

# Digital Readiness for Remote Patient Monitoring in Rural Montana

Results from the Digital Health Planning in Rural Montana Survey

Haley Cote, PharmD, BCACP, BC-ADM  
Haley.cote@umontana.edu

Erica Woodahl, PhD  
Erica.woodahl@umontana.edu

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## Executive Summary

Rural and frontier communities in Montana face persistent challenges related to access to healthcare, chronic disease burden, and social drivers of health. Remote patient monitoring (RPM) has the potential to improve chronic disease management and increase access to care in these settings; however, successful implementation depends on patient readiness, access to technology and broadband internet, affordability, and continuity within the healthcare system. This report presents findings from the Digital Health Planning in Rural Montana Survey, an assessment designed to inform RPM implementation in rural and frontier communities.

The survey included 26 participants residing in 21 rural and frontier zip codes across Montana. Approximately 85% of participants reported having at least one chronic condition, and more than 25% reported three or more chronic conditions. Hypertension was the most commonly reported condition, a finding consistent with statewide trends and one for which RPM has demonstrated clinical benefit.

Participants generally reported regular engagement with healthcare services; however, more than half reported avoiding or delaying care in the past year. Barriers to care were common and multifactorial, but the cost of care emerged as the most frequently reported barrier across multiple survey measures. Participants with commercial insurance reported the highest rates of delayed care and cost-related concerns, suggesting that factors such as cost-sharing or high-deductible health plans may influence decisions to get care in rural settings. Difficulty obtaining timely appointments and distance to care were also commonly reported. Together, these factors reinforce the potential for RPM interventions to increase access in these communities.

Participants reported broad access to general-purpose technology, including smartphones, tablets, and computers, and frequent use of common digital applications; however, access to health monitoring devices and use of clinical applications were less common. Approximately half of the participants were unsure whether health monitoring devices would be beneficial. For successful RPM implementation, this uncertainty must be addressed through education, shared decision-making, and individualized onboarding. Connectivity challenges and variability in internet reliability further support the need to assess readiness at the individual level rather than assuming population-wide digital readiness.

Pharmacists emerged as a particularly important and underutilized resource for RPM implementation in rural and frontier Montana. Participants reported frequent pharmacy visits, reliance on pharmacists for health information, greater trust in pharmacists than in other healthcare providers, and fewer access barriers to pharmacies. Evidence from the literature supports pharmacist involvement in RPM for conditions such as hypertension and diabetes. With prescriptive authority in Montana, pharmacists are well positioned to

support RPM through patient education, device onboarding, data review, medication management, and serving as an accessible point of contact between provider visits.

Overall, findings from this survey indicate that RPM holds promise as a tool to support chronic disease management and improve access to care in rural and frontier Montana. However, effective implementation will require attention to cost and benefit design, internet connectivity, device access, patient education, and trust. RPM programs should be designed as complements to in-person care rather than replacements, and should leverage multiple members of the healthcare team to optimize patient engagement, continuity of care, and program sustainability. By centering the patient experience and leveraging trusted local healthcare resources, RPM programs can be well-positioned to support chronic disease management and improve access to care in rural and frontier Montana.

## Introduction and Purpose

Rural and frontier communities in Montana face persistent health disparities, including higher chronic disease prevalence, higher rates of all-cause mortality and death from chronic disease, and lower life expectancy, compared to urban populations.<sup>1-6</sup> These disparities are influenced by limitations within the healthcare delivery system, such as reduced access to primary and specialty care, variations in the quality of care, healthcare professional shortages, and rural hospital closures.<sup>1,2</sup> Qualitative research has identified challenges related to stigma, influence of rural identity, system complexity, fragmented care, and gaps in cultural understanding that further impact care delivery in Montana.<sup>7</sup> Beyond healthcare system barriers, rural residents face broader social and structural challenges, including higher poverty rates, limited transportation, and less access to reliable internet connectivity, all of which contribute to health outcomes.<sup>8,9</sup> Together, these factors underscore the need for care delivery models that can support ongoing management of chronic conditions while accounting for the challenges rural and frontier communities face.

Remote patient monitoring (RPM) is a digital health approach that enables patients to share health data with their healthcare providers outside of the traditional clinic setting. RPM has the potential to increase access to care and improve outcomes; however, its effectiveness depends on patient readiness, access to technology and broadband internet, digital literacy, and affordability.<sup>10-13</sup> These factors can present significant barriers to implementation and outcomes in the rural setting. The Digital Health Planning in Rural Montana Survey was designed to evaluate digital readiness for RPM implementation among residents of rural and frontier communities. Findings from this survey are intended to inform the planning and implementation of RPM programs serving rural and frontier communities in Montana.

# Methods

## Survey Design and Administration

A cross-sectional survey was developed and administered by the L.S. Skaggs Institute for Health Innovation (SIHI) – University of Montana to assess health status, access to care, technology use, and barriers relevant to RPM use in rural and frontier communities. The survey was available in both online and paper formats to support participation regardless of internet access and digital familiarity. All survey questions were written in plain language, targeted to a fifth-grade reading level, to ensure accessibility for participants with varying levels of literacy. The full survey instrument is included in the Appendix. Approval to conduct the survey was obtained from the University of Montana Institutional Review Board (IRB).

## Eligibility Criteria

Participants were eligible to complete the survey if they resided in rural Montana as defined by the Montana Department of Commerce.<sup>14</sup> Residents of the following cities were excluded by zip code: Billings, Bozeman, Butte, Great Falls, Helena, Kalispell, and Missoula. Initial eligibility was limited to those enrolled in Montana Medicaid, but due to low participation, the criteria were expanded to include all rural Montana residents, regardless of insurance status.

## Survey Timeline

The survey was launched on July 25, 2025. During early data collection, fraudulent responses were identified, prompting temporary pauses in the survey and the implementation of additional security measures. Survey participants were initially offered compensation, but due to the ongoing risk of fraud, compensation for completing the survey was eliminated. To improve recruitment, eligibility criteria were expanded as described above. The final version of the survey, with expanded eligibility, was re-launched on September 10, 2025, and remained open through October 31, 2025.

## Recruitment

Survey recruitment included direct outreach and statewide dissemination efforts. Recruitment materials were distributed to 67 health departments, clinics, pharmacies, extension offices, food banks, SNAP programs, libraries, and human resource councils across 44 Montana counties. Electronic outreach included distributing survey information and recruitment flyers via email, social media channels, and statewide partner networks and newsletters. Printed surveys were distributed through the Montana Food Bank Network Mail-a-Meal program and provided upon request to partners and individuals who requested paper format. A total of 56 printed surveys were distributed.

## Data Collection

Survey questions were designed to assess factors that may influence access to healthcare and readiness to implement RPM in rural and frontier communities. Question topics included clinical, social, and environmental needs, such as health status, chronic disease prevalence, transportation, geography, economic concerns, access and availability of care, and experiences with the local healthcare system and providers. Additional questions assessed use of technology, internet access, and perceptions of digital health tools.

## Data Analysis

Online survey responses were collected using Qualtrics and exported for analysis. Responses from paper surveys were entered manually into the same dataset to ensure consistency across data sources. Data were reviewed for completeness and validity prior to analysis. Given the small sample size and planning-focused intent of this project, statistical hypothesis testing was not conducted. Analysis was primarily descriptive and focused on summarizing participant characteristics and responses. Results are reported using counts and rounded percentages. For questions that allowed multiple responses, percentages reflect the proportion of participants selecting each option. Open-ended responses were reviewed and summarized thematically.

## Results

The findings presented in this report are intended to inform planning and implementation of RPM and digital health programs serving patients living in rural and frontier Montana, rather than to estimate prevalence or draw statewide conclusions.

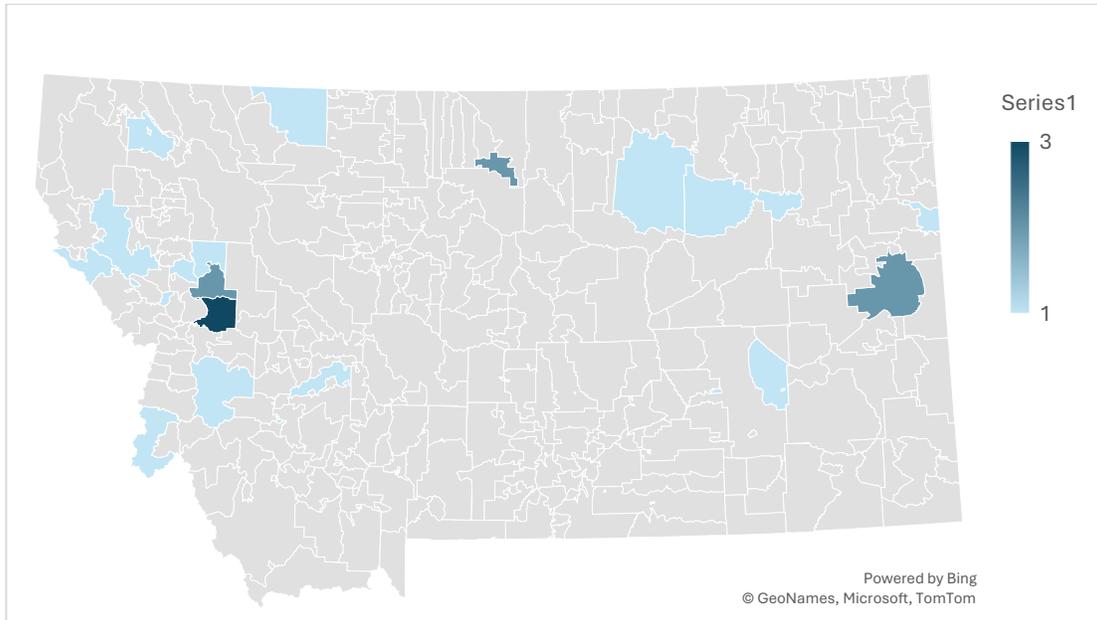
### Participant Characteristics

A total of 26 participants, from 21 rural and frontier zip codes completed the survey (A1). Eighty-five percent of responses were collected via the online survey. Only four participants responded to the print survey, yielding an approximate 7% response rate. No participants reported difficulty reading or understanding written information.

#### *Rurality of Participants*

All participants lived in areas classified as rural according to the Montana Department of Commerce definition.<sup>14</sup> The majority of participants, including all individuals who completed the print survey, lived in highly rural or frontier areas, as defined by Rural-Urban Community Area (RUCA) Codes (Figure A1).

Figure 1. Participant Distribution by Zip Code



### Demographics and Characteristics

Participant demographics and characteristics are summarized in Table 1. The average age of participants was approximately 51 years, with just over half aged 50 or older. Most respondents identified as female and white. Participants reported a range of insurance types, reflecting diverse coverage across rural and frontier Montana. Commercial insurance, Medicare, and Montana Medicaid were the most common insurance types. One participant reported having no health insurance.

Table 1: Demographics and Characteristics of Participants

	Online Survey (N=22)	Print Survey (N=4)	Combined (N=26)
<b>Age* – yr</b>	51.95 ± 17.3	48.5 ± 13.0	51.4 ± 16.5
<b>Gender Identity - no. (%)</b>			
Female	13 (59)	2 (50.0)	15 (58)
Male	7 (32)	2 (50.0)	9 (35)
Non-binary	1 (5)	0 (0)	1 (4)
Prefer Not to Say	1 (5)	0 (0)	1 (4)
<b>Race - no. (%)</b>			
White	19 (86)	2 (50)	21 (81)
American Indian or Alaska Native	1 (5)	2 (50)	3 (12)
Prefer Not to Say	2 (9)	0 (0)	2 (8)
<b>Insurance Enrollment - no. (%)</b>			
Montana Medicaid	4 (18)	2 (50)	6 (23)
Medicare~	6 (27)	1 (25)	7 (27)
Commercial Insurance^	10 (46)	0 (0)	10 (39)
Other#	2 (9)	1 (25)	2 (12)

\*See appendix table A1 for breakdown of participants by age range. ~With or without supplemental insurance. ^Includes employer-sponsored and marketplace health insurance. #Includes IHS, TRICARE, VA, other military coverage, and, uninsured  
 Note: Percentages may not total to 100 due to rounding

### Social Drivers of Health

Participants denied concerns related to housing stability or utility access, but food insecurity was commonly reported. Ten participants (39%) reported often or sometimes worrying that food would run out before they could get more. This was most common in participants enrolled in Montana Medicaid, suggesting the need for additional nutrition-related support in this population.

### Health Status and Healthcare Utilization

Health status and healthcare utilization are outlined in Figure 2 and Table 2.

#### Health Status and Chronic Conditions

Most survey participants (85%) reported having at least one chronic condition, and over one-quarter reported having 3 or more conditions. Participants enrolled in Montana Medicaid had the highest incidence of comorbidities, with an average of 2.5 chronic conditions per participant. Despite the high prevalence of chronic conditions, most survey participants described their overall health status as good or average.

Hypertension was the most commonly reported chronic condition, affecting approximately 39% of participants, which is slightly higher than the statewide prevalence of 32.2%.<sup>15</sup> Of those with hypertension, the majority had commercial insurance (40%) or Medicare (30%). Only three participants reported diabetes, two of whom had Montana Medicaid. Detailed disease prevalence by insurance enrollment can be found in Appendix Table A2.

Half of all survey participants reported at least one behavioral health condition, such as depression, anxiety, or bipolar disorder. These conditions were particularly common among participants with Montana Medicaid, with approximately 70% reporting at least one behavioral health diagnosis.

Figure 2. Chronic Condition Prevalence Among Survey Participants

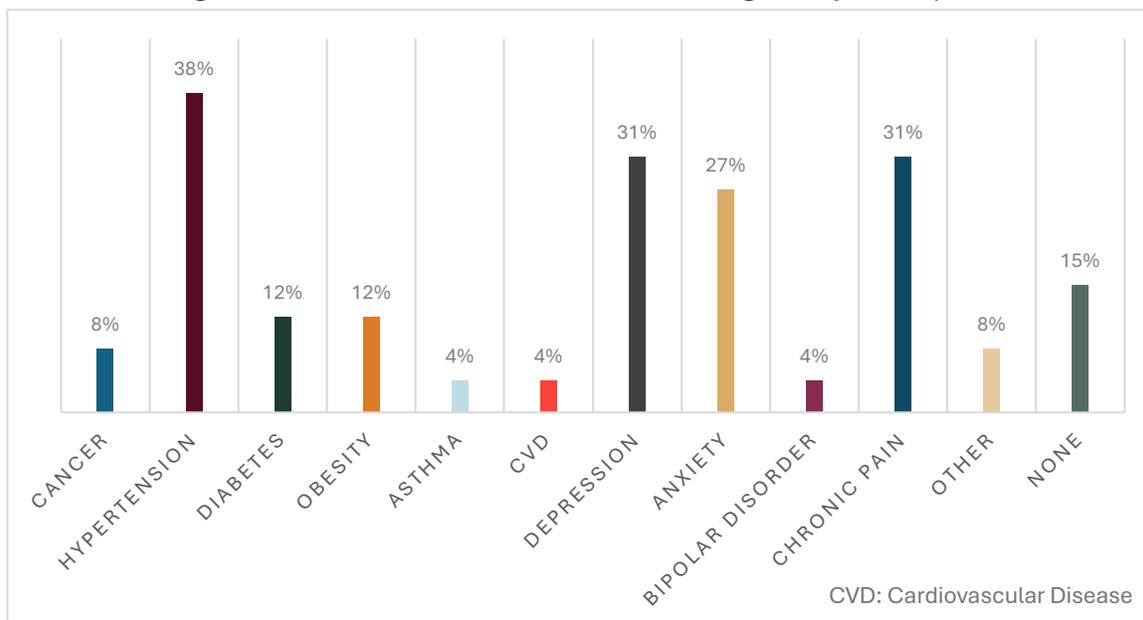


Table 2. Health Status and Utilization by Insurance Enrollment

	MT Medicaid (N=6)	Medicare (N=7)	Commercial (N=10)	Other (N=3)	All Participants (N=26)
<b>Avg. Chronic Conditions*</b>	2.5	1.7	1.5	1.3	1.8
<b>Number of Chronic Conditions - no. (%)</b>					
0	0 (0)	1 (14)	2 (20)	1 (33)	4 (15)
1	1 (17)	2 (29)	3 (30)	1 (33)	7 (27)
2	1 (17)	3 (43)	4 (40)	0 (0)	8 (31)
3	4 (67)	0 (0)	0 (0)	1 (33)	5 (19)
4	0 (0)	1 (14)	1 (10)	0 (0)	2 (8)
<b>Self-Reported Health Status - no. (%)</b>					
Excellent	0 (0)	0 (0)	2 (20)	0 (0)	2 (8)
Good	4 (67)	4 (57)	5 (50)	2 (67)	15 (58)
Average	2 (33)	3 (43)	3 (30)	1 (33)	9 (35)
Poor	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
<b>Frequency of Provider Visits - no. (%)</b>					
At least monthly	3 (50)	0 (0)	1 (10)	0 (0)	4 (15)
Every 2-3 months	2 (33)	1 (14)	4 (40)	1 (33)	8 (31)
Every 6-12 months	1 (17)	6 (86)	4 (40)	1 (33)	12 (46)
Less than yearly	0 (0)	0 (0)	1 (10)	0 (0)	1 (4)
Never	0 (0)	0 (0)	0 (0)	1 (33)	1 (4)
<b>Daily Prescription Medications - no. (%)</b>					
0	0 (0)	0 (0)	4 (40)	1 (33)	5 (19)
1-2	3 (50)	3 (43)	4 (40)	1 (33)	11 (42)
3-4	1 (17)	3 (43)	1 (10)	0 (0)	5 (19)
5 or more	2 (33)	1 (14)	1 (10)	1 (33)	5 (19)
<b>Frequency of Pharmacy Visits - no. (%)</b>					
At least monthly	5 (83)	2 (29)	2 (20)	1 (33)	10 (39)
Every 2-3 months	1 (17)	3 (43)	4 (40)	0 (0)	8 (31)
Every 6-12 months	0 (0)	2 (29)	1 (10)	0 (0)	3 (12)
Less than yearly	0 (0)	0 (0)	2 (20)	0 (0)	2 (8)
Never	0 (0)	0 (0)	1 (10)	2 (67)	3 (12)

\*Average number chronic conditions per participant  
 Note: Percentages may not total to 100 due to rounding

### Medication Use

Most participants reported taking at least one prescription medication daily, and nearly 20% are taking more than five medications daily. The number of participants taking multiple prescription medications was evenly distributed across age groups and insurance enrollment. Approximately 40% of participants visit the pharmacy once a month, which may provide an opportunity to increase access to evaluation between clinic visits. Monthly pharmacy visits were most common for those enrolled in Montana Medicaid, likely secondary to the benefit design.

### Healthcare Utilization

Participants reported ongoing engagement with healthcare services, with 92% reporting provider visits at least every 6-12 months and approximately half reporting more frequent

visits. Those enrolled in Montana Medicaid reported the highest utilization, suggesting a greater need for ongoing monitoring and follow-up in this population.

Over half (53.8%) of participants reported avoiding or delaying care in the last 12-months. Reports of delayed care were most common in participants with commercial insurance, raising questions about how factors such as cost-sharing, benefit design, or scheduling may influence the decision to access timely healthcare in rural settings. Barriers to care are reviewed in greater detail in subsequent sections of this report.

## Barriers to Accessing Healthcare

Participants were asked a series of questions designed to assess common barriers to accessing healthcare in rural and frontier communities, shown in Table 3. All participants reported at least one barrier, with an average of 6.5 barriers reported per person. The most common barriers reported were cost of care (81%), availability of timely appointments (73%), and distance to the clinic (65%).

Table 3. Barriers to Accessing Healthcare Reported by Survey Participants

Participant Reported Frequency* – no. (%)^	Often	Sometimes	Never
<b>Geographic and Transportation Barriers</b>			
Distance to the clinic	6 (23)	11 (42)	9 (35)
Distance to the pharmacy	1 (4)	4 (15)	21 (81)
Lack of reliable transportation	3 (12)	2 (8)	18 (69)
<b>Scheduling and Availability Barriers</b>			
Clinic hours are not compatible with personal schedule~	4 (16)	10 (40)	8 (32)
Pharmacy hours are not compatible with personal schedule	2 (8)	11 (42)	11 (42)
Difficulty obtaining timely appointments	5 (19)	14 (54)	6 (23)
Difficulty scheduling appointments~	2 (8)	12 (48)	9 (36)
Inability to take time off from work	5 (19)	5 (19)	10 (39)
<b>Caregiving Responsibilities</b>			
Lack of childcare support	0 (0)	4 (15)	12 (46)
Lack of caregiving support for family members	2 (8)	1 (4)	11 (42)
<b>Financial Barriers</b>			
Concerns about the cost of care	10 (39)	11 (42)	3 (12)
<b>Trust, Respect, and Communication</b>			
Lack of trust in local providers	7 (27)	6 (23)	10 (39)
Lack of trust in local nursing staff	4 (15)	7 (27)	12 (46)
Lack of trust in local pharmacists	0 (0)	3 (12)	19 (73)
Perceived lack of cultural understanding by healthcare staff	0 (0)	2 (8)	19 (73)
Feeling disrespected during healthcare encounters	1 (4)	5 (19)	16 (62)
Feeling unheard during healthcare encounters	0 (0)	9 (35)	15 (58)
Difficulty understanding health information provided	1 (4)	1 (4)	22 (85)

\*Barriers were asked in plain language and the option to select “not applicable” was available. Responses are summarized as asked in Appendix Table A3. ^Percentages are calculated using the total number of responded to each question. Unless otherwise noted, each question had 26 participants responses. ~Total responses: 25

The majority of participants who reported cost as a frequent barrier had commercial insurance. Additionally, 90% of participants who reported avoiding or delaying care described previously also cited cost as a barrier. These findings further suggest that cost-sharing or benefit design may influence decisions to seek healthcare in rural and frontier settings.

All participants enrolled in Montana Medicaid, and approximately 60% of those with commercial insurance or Medicare, reported distance to the clinic as a barrier to care. Distance barriers were reported across all RUCA codes, demonstrating the limitations of this classification system as a stand-alone indicator of healthcare access. Lack of reliable transportation was only reported by participants enrolled in Montana Medicaid. Scheduling and availability barriers were reported across insurance groups.

Fewer participants reported geographic and scheduling barriers to pharmacies than to clinics. In addition, 73% of participants reported no lack of trust in local pharmacists, but 50% reported some degree of distrust in healthcare providers in their communities. Together with the previously described visit frequency, these findings highlight the potential role for pharmacists as accessible and trusted members of the care team in rural and frontier communities.

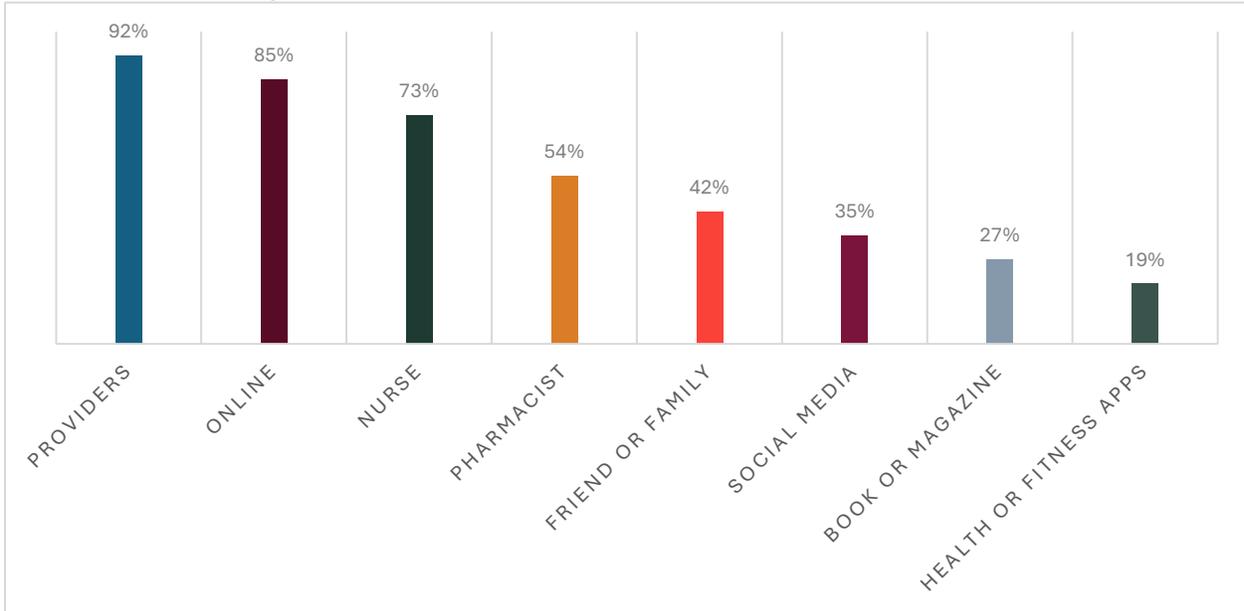
Participants were also asked to identify any additional barriers via a free-text response. Four responses were received, three related to transportation or distance to care, and one related to insurance coverage. All participants who provided free-text responses also responded to corresponding geographic, transportation, and financial barriers as “sometimes” or “often”. The participant who reported “insurance coverage” as a free-text barrier was enrolled in a commercial insurance plan obtained through the health insurance marketplace.

## Sources of Health Information

Participants reported a range of sources for obtaining health information, as shown in Figure 3.

Clinical sources, such as healthcare providers, nurses, and pharmacists, were most frequently reported. Notably, the majority of participants who reported distrust in providers, nurses, or pharmacists still reported using these sources for health information. Online sources, such as health-related websites, were also widely used. Fewer participants reported using social media, books or magazines, or health and fitness applications for health information. These findings suggest that established clinical relationships are central for disseminating health information in rural and frontier communities, but digital sources play an important supporting role.

Figure 3. Participant Reported Sources of Health Information



## Access and Utilization of Technology

### Comfort with Technology

All survey participants reported some level of comfort with technology, with most describing themselves as comfortable or very comfortable (Table 4). There was no clear relationship between comfort with technology and insurance enrollment or age (Figure A3). Participants who completed the print survey reported lower comfort with technology than those who completed the online survey.

Table 4. Reported Comfort with Technology

	MT Medicaid (N=6)	Medicare (N=7)	Commercial (N=10)	Other (N=3)	Combined (N=26)
<b>Comfort with Technology – no. (%)<sup>^</sup></b>					
Very Comfortable	5 (83)	4 (57)	6 (60)	1 (33)	16 (62)
Comfortable	1 (17)	2 (29)	4 (40)	1 (33)	8 (31)
Somewhat Comfortable	0 (0)	1 (14)	0 (0)	1 (33)	2 (8)
Not Comfortable	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)

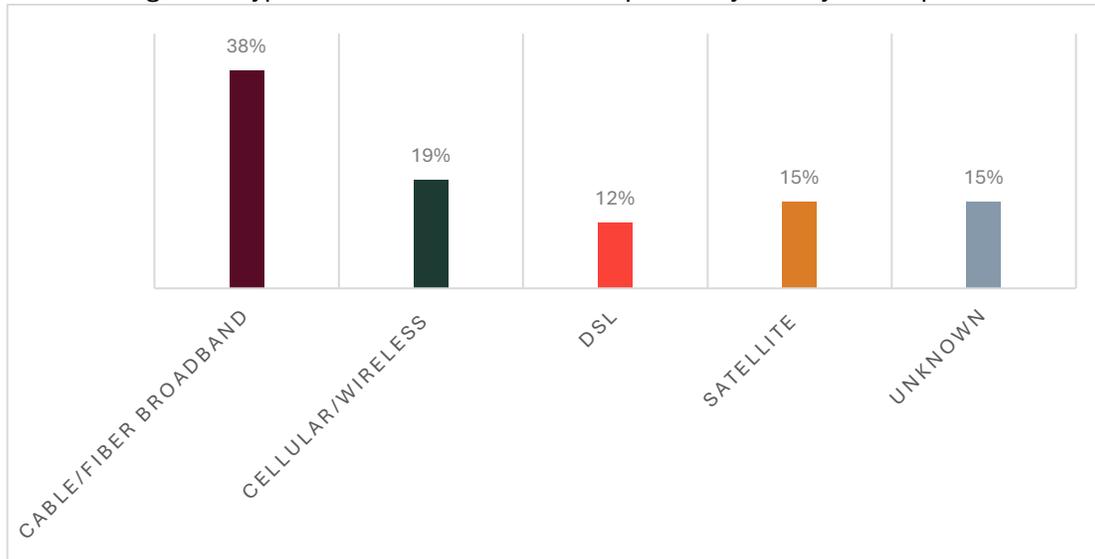
Note: Percentages may not total to 100 due to rounding

Those who responded “somewhat comfortable” were asked a follow-up question about resources to improve comfort with technology. One respondent reported family and clinical sources. The other was not interested in using technology.

### Access to Internet

Types of internet connection used by participants are shown in Figure 4. All survey participants reported having internet access at home via various connection types, with cable or fiber broadband the most common. A substantial proportion of participants reported satellite, Digital Subscriber Line (DSL), or cellular-only internet connections, which may have limitations in speed and reliability.

Figure 4. Type of Internet Connection Reported by Survey Participants



To better assess internet access, participants were asked questions specific to reliability and speed, as shown in Table 5. Only 15% of respondents reported slow internet speed that affected their use. This was most common in DSL internet users. Nearly three-quarters of respondents reported infrequent loss of internet connectivity; however, 15% reported connectivity interruptions at least once monthly, and 11% reported weekly interruptions. Participants with satellite and cellular/wireless connections reported the greatest frequency of interruptions. These findings highlight the importance of considering both connectivity reliability and user support when planning digital health programs in rural and frontier communities.

Table 5. Internet Speed and Reliability

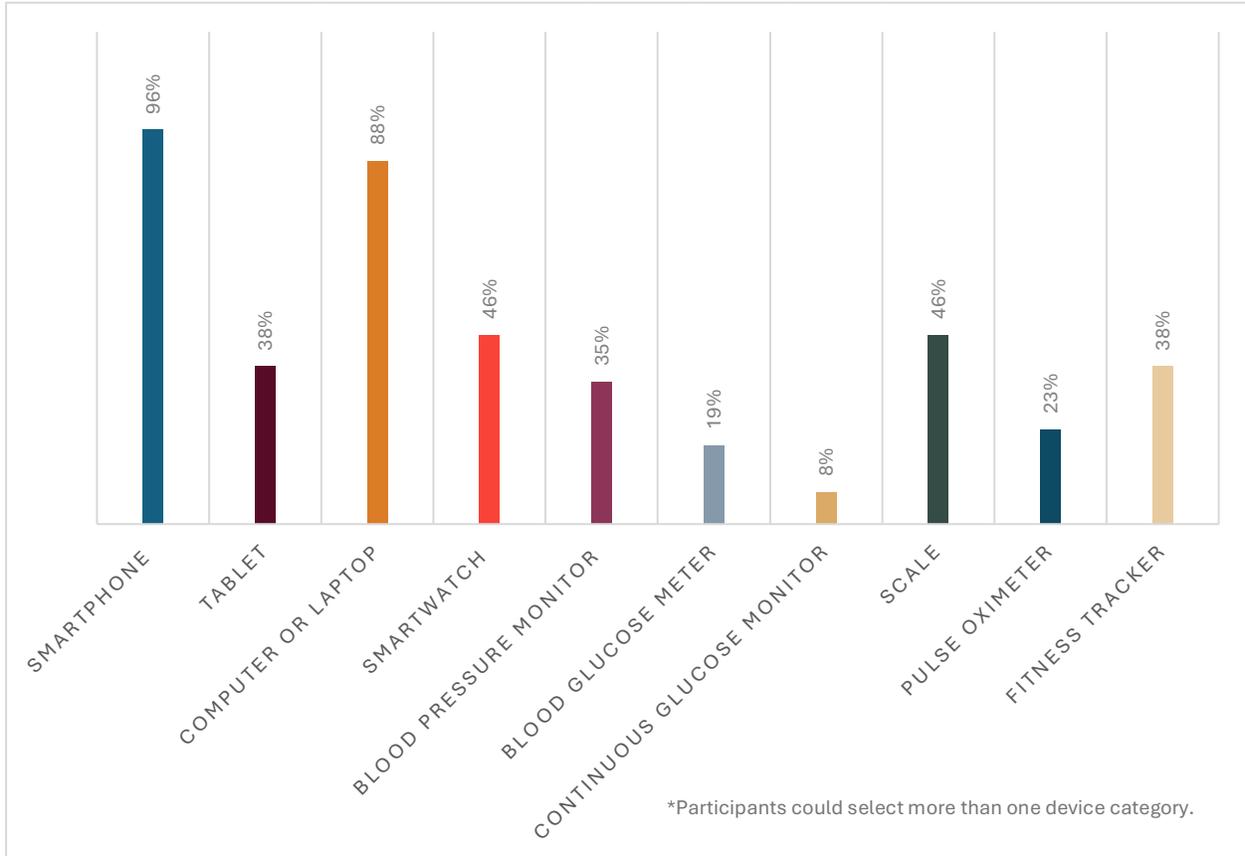
	Cable/Fiber Broadband (N=10)	Cellular/ Wireless (N=5)	DSL* (N=3)	Satellite (N=4)	Unknown (N=4)	Combined (N=26)
<b>Internet Speed - no. (%)</b>						
Very Fast	2 (20)	2 (40)	0 (0)	2 (50)	2 (50)	8 (31)
Sufficient	6 (60)	2 (40)	2 (67)	2 (50)	2 (50)	14 (52)
Slow	2 (20)	1 (20)	1 (33)	0 (0)	0 (0)	4 (15)
<b>Frequency of Interruptions in internet connection - no. (%)</b>						
Never	2 (20)	0 (0)	1 (33)	1 (25)	1 (25)	5 (19)
Rarely	6 (60)	4 (80)	2 (67)	0 (0)	2 (50)	14 (54)
At least monthly	1 (10)	0 (0)	0 (0)	2 (50)	1 (25)	4 (15)
At least weekly	1 (10)	1 (20)	0 (0)	1 (25)	0 (0)	3 (12)
Daily	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)

Note: Percentages may not total to 100 due to rounding

### Access to Technology

Participants were asked about access to a variety of general-purpose and health monitoring devices, outlined in Figure 5. All survey participants reported having access to at least one device category listed in the survey question, with an average of 4.6 categories per participant. All participants reported using either a smartphone, tablet, or computer, or a combination of the three, indicating broad access to general-purpose devices in the survey population.

Figure 5. Device Use Reported by Survey Participants \*



Use of health monitoring devices, including blood pressure monitors, glucose meters, pulse oximeters, scales, and fitness trackers, varied by insurance enrollment and chronic condition (Tables A4 and A5). Nearly three-quarters of participants enrolled in Medicare reported using at least one health monitoring device, while very few participants enrolled in Montana Medicaid had access to health monitoring devices.

Patterns of device use generally aligned with reported chronic conditions. For example, blood pressure monitors were most common in participants with hypertension. However, not all participants reported access to the devices needed to monitor their condition, revealing potential gaps in access for patients who may require monitoring.

### Perceptions of Health Monitoring Technology

Perceived benefits and concerns with using health monitoring devices are shown in Table 6. Approximately 42% of survey participants thought health monitoring devices would be beneficial for their health, while 46% were unsure of the benefit. Only a small proportion of participants (12%) did not believe health monitoring devices would be beneficial.

Cost was the primary concern related to the use of health monitoring devices at home. This was less frequently reported among participants enrolled in Montana Medicaid, which may be reflective of the lower prevalence of conditions that require the type of monitoring devices often not covered by insurance.

Overall, nearly half of the participants had no concerns about using health monitoring devices. Notably, one participant reported that using home monitoring devices results in increased anxiety, which is also commonly reported in the clinic setting. This finding demonstrates the importance of patient selection and shared decision-making when implementing remote monitoring care plans.

Table 6. Perceived Benefits and Concerns with Health Monitoring Devices

	MT Medicaid (N=6)	Medicare (N=7)	Commercial (N=10)	Other (N=3)	All Participants (N=26)
<b>Perceived Benefit of Health Monitoring Devices - no. (%)</b>					
Beneficial	5 (83)	3 (43)	2 (20)	1 (33)	11 (42)
Unsure	1 (17)	3 (43)	7 (70)	1 (33)	12 (46)
Not Beneficial	0 (0)	1 (14)	1 (10)	1 (33)	3 (12)
<b>Reported Concerns with Health Monitoring Devices* - no. (%)</b>					
Cost of devices or related expenses	1 (17)	4 (57)	3 (30)	2 (67)	10 (39)
Time required to use monitoring devices	0 (0)	0 (0)	1 (10)	1 (33)	2 (8)
Concerns with result accuracy	1 (17)	1 (14)	0 (0)	0 (0)	2 (8)
Difficulty using the devices	1 (17)	1 (14)	0 (0)	0 (0)	2 (8)
Lack of access to necessary devices	1 (17)	1 (14)	0 (0)	0 (0)	2 (8)
Lack of reliable internet to share results	0 (0)	1 (14)	1 (10)	0 (0)	2 (8)
Concerns sharing results with providers	1 (17)	0 (0)	0 (0)	0 (0)	1 (3.8)
Perceived lack of need for monitoring devices	1 (17)	1 (14)	2 (20)	1 (33)	5 (19)
No concerns	3 (50)	2 (29)	5 (50)	2 (67)	12 (46)

\*Participants could select more than one concern

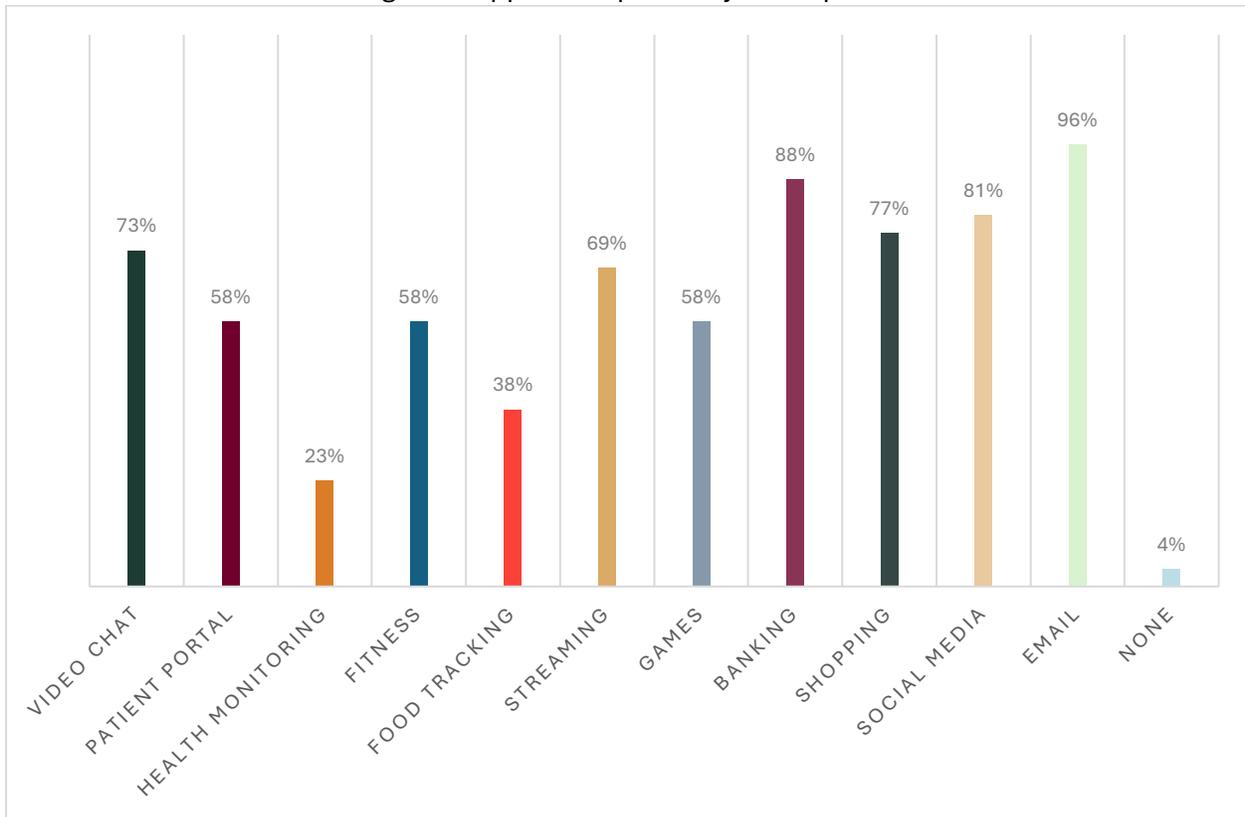
Note: Percentages may not total to 100 due to rounding

### Application Use

Use of smartphone and tablet-based applications (apps) is summarized in Figure 6. All but one participant reported using at least one type of app. Non-health-related apps, such as email, banking, social media, shopping, and streaming apps, were commonly used, indicating broad familiarity with available apps.

Approximately 60% of participants reported using patient portal apps, suggesting experience accessing health information or communicating with providers via digital platforms. In contrast, fewer participants used health monitoring apps, but over half reported using fitness apps, highlighting greater familiarity with consumer health and wellness technology than with clinical monitoring tools.

Figure 6. App Use Reported by Participants



### Access to Telehealth

Participant preference for visit type is shown in Table 7. Nearly all survey participants (96%) reported preferring in-person appointments with their healthcare provider; however, about half reported audio/video telehealth visits were also acceptable. Fewer participants found audio-only telehealth visits acceptable and approximately 12% of respondents were not interested in telehealth visits. Free-text responses aligned with this finding, although some participants stated telehealth would be acceptable if in-person visits weren't available.

Participants enrolled in Medicare and those with commercial insurance were less receptive to telehealth visits than those enrolled in Montana Medicaid.

Nearly 40% of participants reported that their provider did not offer telehealth visits, which was the most common barrier. The second most common barrier was the concern that healthcare providers would not have access to the necessary clinical information during the visit, which could be addressed through RPM implementation.

Table 7. Preferred Visit Type and Barriers to Telehealth

	MT Medicaid (N=6)	Medicare (N=7)	Commercial (N=10)	Other (N=3)	All Participants (N=26)
<b>Preferred Visit Type* - no. (%)</b>					
In-Person	5 (83)	7 (100)	10 (100)	3 (100)	25 (96)
Telehealth –Audio + Video	5 (83)	3 (43)	4 (40)	0 (0)	12 (46)
Telehealth – Audio Only	4 (67)	3 (43)	1 (10)	1 (33)	9 (35)
<b>Barriers to Telehealth Visits* - no. (%)</b>					
Not offered	2 (33)	2 (29)	4 (40)	2 (67)	10 (39)
Privacy concerns – telehealth platform	0 (0)	0 (0)	1 (10)	0 (0)	1 (4)
Privacy concerns – home environment	2 (33)	0 (0)	0 (0)	0 (0)	2 (8)
Difficulty using the telehealth platform	1 (17)	0 (0)	0 (0)	0 (0)	1 (4)
Provider can't access clinical information	2 (33)	0 (0)	1 (10)	1 (33)	4 (15)
None	1 (17)	3 (43)	3 (30)	1 (33)	8 (31)
Not interested in telehealth visits	0 (0)	2 (29)	1 (10)	0 (0)	3 (12)

\*Participants could select more than one acceptable visit type and more than one barrier.

Note: Percentages may not total to 100 due to rounding

These findings suggest that provider availability and access to clinical data, more than privacy or digital literacy, may be key factors influencing telehealth uptake in rural and frontier communities. Additionally, these findings indicate that telehealth may be most effective as a complement to in-person care, particularly when supported by systems that allow providers to access relevant clinical data between visits, such as remote monitoring platforms.

### *Healthcare, Community Services, and Technology Use at Home*

Participants were given the opportunity to provide additional information related to healthcare and services in their communities and technology use at home via open-ended responses at the end of the survey.

Participants identified a range of concerns related to healthcare and services in their communities. Common themes included distance to hospitals and emergency care, limited availability of specialty and mental health services, and long wait times for appointments at regional centers. Several participants emphasized the importance of

local clinics, particularly those serving individuals who would otherwise have to travel long distances, while also expressing concerns about staffing, continuity of care, and potential funding losses to rural hospitals and clinics. Concerns related to social and environmental needs were also raised, including a lack of clean water and limited access to support services, highlighting the influence of social and economic factors on health outcomes.

Consistent with other survey sections, participants raised concerns about the affordability of care, limitations in insurance coverage, and the operating hours of local healthcare services. A small number of participants described negative experiences with healthcare staff, demonstrating the importance of respectful communication, continuity, and trust in rural and frontier healthcare settings.

Responses related to technology use at home reflected a range of experiences. Several participants reported no concerns about using technology, while others reiterated challenges with slow internet, device costs, privacy, and the need for additional digital skills training. Some participants noted that while they were personally comfortable using technology, others in their community may struggle to adopt digital health tools and require in-person support to access care.

Participants also described frustration with the usability and reliability of digital health platforms, including technical issues and difficulty reaching support when problems arise. These responses highlight the importance of designing remote monitoring programs that account for variability in connectivity and digital literacy and provide access to technical assistance.

## Conclusion and Planning Implications

Findings from the Digital Health Planning in Rural Montana Survey highlight both opportunities and challenges for implementing RPM. While our overall sample size is small, our findings provide important insights into the digital readiness of rural and frontier communities in Montana.

Survey participants reported a high prevalence of chronic conditions, such as hypertension, for which RPM has demonstrated clinical benefit. Participants also reported regular engagement with healthcare services and broad access to general-purpose technology, suggesting a baseline level of readiness for RPM implementation. At the same time, uncertainty about the benefits of RPM and conditional acceptance of telehealth were common. These findings demonstrate the importance of patient education, shared decision-making, individualized onboarding, and hybrid visit models that include in-person and remote services. Connectivity challenges and variability in access to monitoring devices reinforce the need to assess readiness at the individual level rather than assuming population-level digital readiness.

Concern related to the cost of care emerged across multiple survey measures and was reported by participants with all insurance types. Many participants also reported avoiding or delaying care, with barriers such as cost, transportation, and distance to care likely contributing. Participants with commercial insurance had the highest incidence of delayed care and more frequent cost concerns, suggesting that factors such as cost-sharing requirements or high-deductible health plans (HDHPs) may influence decisions to seek care. These findings underscore the importance of evaluating insurance coverage, benefit design, and affordability when planning RPM programs.

Pharmacists represent a particularly important opportunity for RPM implementation in rural and frontier communities. With prescriptive authority in Montana, pharmacists are well-positioned to support chronic disease management through RPM.<sup>16-21</sup> Evidence demonstrates that pharmacists' involvement in RPM improves outcomes across multiple conditions.<sup>22-25</sup> Survey participants reported frequent pharmacy visits and reliance on pharmacists for health information. Compared to other health professions, participants reported higher levels of trust and fewer access barriers to pharmacists. Together, these findings highlight the value of pharmacists as integral members of the RPM care team, supporting patient education, facilitating device use, assisting in data review and medication dose adjustment, and providing an accessible point of contact between provider visits.

Overall, RPM has the potential to improve health outcomes and access to care in rural and frontier Montana; however, these survey findings demonstrate that access to care is shaped not only by distance and availability but also by continuity, trust, and usability of digital tools. Future RPM initiatives should integrate pharmacists into care teams, address cost and connectivity barriers, and be implemented as a complement to in-person care rather than a replacement. By centering the patient experience and leveraging trusted local healthcare resources, RPM programs can be well-positioned to support chronic disease management and improve access to care in rural and frontier Montana.

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# Appendix

## Complete Survey Instrument

### **Digital Health Planning in Rural Montana: Informed Consent**

#### **We invite you to join the conversation about access to technology and healthcare in rural Montana** **Introduction**

You are being asked to participate in a voluntary research survey led by Drs. Haley Cote and Erica Woodahl at the L.S. Skaggs Institute for Health Innovation at the University of Montana. The information you share will help us understand more about your experience with healthcare and technology and the healthcare related needs in your community. The information collected may not benefit you directly, but the perspectives of community members that we learn from this study will be assessed and used to better guide digital health planning and technology implementation. Indirectly, you may benefit from the satisfaction of helping with a project that may identify ideas and generate thoughtful approaches to increasing access to innovative care and supporting the health of your community.

#### **What Will Happen in This Study?**

To participate in this research, you must live in rural Montana. You are not eligible to take the survey if you live in any of the following towns: Billings, Bozeman, Butte, Great Falls, Helena, Kalispell, or Missoula.

If you agree to take part, you will complete the attached survey, which includes questions about:

- Your demographics and health status
- Your access to healthcare, technology, and community resources
- Your experience with technology and health monitoring devices

Participation voluntary, and you may skip any question or stop at any time. The survey should take approximately **10-15 minutes** to complete.

**To be included in the study, the survey must be returned in the attached envelope and postmarked by September 15, 2025**

#### **Confidentiality**

All survey responses are confidential, and no identifying information will be linked to your answers. All data will be securely stored using restricted-access platforms such as SharePoint, which are only accessible to authorized research team members. These systems are designed to minimize the risk of unauthorized access or disclosure. While we take all reasonable steps to protect your data, please be aware that any online participation carries a minimal risk of data breaches.

## Contact Information

If you have questions about the study, please contact:

Dr. Haley Cote – [haley.cote@umontana.edu](mailto:haley.cote@umontana.edu); 406-243-4780, or

Dr. Erica Woodahl – [erica.woodahl@umontana.edu](mailto:erica.woodahl@umontana.edu); 406-243-4129

If you have questions about your rights as a research participant, or if you have concerns or complaints, you may contact the University of Montana Institutional Review Board (IRB) at (406) 243-6672 or [irb@umontana.edu](mailto:irb@umontana.edu).

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**By completing and returning the survey, you are confirming that you agree to all of the following:**

- You live in Montana
- You do not live in Billings, Bozeman, Butte, Great Falls, Helena, Kalispell, or Missoula
- You have read and understood the information above
- You voluntarily agree to participate in this study

## Digital Health Planning in Rural Montana: Survey

### Demographics and Health Status

1. What is the zip code at your primary home?  
(required) \_\_\_\_\_
2. How do you get your health insurance? (select all that apply; required)
  - Medicaid
  - Medicare
  - TRICARE, VA, or other military coverage
  - Indian Health Service (IHS)
  - Through an employer (your job or a family member's job)
  - Through the Health Insurance Marketplace (healthcare.gov)
  - Other: \_\_\_\_\_
  - I don't have health insurance
3. What is your age? \_\_\_\_\_
4. What is your gender identity? (select one)
  - Male
  - Female
  - Non-binary
  - Other: \_\_\_\_\_
  - Prefer not to say
5. What is your race and ethnicity?  
(select all that apply)
  - American Indian or Alaska Native
  - Black or African American
  - Hispanic or Latino
  - White
  - Asian
  - Native Hawaiian or Pacific Islander
  - Other: \_\_\_\_\_
  - Prefer not to say
6. How would you rate your health? (select one)
  - Excellent
  - Good
  - Average
  - Poor
7. Do you have any of the following health conditions? (select all that apply)
  - Cancer
  - High blood pressure
  - Diabetes
  - Obesity
  - Asthma
  - COPD
  - Heart problems
  - Kidney problems
  - Liver problems
  - Depression
  - Anxiety
  - Bipolar disorder
  - Currently pregnant
  - Chronic Pain
  - Frequent infections
  - Other: \_\_\_\_\_
  - I don't have any health conditions

### Access to Care and Drivers of Health

8. How often do you see a doctor? (select one)

- Once a month or more
- Every 2–3 months
- Once or twice a year
- Less than once a year
- I don't go to the doctor

9. In the past year, did you ever avoid going to the doctor even though you needed to?

(select one)

- Yes
- No

10. How many prescription medicines do you take on a daily basis? (select one)

- 0
- 1-2
- 3-4
- 5 or more

11. How often do you go to the pharmacy? (select one)

- Once a month or more
- Every 2–3 months
- Once or twice a year
- Less than once a year
- I don't go to the pharmacy

**For question 12, select the option that best reflects your experience for each statement**

12. How often do the following things make it hard to get healthcare or stop you from getting care you need?

	OFTEN	SOMETIMES	NEVER	NOT APPLICABLE
The clinic is too far away	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The pharmacy is too far away	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I don't have a ride	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
the clinic is not open when I can go	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
the pharmacy is not open when I can go	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I can't get an appointment soon enough	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It's too hard to schedule an appointment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I can't take time off work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I don't have anyone to watch my child while I'm gone	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I don't have anyone to care for a family member while I'm gone	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I worry about the cost	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I don't trust the doctors in my community	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I don't trust the nurses in my community	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

I don't trust the pharmacists in my community	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
people working at the clinic or pharmacy don't understand my culture	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I don't feel respected	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I don't feel listened to	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I don't understand the information the doctor, nurse, or pharmacist tells me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is there anything else that makes it hard to get care? _____				

13. Where do you usually get health information? (select all that apply)

- Doctors
- Nurses
- Pharmacists
- Family or friends
- TV or radio
- Newspaper
- Books or magazines
- Papers or flyers from the clinic, hospital, or pharmacy
- Social media (like Facebook, YouTube, or TikTok)
- Websites (like Google or WebMD)
- Health or fitness apps (like Fitbit or Noom)
- I don't look for health information or ask questions about my health

14. How easy is it for you to read and understand written information (like letters, signs, or forms)? (select one)

- Very easy
- Easy
- Hard
- Very hard

15. Do you have a safe and steady place to live? (select one)

- Yes
- Sometimes
- No

16. In the past year, has the electric, gas, or water company threatened to shut off services in your home? (select one)

- Yes
- No
- It's already been shut off

17. In the past year, how often did you worry about running out of food before you could get more? (select one)

- Often
- Sometimes
- Never

## Access and Use of Technology

**For question 18, select one option and answer question 19 based on your response**

18. How comfortable are you with using technology (like computers, smartphones, tablets, etc.)? (select one)

- Very comfortable
- Comfortable
- Somewhat comfortable
- Not comfortable

**Only complete question 19 if you answered “somewhat comfortable” or “not comfortable” to question 18.**

19. If technology could improve your health, what resources would you use, or do you already use, to feel more comfortable using it? (select all that apply)

- |   |   |
|---|---|
| <input type="checkbox"/> Friend, family member, or caregiver        | <input type="checkbox"/> In-person classes                              |
| <input type="checkbox"/> Doctor                                     | <input type="checkbox"/> Online videos or classes                       |
| <input type="checkbox"/> Nurse                                      | <input type="checkbox"/> I don't think technology can improve my health |
| <input type="checkbox"/> Pharmacist                                 | <input type="checkbox"/> I don't want to use technology                 |
| <input type="checkbox"/> Someone at the library or community center | <input type="checkbox"/> I don't need to improve my health              |
| <input type="checkbox"/> Community health worker                    | <input type="checkbox"/> Other: _____                                   |
| <input type="checkbox"/> Books or written instructions, or articles |   |

**For question 20, select one option and complete questions 21-25 based on your response**

20. Do you have access to internet at home? (select one)

- Yes (complete questions 21-23 and skip questions 24 and 25)
- No (skip 21-23 and complete questions 24 and 25)

**Only complete questions 21-23, if you answered “yes” to question 20. Select one option.**

21. What kind of internet do you use at home? (select one)

- Cable
- Satellite
- Hotspot
- Cell phone data only
- Other: \_\_\_\_\_
- I don't know

22. How often does your internet at home stop working, have problems, or get shut off?

(select one)

- Daily
- At least once a week
- At least once a month
- Rarely
- Never

23. How is the internet speed at home? (select one)

- Very fast – videos and websites load quickly
- Good enough – sometimes it’s a little slow, but I can usually do the things I need to do
- Slow – It takes a long time for websites and videos to load and I can’t always do the things I need to do
- I don’t know

**Only complete questions 24 and 25, if you answered “no” to question 20.**

24. What are the main reasons you do not have access to internet at home?

(select all that apply)

- It costs too much
- It’s not available in my area
- The internet available is too slow or doesn’t work well
- I don’t know how to use it
- I don’t feel comfortable or safe using it
- I don’t need it
- I don’t want it
- Other: \_\_\_\_\_

25. If you don’t use internet at home. where do you access it most often? (select up to **three** most frequently used)

- Library
- School
- Work
- Community center
- Friend or family member’s home
- Coffee shop or restaurant
- Somewhere else: \_\_\_\_\_
- I don’t use the internet

**For question 26, select all that apply and answer questions 27 & 28 based on your response**

26. What devices do you use at home? (select all that apply)

- Smartphone
- Tablet
- Laptop or desktop computer
- Smartwatch
- Blood pressure monitor
- Blood sugar monitor
- Other: \_\_\_\_\_
- I don’t use any devices at home
- Continuous glucose monitor (CGM) (like Dexcom or Libre)
- Heart rate monitor
- Oxygen monitor
- Body weight scale
- Fitness trackers (like Fitbit or step counter)

**Only complete question 27, if you use a smartphone or tablet**

27. Do you use any of the following types of apps on your smartphone or tablet? (select all that apply)

- Video chat apps - like FaceTime or Zoom
- Health messaging apps - like apps to communicate with your doctor or request refills
- Health monitoring apps - like apps to monitor your health (blood pressure, blood sugar, etc.)
- Fitness or activity apps - like apps to track exercise or do workouts

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- Food tracking apps - for calorie counting or keeping track of your diet
- Games
- Streaming apps - like Netflix, YouTube, etc.
- Banking or payment apps - like online banking or Venmo
- Social media - like Facebook, TikTok, etc.
- Shopping apps - like Amazon, Walmart, etc
- Email or messaging apps - like Gmail, WhatsApp, etc.

**Only complete question 28, if you use a blood pressure monitor, blood sugar monitor, CGM, heart rate monitor, oxygen monitor, body weight scale, or fitness tracker**

28. When you use devices to monitor your health at home, how do you share your results with your doctor? (select one)

- Through an app
- I share the numbers at appointments or on a phone call
- I don't share the information with my doctor
- I don't know

29. Do you think it would be helpful or improve your health to use a monitoring device at home (like a blood pressure or blood sugar monitor) if it sent your information directly to your doctor? (select one)

- Yes
- Maybe
- No

30. What are your concerns with using health monitoring devices at home? (select all that apply)

- |  |  |
|--|--|
| <input type="checkbox"/> They are too expensive                                      | <input type="checkbox"/> I don't want to share results with my doctor                |
| <input type="checkbox"/> They are too hard to use                                    | <input type="checkbox"/> My doctor doesn't look at my results when I monitor at home |
| <input type="checkbox"/> The results aren't accurate                                 | <input type="checkbox"/> I don't need to monitor my health                           |
| <input type="checkbox"/> I don't have time   | <input type="checkbox"/> I don't have concerns                                       |
| <input type="checkbox"/> I don't have reliable internet at home to share the results | <input type="checkbox"/> Other: _____  |
| <input type="checkbox"/> I don't have a smartphone or tablet                         |  |
| <input type="checkbox"/> I don't have a computer                                     |  |

31. How do you like to have appointments with your doctor? (select all that apply)

- In person (at the clinic or office)
- Video visit (using smartphone, tablet, or computer)
- Phone call (without video)
- I don't want or need appointments with my doctor

32. What makes it hard to have an appointment with your doctor over video or phone call?

(select all that apply)

- I don't have reliable internet at home
- I don't have a smartphone or tablet
- I don't have a landline phone
- I don't have a computer
- I don't know how to use the app my doctor uses
- My doctor doesn't offer it
- My doctor won't have the information they need to treat me unless I'm in the office
- There are too many people living in my home to get privacy or a quiet space
- I am worried about privacy from the app or phone service
- Something else: \_\_\_\_\_
- It's not hard to have a video or phone appointment

***For questions 33 and 34, please provide any additional information you think the researchers should know about your healthcare, services, and technology use in your community***

33. What other information or concerns about healthcare or other services in your community would you like to share?

34. What other information or concerns about using technology at home would you like to share?

**Thank you for taking the time to participate in this survey. We genuinely value the information you have provided.**

If you have any questions or concerns about the study, please email Dr. Cote at [haley.cote@umontana.edu](mailto:haley.cote@umontana.edu) or Dr. Woodahl at [erica.woodahl@umontana.edu](mailto:erica.woodahl@umontana.edu)

## Participant Characteristics

Participants residing in the following zip code areas were excluded:

59101, 59102, 59103, 59104, 59105, 59106, 59107, 59108, 59111, 59112, 59114, 59115, 59116, 59117, 59715, 59717, 59718, 59719, 59771, 59772, 59701, 59702, 59703, 59707, 59750, 59401, 59402, 59403, 59404, 59405, 59406, 59601, 59602, 59604, 59620, 59623, 59624, 59625, 59626, 59901, 59903, 59904, 59801, 59802, 59803, 59804, 59806, 59807, 59808, 59812

Figure A1. Shows the number of participations by Rural-Urban Community Area (RUCA) code. While a small number of participants lived in areas classified as less remote by RUCA codes 5 and 2, they did not live in zip codes designated as urban by the Montana Department of Commerce.

Figure A1. Number of Participants by Rural-Urban Community Area (RUCA) Codes

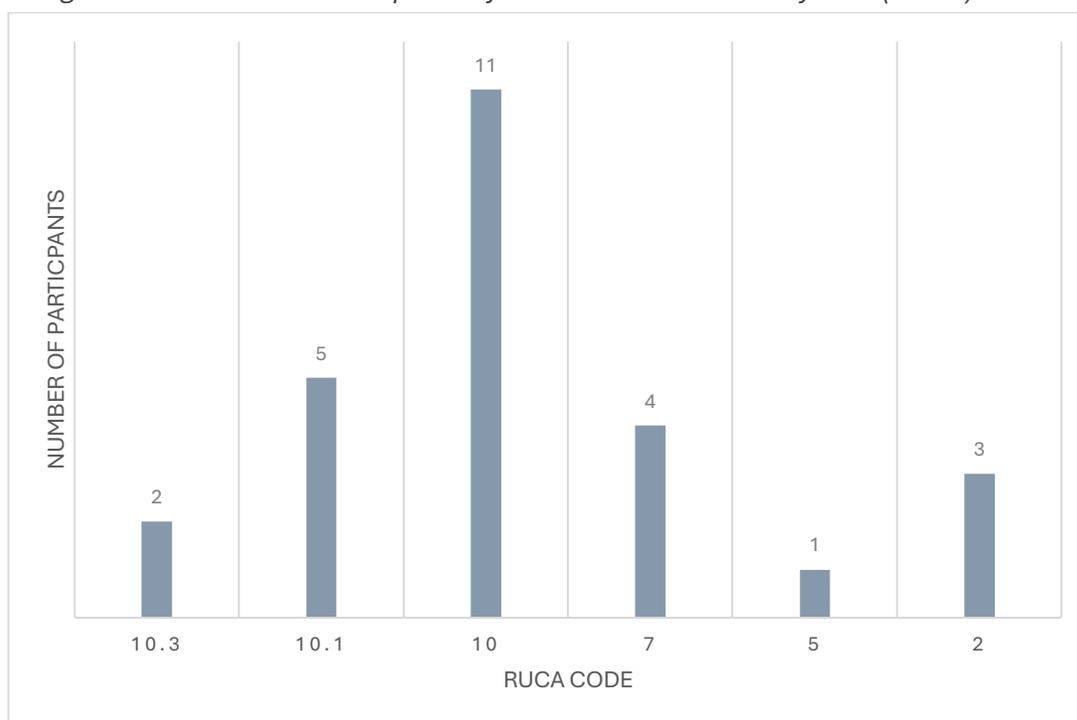


Table A1 shows the number of survey participants by age range. While the majority of participants were age 60+, a broad age range was represented

Table A1. Demographics by Age Range

Age Range	Online (N=22)	Print (N=4)	Combined (N=26)
18-29 – no (%)	3 (14)	0 (0)	3 (12)
30-39 – no (%)	3 (14)	1 (25)	4 (15)
40-49 – no (%)	4 (18)	1 (25)	5 (19)
50-59 – no (%)	4 (18)	1 (25)	5 (19)
60-64 – no (%)	1 (5)	1 (25)	2 (8)
65+– no (%)	7 (32)	0 (0)	7(27)

*Health Status and Chronic Conditions*

Chronic condition prevalence by insurance enrollment is shown in Table A2. No survey participants reported chronic obstructive pulmonary disease (COPD), chronic kidney disease (CKD), liver disease, or recurrent infections. No participants were pregnant at the time of the survey.

Table A2. Chronic condition prevalence by insurance enrollment

	MT Medicaid (N=6)	Medicare (N=7)	Commercial (N=10)	Other (N=3)	All Participants (N=26)
<b>Chronic Condition Prevalence - no. (%)</b>					
Cancer	0 (0)	1 (14)	1 (10)	0 (0)	2 (8)
Hypertension	1 (17)	3 (43)	4 (40)	2 (33)	10 (39)
Diabetes	2 (33)	1 (14)	0 (0)	0 (0)	3 (12)
Obesity	1 (17)	1 (14)	0 (0)	0 (0)	3 (12)
Asthma	0 (0)	1 (14)	0 (0)	0 (0)	1 (4)
COPD	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
CVD	0 (0)	0 (0)	1 (10)	0 (0)	1 (4)
CKD	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Liver Disease	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Depression	3 (50)	1 (14)	3 (30)	1 (33)	8 (31)
Anxiety	5 (83)	0 (0)	1 (10)	1 (33)	7 (27)
Bipolar Disorder	1 (17)	0 (0)	0 (0)	0 (0)	1 (4)
Currently Pregnant	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Chronic Pain	2 (33)	3 (43)	3 (30)	0 (0)	8 (31)
Frequent Infections	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Other	0 (0)	1 (14)	1 (10)	0 (0)	2 (8)
None	0 (0)	1 (14)	2 (20)	1 (33)	4 (15)

Note: Percentages may not total to 100 due to rounding

**Barriers to Accessing Healthcare**

Participants were asked how often each of the following made it difficult to obtain needed healthcare. Table A3 presents the questions as asked and the proportions of participants who responded “often,” “sometimes,” “never,” or “not applicable.”

Table A3. Barriers to Care Response Detail

<b>Participant Reported Frequency – no. (%)*</b>	Often	Sometimes	Never	N/A
<b>Geographic and Transportation Barriers</b>				
The clinic is too far away	6 (23)	11 (42)	9 (35)	0 (0)
The pharmacy is too far away	1 (4)	4 (15)	21 (81)	0 (0)
I don't have a ride	3 (12)	2 (8)	18 (69)	3 (12)
<b>Scheduling and Availability Barriers</b>				
The clinic is not open when I can go	4 (16)	10 (40)	8 (32)	3 (12)
The pharmacy is not open when I can go	2 (8)	11 (42)	11 (42)	2 (8)
I can't get an appointment soon enough	5 (19)	14 (54)	6 (23)	1 (4)
It's too hard to schedule an appointment	2 (8)	12 (48)	9 (36)	2 (8)
I can't take time off work	5 (19)	5 (19)	10 (39)	6 (23)

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Table A3. Continued

Participant Reported Frequency – no. (%)*	Often	Sometimes	Never	N/A
<b>Caregiving Responsibilities</b>				
I don't have anyone to watch my child	0 (0)	4 (15)	12 (46)	10 (39)
I don't have anyone to care for a family member	2 (8)	1 (4)	11 (42)	12 (46)
<b>Financial Barriers</b>				
I worry about the cost	10 (39)	11(42)	3 (12)	2 (8)
<b>Trust, Respect, and Communication</b>				
I don't trust the doctors in my community	7 (27)	6 (23)	10 (39)	3 (12)
I don't trust the nurses in my community	4 (15)	7 (27)	12 (46)	3 (12)
I don't trust the pharmacists in my community	0 (0)	3 (12)	19 (73)	4 (15)
People working at the clinic or pharmacy don't understand my culture	0 (0)	2 (8)	19 (73)	5 (19)
I don't feel respected	1 (4)	5 (19)	16 (62)	4 (15)
I don't feel listened to	0 (0)	9 (35)	15 (58)	2 (8)
I don't understand the information the doctor, nurse, or pharmacist tells me	1 (4)	1 (4)	22 (85)	2 (8)
<b>Free Text Responses^</b>				
Is there anything else that makes it hard to get care?	<ol style="list-style-type: none"> <li>1. "Insurance coverage"</li> <li>2. "Distance to [nearest urban area]"</li> <li>3. "Transit only runs certain days and only goes to [one town] and healthcare provider is in [different town]"</li> <li>4. "Transportation"</li> </ol>			

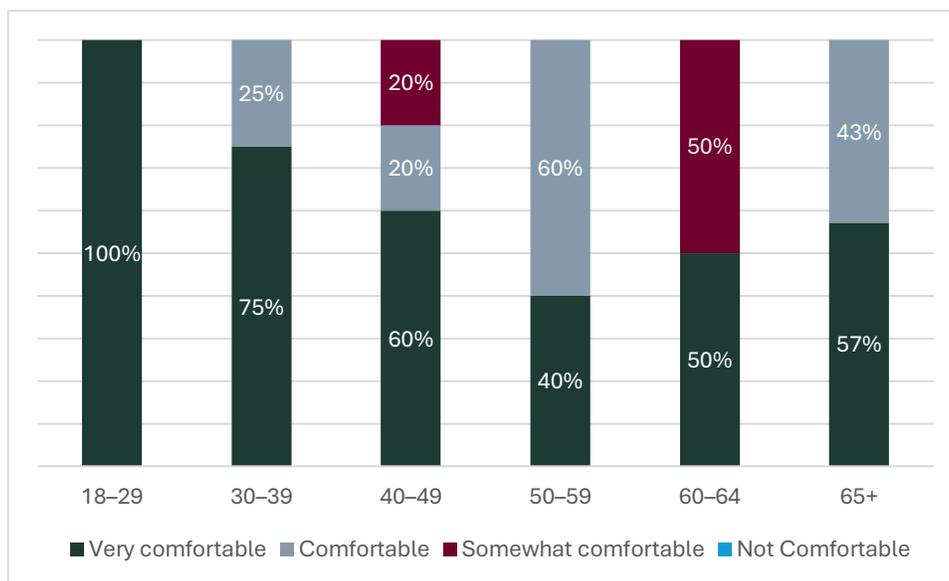
\*Percentages above are calculated using the total number of participants who responded to each question

^Location has been removed to protect participant confidentiality

## Comfort with Technology

Participant reported comfort with technology was assessed by age range, shown in Figure A3. There were no apparent patterns between age and reported comfort with technology identified.

Figure A3. Comfort with Technology by Age Range



## Access to Technology

Detailed information on device use by insurance enrollment and chronic condition are described in Tables A4 and A5.

Table A4. Device Use by Insurance Enrollment

	MT Medicaid (N=6)	Medicare (N=7)	Commercial (N=10)	Other (N=3)	All Participants (N=26)
<b>Participants Reporting Device Use* - no. (%)</b>					
Smartphone	6 (100)	7 (100)	9 (90)	3 (100)	25 (93)
Tablet	3 (51)	2 (29)	4 (40)	1 (33)	10 (39)
Computer or Laptop	5 (83)	5 (71)	10 (100)	3 (100)	23 (89)
Smartwatch	4 (67)	1 (14)	6 (60)	1 (33)	12 (46)
BP Monitor	1 (17)	5 (71)	2 (20)	1 (33)	9 (35)
BG Monitor	1 (17)	2 (29)	2 (20)	0 (0)	5 (19)
CGM	1 (17)	1 (14)	0 (0)	0 (0)	2 (8)
Scale	1 (17)	5 (71)	5 (50)	1 (33)	12 (46)
Pulse Oximeter	2 (33)	1 (14)	3 (30)	0 (0)	6 (23)
Fitness Tracker	1 (17)	3 (43)	5 (50)	1 (33)	10 (39)

\*Participants could select more than device type.

Note: Percentages may not total to 100 due to rounding

Table A5. Device Use by Chronic Condition

	Hypertension (N=10)	Diabetes (N=3)	Obesity (N=3)	Depression (N=8)	Anxiety (N=7)	Chronic Pain (N=8)
<b>Participants Reporting Device Use* - no. (%)</b>						
Smartphone	9 (90)	3 (100)	3 (100)	8 (100)	7 (100)	8 (100)
Tablet	7 (70)	1 (33)	2 (67)	4 (50)	4 (57)	3 (38)
Computer or Laptop	9 (90)	1 (33)	2 (67)	8 (100)	7 (100)	8 (100)
Smartwatch	5 (50)	1 (33)	2 (67)	6 (75)	5 (71)	3 (38)
BP Monitor	6 (60)	1 (33)	2 (67)	1 (13)	1 (14)	4 (50)
BG Monitor	2 (20)	2 (67)	2 (67)	2 (25)	1 (14)	1 (13)
CGM	1 (10)	1 (33)	1 (33)	1 (13)	1 (14)	1 (13)
Scale	7 (70)	0 (0)	2 (67)	3 (38)	1 (14)	4 (50)
Pulse Oximeter	2 (20)	1 (33)	1 (33)	1 (13)	2 (29)	1 (13)
Fitness Tracker	6 (60)	1 (33)	3 (100)	3 (38)	2 (29)	3 (38)

\*Participants could select more than device type.

Note: Percentages may not total to 100 due to rounding