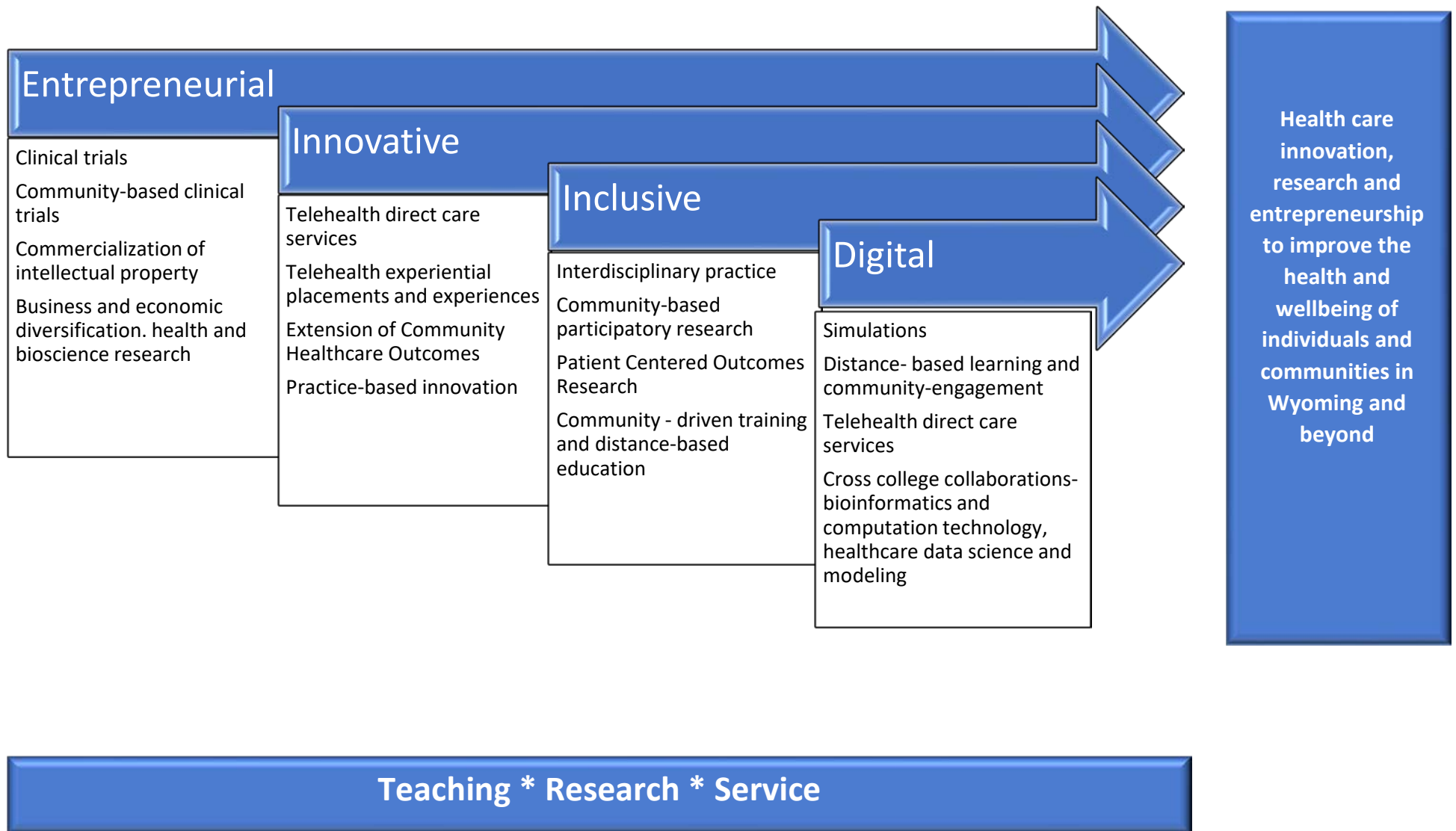
Appendix D: University of Wyoming ECHO Programs

Appendix E: Bioscience Innovation Hub Diagram

Appendix B

Rural Health Innovation Initiative Logic Model

Rural Health Innovation Institute

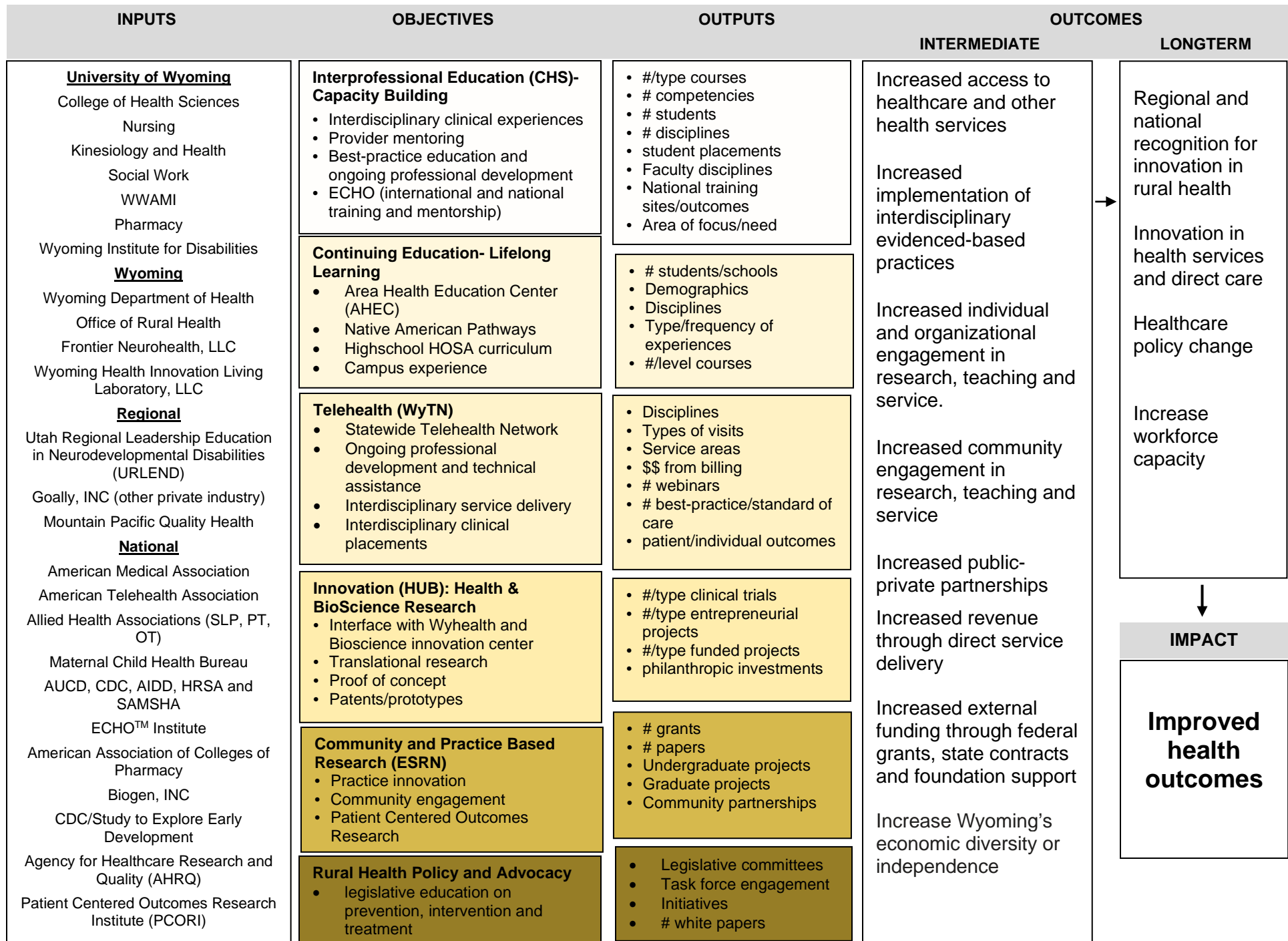


Appendix C

Telehealth Survey Reports

Rural Health Innovation Institute

Purpose: To improve the health outcomes with digital, entrepreneurial, interdisciplinary and inclusive approaches to research, teaching and service.



Wyoming Telehealth Provider Needs Assessment Spring 2020



This survey was created by the Wyoming Telehealth Network to assess Wyoming provider telehealth needs.

This report summarizes the 241 responses received from telehealth providers between May 13 - June 9, 2020.

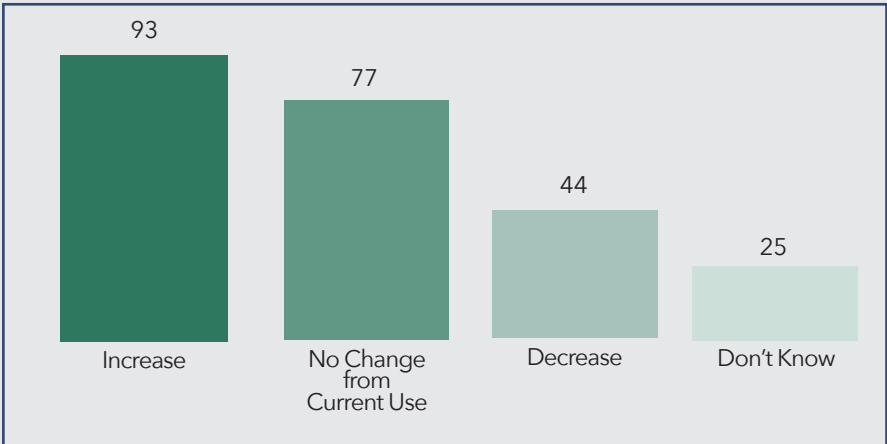
Average Years as a Healthcare Provider: 20.33
Average Years Providing Telehealth Services: 2.03

% of Current Patients are Being Seen Via Telehealth

- 61% of All Patients Being Seen via telehealth
- 24.7% of Providers Currently at 100% telehealth
- 9.4% of Providers Currently at 0% telehealth
- 59% of Providers are \geq 50% telehealth



Changes in Telehealth Use in the Next 3 Months



Providers are already using telehealth at a very high percentage and they generally anticipate staying at this level or even increasing in the near future.

Provider Experiences in Implementing Telehealth

Provider Experiences in Implementing Telehealth

- Implementation has been smooth for many participants
- Steep learning curve but time and trainings have helped
- Highly effective for certain groups of patients



Challenges in Implementation

- Learning curve for both providers and patients
- Internet connection and access
- Difficult for new patient consultations
- Engagement with patients
- Coding and billing issues

Provider Experiences in Implementing Telehealth

Opportunities when Implementing Telehealth

- Networking and education
- New reimbursement policies
- More flexible scheduling
- Can see more patients in a day
- Patients can be more comfortable and more engaged

Provider Technology Needs

- Training on videoconferencing (Zoom)
- Technical support
- Access to technology materials
- Stronger internet access/quality



Wyoming Telehealth Provider Needs Assessment Spring 2020

Patient Experiences in Implementing Telehealth

Patient Telehealth Education Needs

- Technology education
- Education on costs
- Information on the telehealth process



Patient Technology Needs

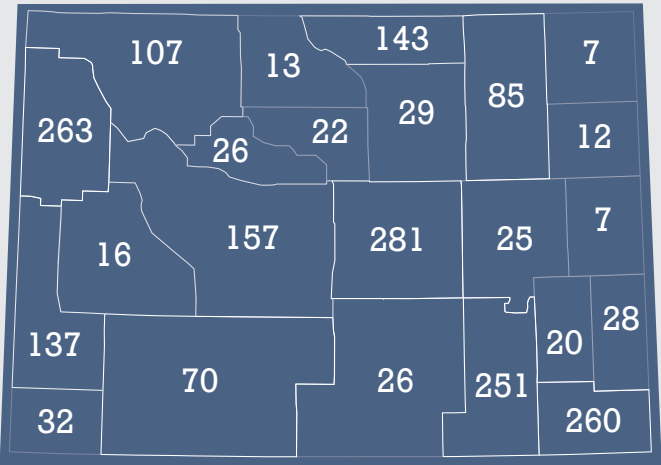
- Training/support for videoconferencing/Zoom
- Access to technology devices
- Increased internet access

State Level Changes to Support Telehealth Implementation

- Expanding services such as Medicaid and insurance continuing approval of services, financial assistance to patients and clinics, continuing education
- Insurance reimbursement, flexibility, coverage, and billing
- Clear rules and regulations regarding telehealth
- Increased service access, specifically internet access across the state



Wyoming Providers Using Telehealth



*by county, as of June 15, 2020

Provider specialties include:

- Mental Health Counseling
- Family Practice
- Physical Therapy
- Speech Language
- Education
- Clinical Psychology
- Internal Medicine
- Occupational Therapy
- Public Health
- Nursing
- Orthopedics
- Psychiatry

Wyoming Telehealth Network

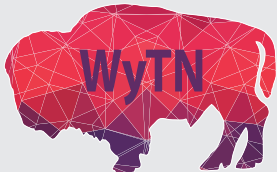
The Wyoming Telehealth Network (WyTN) increases access to telehealth technology, resources, and education so that Wyoming residents can have better healthcare.

The WyTN is a legislatively mandated activity of the Wyoming Telehealth Consortium and is financially supported through the Wyoming Department of Health, Office of Rural Health and the College of Health Sciences, Wyoming Institute for Disabilities.

The WyTN acts as a hub to connect everyone with an interest in telehealth. Additionally, the WyTN improves implementation of telehealth in healthcare practices through technical and procedural support and technology provision.



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Appendix D

University of Wyoming ECHO Programs

The Impact of COVID-19 on Wyoming Medical Practices: A Snapshot of Primary Care in Wyoming

This survey was created by the Wyoming Medical Society in collaboration with the Wyoming Telehealth Network to understand the impact of COVID-19 on primary care providers and practices in Wyoming.

This report summarizes the 83 responses received from Wyoming primary care physicians between March 19 - April 8, 2020.

Points the state should emphasize:



Staying Home



Social Distancing



Testing

Current Telehealth Use

Telehealth use is on the rise, however many appointments are being deferred.

54% of respondents report currently using telehealth in their practice

73% report having to defer well-visits and routine follow-up with patients due to the pandemic

58% report that they have encouraged patients to consider telehealth

Telehealth Educational Needs

Providers are seeking information and additional resources.

- Rapidly changing billing and reimbursement practices
- Patient access
- Resources on telehealth use and technology
- Practice policies and procedures



Supply and Materials Access

Providers indicate significant issues and concerns.

84% report disruptions in current supply chain or procurement of materials, specifically personal protective equipment (PPE)

86% report they have not been able to identify alternatives for purchasing supplies



Practice & Financial Impact

Practice disruption is the current norm, and providers are experiencing financial strain which they expect to continue.

70% of respondents report an increase in cancellations

46% report and anticipate significant administrative interruptions

62% report they are currently experiencing or anticipating cash flow issues

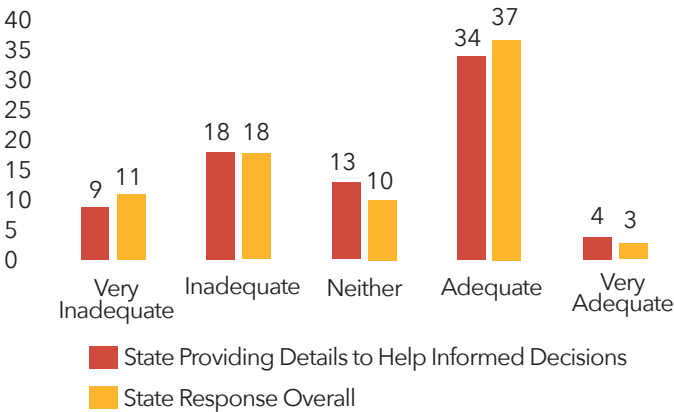


State Response

Wyoming providers feel the state response thus far has been adequate.

49% of respondents feel details from the state to help make informed patient and practice decisions have been at least Adequate or Very Adequate

Assessment of State Response to COVID-19



Resources for Physicians

Wyoming Medical Society

The Wyoming Medical Society was founded in 1903 to provide representation, advocacy and service to Wyoming physicians. We strive to be an efficient, member-driven, responsive organization, capable of anticipating and responding swiftly to the changing health care environment. WMS serves our membership, and their patients, and works to improve the health of Wyoming's citizens.

The Wyoming Medical Society is, and always will be, a staunch advocate for physicians.

Join us each Tuesday when WMS will feature Wyoming physicians to talk about experiences in testing, treating and preparing for COVID-19. Learn from your colleagues, ask questions, share resources and rely on your Wyoming medical community.

www.wyomed.org/resources/covid-19/education/



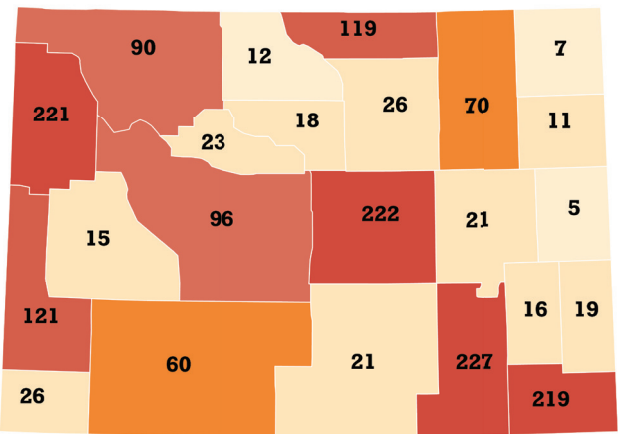
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Wyoming Providers Using Telehealth*



*by county, as of April 8, 2020

Education & Assistance

WyTN Zoom Videoconferencing Open Lab

The WyTN is offering an opportunity to share and receive information, suggestions, and resources about the Zoom™ platform for telehealth. Open labs via Zoom will be held on Tuesdays and Thursdays from 9:00 - 10:00 a.m. Learn more and join at:

uwyo.edu/wind/wytn/covid-19.html

Educational Webinars

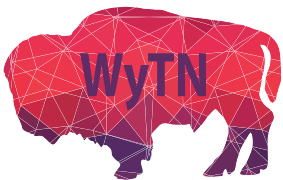
The WyTN offers educational webinars on the last Wednesday of every month from 12:00 - 1:00 p.m.

Learn more about the current topic and how to join at:

uwyo.edu/wind/wytn/wytn-webinars.html

Learn more about the Wyoming Telehealth Network at wyomingtelehealth.org

The WyTN is a legislatively mandated activity of the Wyoming Telehealth Consortium and is financially supported through the Wyoming Department of Health, Office of Rural Health and the College of Health Sciences, Wyoming Institute for Disabilities



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Appendix E

Bioscience Innovation Hub Diagram

University of Wyoming Project ECHO

The **Project ECHO Networks** provide ongoing support for educators, healthcare providers, families and employers to support community conversations around best practice in education, health, and disability services. The goal of these networks is to remove barriers to specialized knowledge, and improve outcomes for students, patients, and families.

Project ECHO uses an online videoconferencing model, with professionals, experts, and community members coming together to build capacity and support effective practices. With this method, educators, healthcare providers, special service providers, case managers, administrators, and families have access to expert advice right in their homes, schools, and offices.



Education: The ECHO model offers discussion and coaching opportunities with an interdisciplinary group of highly skilled educators and professionals as a way to build capacity in the application of effective practices supporting classroom, school, district, and student outcomes. Areas of focus have included autism, assistive technology, behavior supports, early childhood, educational and school leadership, career and technical education.



Health: Project ECHO® model that revolutionizes medical education and exponentially increases workforce capacity to provide best-practice specialty care and reduce health disparities. The networks are led by expert teams who conduct virtual clinics with community providers. Areas of focus have included Medicaid waiver services and student health.



Families: UW ECHO for Families is a learning community for families and caregivers supporting individuals through transition (ages 14-21). The UW ECHO for Families is the first ECHO network that provides information directly to families and can be accessed anywhere in the state.

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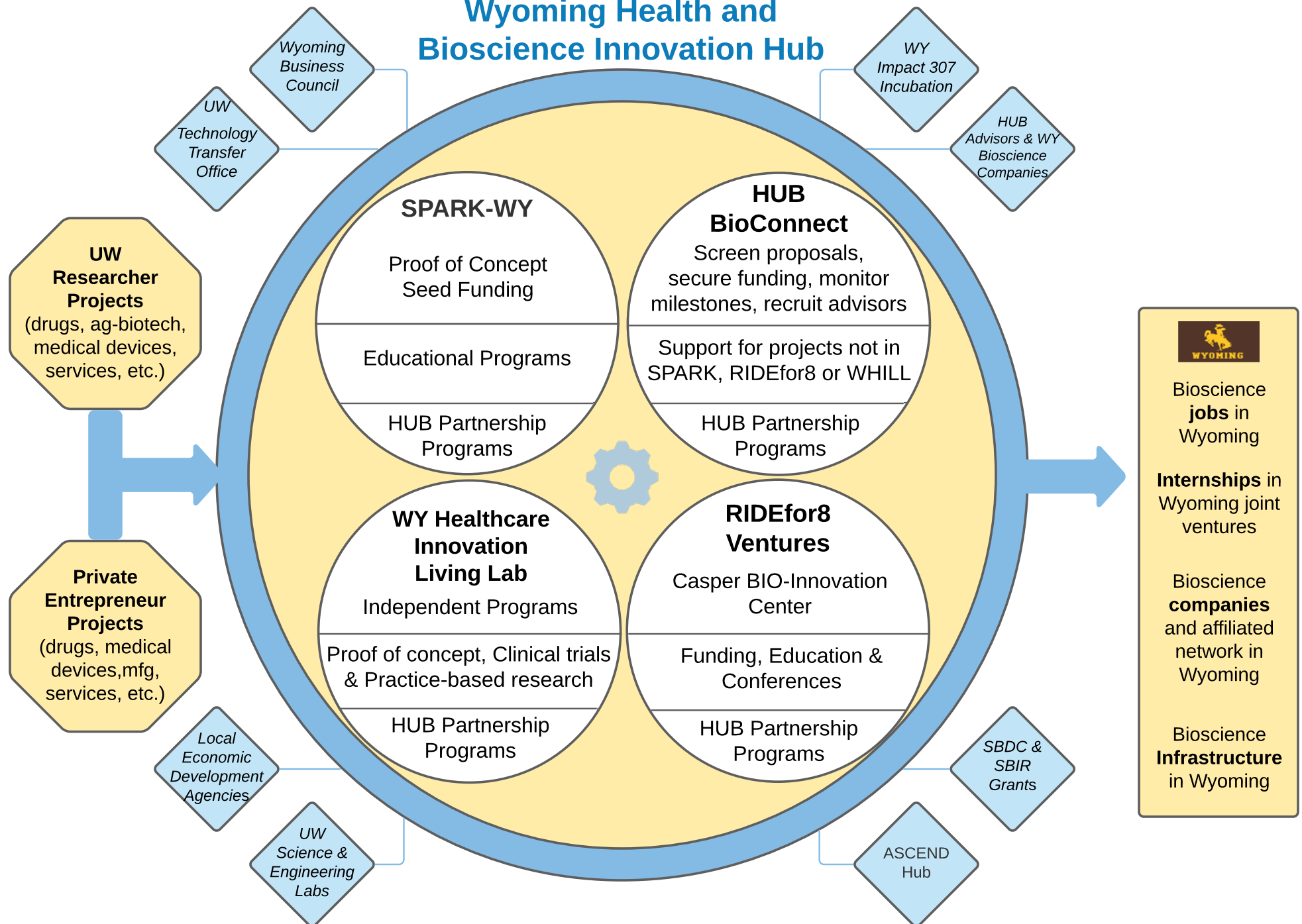
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Appendix E

Bioscience Innovation Hub Diagram

Wyoming Biosciences Ecosystem

Wyoming Health and Bioscience Innovation Hub



College of Health Sciences, University of Wyoming
Rural Health Innovation Institute

References:

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3. Strasser R, Kam SM, Regalado SM. Rural health care access and policy in developing countries. *Annual Review of Public Health*. 2016;37:395-412.
4. Schoo A, Lawn S, Carson D. Towards equity and sustainability of rural and remote health services access: supporting social capital and integrated organisational and professional development. *BMC Health Services Research*. 2016;16(1):111.
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6. Harris JK, Beatty K, Leider JP, Knudson A, Anderson BL, Meit M. The double disparity facing rural local health departments. *Annual review of public health*. 2016;37:167-184.
7. Goins RT, Williams KA, Carter MW, Spencer SM, Solovieva T. Perceived Barriers to Health Care Access Among Rural Older Adults: A Qualitative Study. 2005;21(3):206-213.

BUDGET NARRATIVE

Rural Health Innovation Initiative (RHII)

Calculated using actual salary and fringe rate for faculty (41.9%) and staff (53%) employed by the University of Wyoming (UW) and includes annual salary increases at 3% per year.

Faculty/Staff Support

- **Director Faculty - 1 FTE - \$127,710.00**

(Salary - \$90,000.00, Fringe (41.9%) - \$37,710.00 = \$127,710.00)

This position will provide oversight for the core education, training and service components of the RHII. Core activities will include state, regional and national collaborations to support current and emerging rural health initiatives. This position will participate in state level taskforces and support collaborations between the college of health sciences and state agencies, health associations and health centers. Additionally, this position will support the development of grant proposals that support interdisciplinary education, training and capacity in the college and throughout the state. This will include co-applications with agencies and organizations committed to improving rural health outcomes and healthcare provider capacity.

- **Clinical Faculty – 1 FTE - \$99,330.00**

(Salary - \$70,000.00, Fringe (41.9%) - \$29,330.00 = \$99,330.00)

- This position will provide interdisciplinary clinical expertise and student engagement for the RHII. Core activities will include the development and delivery of interdisciplinary curriculum throughout the college to support best practices in rural health and direct service delivery. Additionally, the faculty member will assist with engagement with healthcare practices and providers to support community and practice-based research as part of the Equality State Research Network.

- **Research Professor – 1 FTE - \$99,330.00**

(Salary - \$70,000.00, Fringe (41.9%) - \$29,330.00 = \$99,330.00)

- This position will guide all research and evaluation activities association the RHII to include collaborations with the ESRN and SPARK-WY grants provided through the Bioscience Innovation Hub. This will include technical support around proposals, research design, implementation, data analysis, reporting and publication.

- **Program Managers – 2 FTE - \$167,076.00**

*(Salary - \$54,600.00, Fringe (53%) - \$28,938.00 = \$83,538.00*2 = \$167,076.00)*

- **Bioscience Innovation Hub Coordinator:** This position will project coordinator for the bioscience innovation hub to include SPARK-WY, WY Healthcare Innovation Living Lab, RIDEfor8 Ventures, and the Hub BioConnect. Core activities will include facilitation of internships and educational opportunities for Wyoming students, engagement of entrepreneurs to resources, education, funding, advisors, facilities, and project management
- **Interdisciplinary Training, Education and Service Delivery Coordinator:** This position will coordinate the interdisciplinary activities association with the RHII. This will include training and capacity building efforts that support interdisciplinary care through ongoing professional development and experiential clinical opportunities. This position will support the development and delivery of statewide conference and student engagement through local HOSA chapters.

- **Business Manager - 0.5 FTE - \$35,190.00**

*(Salary - \$46,000.00, Fringe (53%) - \$24,380.00 = \$70,380.00*0.5 = \$35,190.00)*

- This position will oversee the fiscal management and office support for this initiative in conjunction with Director and CHS administration. This position will prepare financial reports, manage accounting of project expenditures, and ensure compliance with University, State and Federal regulations.

- **Grants Writer – 1 FTE - \$76,500.00**
(Salary - \$50,000.00, Fringe (53%) - \$26,500.00 = \$76,500.00)
 - This position will support the development of federal and state grants to support the initiatives for the RHII. This position will work with faculty to identify and develop grant applications that support innovative approaches to research, teaching and services.
- **Program Coordinators – 2 FTE - \$119,340.00**
(Salary - \$39,000.00, Fringe (53%) - \$20,670.00 = \$59,670.00*2 = \$119,340.00)
 - **Bioscience Project Coordinator:** This position will support the core activities of the Hub to include participant engagement, marketing and outreach for core components.
 - **RHII Project Coordinator:** This position will support the research, training and direct services delivery as part of the RHII. This includes conducting, marketing and recruitment for grant awards, conference presentations, and interdisciplinary training opportunities.

Total Faculty/Staff Support - \$724,476.00

Travel

- **Travel - \$12,000.00**
 - Funds will be used to support travel for core faculty staff to present at region and national conferences on the work of the RHII.

Total Travel- \$12,000

Materials and Supplies

- **Research/Survey Platform -Redcap - \$5,000.00.**
 - This will support data storage to support the research and evaluation activities associated with the RHII research and evaluation activities. This HIPAA secure platform will be made available to all faculty and staff engaged with the RHII and associated with Initiative objectives.
- **Technology - \$7,500.00** (\$1,500*5 computers = \$7,500.00)
Funds will support the purchase of new technology and computer for core RHII staff.
- **Meeting, Training and Marketing Materials - \$3,500.00**
 - Costs will include materials, room charges and other ancillary costs related to hosting annual and other meetings as needed.
- **Project Supplies - \$1,200.00**
 - Materials to support the successful completion of this project. Supplies include copy/printer paper, writing implements, printer toner, and staples.

Total Materials and Supplies - \$17,200.00

Other Costs/Seed Grants

- **Community and Practice Based Research Grants - \$300,000.00** (Six- \$50,000 grants to support community and practice-based research)
 - These seed awards will be designed to encourage faculty to engage in community-based participatory research that focuses on patient centered outcomes research (PCOR) and comparative effectiveness research (CER). Awardees will be expected to present to the ESRN membership, and the ESRN Conference, as well as leverage these funds to pursue larger grants. This seed money will accelerate the opportunities for our faculty to be successful researchers and develop novel solutions that will work within the rural communities of Wyoming. If used as UW supplemental salary fringe will be deducted from the total award.
- **SPARK Seed Grants - \$300,000.00** (Six-\$50,000, up to 2-year grants)
 - These awards will support early pre-clinical phase of product development through the Bioscience Innovation Hub. If used as UW supplemental salary fringe will be deducted from the total award. If used as UW supplemental salary fringe will be deducted from the total award.
- **Annual Statewide Interdisciplinary Health Conference - \$50,000.00**

- This conference will be held annually to disseminate the work conducted through the state related to rural health innovation. Tracks will be developed for research and teaching to include faculty, community member and student presentations and engagement. These costs will support a virtual conference platform and facilitation to support the conference and distance engagement/presentation.
- **HOSA – High School clubs - \$10,000.00** (10 schools - \$1k)
 - These funds will support the development and implementation of HOSA activities in high schools throughout Wyoming. Faculty and staff from the College of Health Science to promote career opportunities in the health care industry and to enhance the delivery of quality health care to all people. (Wyoming is the only state without a HOSA chapter which is an international student organization recognized by the U.S. Department of Education and the Health Science Education (HSE) Division of ACTE)
- **Area Health Education Center Support (AHEC) -\$15,000.00**
 - Funds will be used to develop and deliver on campus and virtual experience for high school students to support early engagement with interdisciplinary healthcare professions. These funds will also be used to establish an Area Health Education Center (AHEC) program to recruit, train and retain a health professions workforce committed to underserved populations.
- **Innovative Digital Technology - \$75,000**
 - Funds will be used to support purchase or development of innovative learning and clinical services technology aligned with RHII initiatives. This will include peripherals to support remote patient monitoring and diagnostic equipment for remote collaborating clinical sites. Funds can also be purchased to support simulations for CHS discipline specific curriculum in telehealth and rural health service delivery.

Total Other Costs/Seed Grants - \$750,000.00

Professional and Consulting Services

- **Stipends for External Experts \$45,000** (9 awards at \$5,000)
 - These stipends will be used to secure external expertise in the interdisciplinary practice support ongoing training and educational opportunities supported by this initiative.
- **Faculty fellowships - \$80,000** (8 awards at \$10,000)
 - These stipends will support current College of Health Sciences faculty to engage in RHII core activities of interdisciplinary course development, research, community engagement and service delivery. Faculty will be required to develop and deliver training and education opportunities that respond to emerging rural issues and state need. If used as UW supplemental salary fringe will be deducted from the total award.

Conference Speaker(s)

- **Conference Speaker(s) - \$25,000.00**
 - These funds will be used to support the costs of internationally recognized speakers at the annual conference. Speakers will represent innovators in the field of rural health and will align with key areas of focus of the RHII.

Total Professional/Consulting and Speaker Costs - \$150,000.00

Total Direct Costs Year 1 - \$1,653,676.00

Total Direct Costs Year 2 - \$1,653,676.00

Total Direct Costs Year 3 - \$1,488,308.40 - (10% reduction - external funding anticipated)

Total Direct Costs Year 4 - \$1,240,257.00- (25% reduction – external funding anticipated)

Total Direct Costs Year 5 – \$826,838.00 - (50% reduction – external funding anticipated)