

Social Work and Drug Recovery in Rural Montana: Integrating Technology, Culture, And Community

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Abstract—Montana confronts a paradoxical substance use crisis: declining drug seizures coincide with rising overdose fatalities, while vast rural landscapes and American Indian communities develop innovative, culturally grounded responses to addiction. This manuscript examines the current state of drug recovery services in Montana through a social work lens, synthesizing legislative reforms, tribal wellness initiatives, community-based recovery supports, epidemiological trends, and emerging technological interventions. The analysis identifies four critical findings based on a review of the literature: First, rural recovery community centers (RCCs) serve as essential bridging institutions addressing social determinants of health in frontier environments (Bohler et al., 2025; Mancini & Linhorst, 2021). Second, Indigenous-led healing courts and culturally grounded interventions demonstrate promising outcomes by integrating spiritual practices and community connectedness into evidence-based treatment frameworks (KPAX News, 2025; LUC-Finna, 2019). Third, recent Montana legislation (SB 516) and state investments (HEART Fund, Behavioral Health System for Future Generations) signal policy commitment, yet implementation gaps persist, particularly regarding medications for opioid use disorder (MOUD) access and cross-sector collaboration (Montana Legislature, 2025; State of Montana Newsroom, 2025). Fourth, technology-assisted interventions, including telehealth platforms, mobile health applications, wearable monitoring devices, and digital peer support networks, offer promising solutions to geographic and workforce barriers while requiring careful adaptation for rural and tribal contexts (Thapa et al., 2026; Marsch et al., 2024; Tofighi et al., 2023). The manuscript concludes with practice recommendations for social workers, including technology-enhanced culturally responsive assessment tools, telehealth adaptations for family-based interventions (CRAFT), digital harm reduction strategies, and advocacy for technology-infused recovery-oriented systems of care that prioritize rehabilitation over incarceration. Implications for social work education and policy advocacy in rural contexts are discussed.

Index Terms—Rural social work, substance use disorder, Montana, Indigenous health, recovery community centers, healing courts, harm reduction, telehealth, digital health interventions, mobile health

I. INTRODUCTION

The state of Montana presents a distinctive landscape for substance use disorder (SUD) treatment and recovery support services. With a population density of fewer than seven people per square mile, vast frontier expanses, and significant American Indian populations across seven reservations, the challenges of delivering effective SUD interventions are magnified by geographic isolation, workforce shortages, and historical trauma (Brave Heart, 2003; Canfield, 2021; Gone & Trimble, 2012). Yet within these constraints emerge innovations, including technology-enabled solutions, that hold lessons for rural social work practice nationwide.

Recent epidemiological data reveal a troubling trend: while fentanyl seizures in Montana decreased 70 percent from 2024 to 2025, fentanyl-linked fatal overdoses increased 34 percent during the same period, from 55 to 74 deaths (KMPT-AM, 2026). This divergence suggests that supply-side interventions alone prove insufficient and that demand for accessible, effective treatment remains urgent. In March 2025 alone, the Montana Department of Public Health and Human Services (DPHHS) recorded 95 suspected opioid overdoses, compared to a monthly average of 69 in 2024 (Montana Department of Public Health and Human Services, 2025). Polysubstance use complicates the clinical picture, with 78 percent of fatal overdoses involving fentanyl mixed with other illicit drugs, most commonly methamphetamine (Dasgupta et al., 2022; Volkow, 2021). These statistics underscore the necessity of a robust, multi-level response that addresses not only acute overdose risk

but also the underlying social determinants of health, housing instability, unemployment, social isolation, and systemic marginalization, that perpetuate substance use disorders. Social work, with its ecological systems perspective and commitment to vulnerable populations, is uniquely positioned to lead such efforts, particularly as technology creates new possibilities for bridging rural divides (National Association of Social Workers, 2021).

Technology has emerged as a transformative force in SUD treatment, offering solutions to longstanding rural barriers. Telehealth platforms enable remote counseling and medication management; mobile applications deliver cognitive behavioral therapy modules and contingency management; wearable sensors can detect physiologic precursors of overdose; and digital peer support networks connect isolated individuals with recovery communities (Marsch et al., 2024; Tofighi et al., 2023; National Institute on Drug Abuse, 2024). However, technology is not a panacea. Rural Montana faces persistent digital divides: broadband access remains limited on reservations and in frontier counties, smartphone ownership varies by income and age, and digital literacy presents challenges for some populations (Federal Communications Commission, 2024; Perrin & Atske, 2023). For American Indian communities, technology-based interventions must be culturally grounded, respecting tribal sovereignty and incorporating Indigenous knowledge systems (Walters et al., 2020; Gone, 2021). Social workers must therefore adopt a critical technology perspective, leveraging digital tools while advocating for infrastructure equity and culturally appropriate design.

This manuscript pursues four objectives. First, it provides a comprehensive overview of Montana's current SUD recovery landscape, including legislative frameworks, tribal innovations, and community-based programs. Second, it analyzes the specific barriers and facilitators to recovery in rural and reservation contexts, drawing on recent research from Montana and comparable rural settings. Third, it examines emerging technology-based interventions for SUD treatment and recovery support, evaluating their applicability and adaptation requirements for rural Montana. Fourth, it offers evidence-based practice recommendations for social workers engaged in SUD treatment and recovery support services in Montana,

emphasizing technology integration, cultural responsiveness, harm reduction, and policy advocacy.

II. THE EPIDEMIOLOGICAL CONTEXT OF SUBSTANCE USE IN MONTANA

Understanding Montana's substance use crisis requires attention to both state-level trends and regional variations. The Rocky Mountain High Intensity Drug Trafficking Area (RMHIDTA) reported that in 2025, Montana task forces seized 83,382 dosage units of fentanyl, a substantial decrease from 275,091 units in 2024 (Rocky Mountain High Intensity Drug Trafficking Area, 2025). Methamphetamine seizures remained relatively stable at approximately 304 pounds, suggesting that meth continues to be the most prevalent illicit stimulant in the state. Cocaine seizures decreased 51 percent to 33.3 pounds, while heroin seizures dropped 94 percent to less than one pound (Rocky Mountain High Intensity Drug Trafficking Area, 2025). Despite decreased seizures, overdose fatalities have not followed the same trajectory. The Montana State Crime Lab documented 74 fentanyl-linked deaths in 2025, up from 55 in 2024 (Montana State Crime Lab, 2026). This pattern, decreased supply accompanied by increased mortality, may reflect several phenomena: increased potency of available substances, delayed treatment-seeking behavior, reduced harm reduction access, or polysubstance interactions that complicate overdose reversal efforts (Dasgupta et al., 2022).

Geographically, overdoses cluster along major transportation corridors, including Interstates 90 and 15 and US Highways 93 and 2. Counties with ten or more suspected overdoses in early 2025 included Cascade, Flathead, Missoula, Silver Bow, and Yellowstone (Montana Department of Public Health and Human Services, 2025). This distribution pattern indicates that while Montana's crisis is statewide, rural counties without major highway access may experience different risk profiles, potentially including greater isolation from emergency services and treatment providers. Technology can help address this geographic disparity: telehealth platforms enable remote access to addiction specialists, mobile overdose detection systems can alert first responders in sparsely populated areas, and digital monitoring tools can support medication adherence when

pharmacy access is limited (Marsch et al., 2024; Ghitza et al., 2024).

However, for American Indian populations, the burden of substance-related morbidity and mortality is disproportionately severe. Studies have documented significant disparities in drug and alcohol-related health outcomes among American Indians and Alaska Natives compared to other ethnic groups, despite high rates of abstinence within these communities (Indian Health Service, 2023; Venner et al., 2021). These disparities reflect not individual pathology but the cumulative impact of historical trauma, systemic discrimination, economic marginalization, and limited access to culturally appropriate care (Brave Heart, 2003; Evans-Campbell, 2008; Gone, 2021). Technology-based interventions for tribal communities must be co-designed with tribal partners, respect cultural protocols, and integrate traditional healing practices with digital tools (Walters et al., 2020; Gone & Trimble, 2012).

III. LEGISLATIVE AND POLICY FRAMEWORKS FOR SUD TREATMENT

Treatment and Support Services

Montana law establishes clear expectations for the treatment of drug-involved offenders. Under Montana Code Annotated 46-1-1110, each jurisdiction must establish systems to place drug offenders into clinically approved substance abuse treatment programs based on objective medical diagnostic criteria (Montana Legislature, 2005). The statute mandates an adequate continuum of care and requires that offenders receive adequate support services and aftercare. Importantly, the law stipulates that treatment length must be determined by individual needs and accepted practices, not by fixed duration requirements (Montana Legislature, 2005). What makes this statute particularly significant is how it reflects recovery-oriented systems of care principles, which emphasize that recovery is a nonlinear process requiring flexible, sustained support (White, 2009). Technology can support this flexibility through asynchronous telehealth check-ins, mobile-based relapse prevention tools, and digital recovery support networks that provide continuous availability beyond traditional service hours (Ashford et al., 2024; McKay et al., 2023). However, implementation varies significantly across Montana's 56 counties, with rural jurisdictions

struggling to assemble the multidisciplinary teams and service arrays contemplated by the statute.

Licensing and Quality Standards

The 2025 Montana Legislature passed Senate Bill 516, which updates licensing requirements for facilities licensed by the Department of Public Health and Human Services. The bill clarifies definitions for substance use disorder treatment facilities and emphasizes minimum safety and operational standards (Montana Legislature, 2025). Proponents argue these updates enhance accountability and patient welfare, while some facility operators express concern about regulatory burden and potential impacts on service availability in already underserved areas. For technology-enabled services, SB 516 raises important questions about licensure portability across state lines, privacy requirements for telehealth platforms, and quality standards for digital therapeutic tools (American Telemedicine Association, 2024). For social workers, SB 516 underscores the importance of understanding regulatory frameworks that govern both traditional and technology-mediated SUD treatment settings. The bill's provisions regarding provisional licensing and inspection protocols have direct implications for practice documentation, facility operations, continuity of care, and the implementation of electronic health records that interface with telehealth systems.

HEART Fund and Behavioral Health System for Future Generations

Montana has committed significant resources to behavioral health reform. The Healing and Ending Addiction through Recovery and Treatment (HEART) Fund supports expansion of the behavioral health services continuum statewide. Additionally, the Behavioral Health System for Future Generations (BHSFG) Commission invests \$300 million to reform and improve Montana's behavioral health and developmental disabilities service systems (State of Montana Newsroom, 2025). Part of this funding supports wellness kiosks that dispense fentanyl testing strips and naloxone at low or no cost to communities across the state (Montana Department of Public Health and Human Services, 2024). These kiosks represent an innovative technology-based harm reduction strategy, placing overdose reversal tools in accessible public locations. Beyond kiosks, BHSFG funding could

support broader technology infrastructure: telehealth hubs in rural libraries, mobile health applications for recovery support, and data integration systems that connect courts, treatment providers, and peer support organizations (Montana Department of Public Health and Human Services, 2024). These investments represent recognition at the highest levels of state government that SUD treatment requires sustained funding and technological infrastructure, not episodic grants. However, the distribution of these resources across Montana's vast geography remains an ongoing implementation challenge.

IV. TRIBAL INNOVATIONS IN HEALING AND RECOVERY

Confederated Salish and Kootenai Tribes Wellness Court

Perhaps the most significant development in Montana's recovery landscape is the expansion of tribal-led healing courts. The Confederated Salish and Kootenai Tribes (CSKT) launched their healing court in June 2023, and within two years, three participants had graduated, with twelve active participants and five pending applicants as of early 2025 (KPAX News, 2025a). The court represents a fundamental shift from punitive approaches to rehabilitation-focused interventions. Technology could enhance the court's operations through remote check-ins for participants living in distant locations, mobile-based drug testing reporting, and digital platforms for connecting participants with cultural mentors and peer support (Carroll et al., 2024; Molfenter et al., 2023).

Dana Comes at Night, the healing court director and a tribal member in long-term recovery, articulates the court's philosophy: "The main thing when it comes to treatment courts is you gotta show up, try hard and be honest" (KPAX News, 2025a). The program offers both short-term (minimum six months) and long-term (one to two years) tracks, with duration determined by individual progress rather than fixed timelines, a practice consistent with MCA 46-1-1110's emphasis on individualized treatment (Montana Legislature, 2005). Crucially, the CSKT healing court integrates cultural practices into its treatment model. Participants work with licensed addiction counselors through tribal health services or community providers, but the court also emphasizes "connectedness" with other tribal members on the same recovery path (Flathead Tribal

Health, 2023). Desiree Fox, behavioral health division director, notes: "We know anecdotally that people who are more involved with cultural activities and have more connections and social supports tend to be more successful on their recovery journey" (KPAX News, 2025a). Digital platforms that facilitate these connections, private social networks, virtual talking circles, or culturally tailored mobile apps, could extend connectedness beyond in-person gatherings, though such tools must be designed in partnership with tribal communities to ensure cultural appropriateness and data sovereignty (Walters et al., 2020; Tsosie et al., 2024).

CSKT has also expanded its jurisdictional authority to handle more felony cases, processing 150 low-level felony drug offenses in the past year compared to 10-20 annually in previous years (KPAX News, 2025a). Tribal officials emphasize that this expansion is not about incarceration but about providing culturally appropriate alternatives to state prison. Shane Morigeau, CSKT deputy executive officer, states: "The ultimate goal is to get people into the wellness courts, getting them the treatment, the mental health care and addiction treatment they need" (KPAX News, 2025a). Technology can support case management across this expanded caseload through electronic court records, automated appointment reminders, and data dashboards that help staff monitor participant progress without increasing burnout (Molfenter et al., 2023).

Mountain Shadow Association and Kaala's Village
On the Crow Reservation, the Mountain Shadow Association, founded in 2022, exemplifies community-led recovery innovation. The organization focuses on restorative practices, cultural revitalization, and programs that address poverty, unemployment, childhood trauma, foster care, addiction, family separation, and recidivism (Crow Nation Tribal Health, 2023; State of Montana Newsroom, 2025). Its flagship project, Kaala's Village, will be Montana's first Family Healing Center, providing residential services for children and guardians undergoing substance abuse recovery while preserving family and cultural ties (State of Montana Newsroom, 2025). Technology will play a crucial role in Kaala's Village operations. Plans include telehealth counseling rooms for family therapy sessions when distance prevents in-person attendance, digital literacy training for residents to support employment and education goals,

and a secure platform for aftercare support following residential discharge (Crow Nation Tribal Health, 2023). Governor Gianforte donated a quarter of his annual salary to Mountain Shadow Association in December 2025, highlighting the organization's bipartisan support (State of Montana Newsroom, 2025). However, the organization still seeks \$300,000 to complete construction, including technology infrastructure, illustrating the funding challenges facing tribal and rural recovery initiatives despite state-level rhetorical commitment.

Culturally Grounded Technology Interventions: Research and Development

A community-based participatory research project conducted on a rural Montana reservation provides empirical guidance for culturally grounded SUD interventions. Key informant interviews with 25 tribal members revealed that a holistic approach emphasizing "spiritual, cultural, and interpersonal harmony and connectedness" was essential for intervention success (LUC-Finna, 2019). Participants also emphasized the need for multi-level interventions targeting individuals, families, and the entire community, not just the person with the substance use disorder (LUC-Finna, 2019; Walters et al., 2020). Emerging research on technology-based interventions for Indigenous populations suggests that mobile apps incorporating traditional language, storytelling, and cultural practices can enhance engagement and outcomes when developed through community-based participatory research methods (Rasmus et al., 2024; Cwik et al., 2023). For example, the "Smart Journey" app, developed with Alaska Native communities, combines cognitive behavioral therapy modules with traditional activities and has shown preliminary efficacy in reducing substance use (Rasmus et al., 2024). Similar approaches could be adapted for Montana's tribal nations, with apps featuring Salish, Kootenai, Crow, or other tribal languages, Indigenous art and imagery, and content grounded in local cultural practices. For social workers, this implies that evidence-based digital practices developed in mainstream contexts require careful cultural adaptation and community engagement prior to implementation in tribal settings (Boyd et al., 2021; Hennessy & Johnson, 2023). Technology is not culturally neutral; algorithms, user interfaces, and content carry embedded values that may conflict with

Indigenous worldviews if not intentionally addressed (Tsosie et al., 2024; Walter et al., 2022).

V. TECHNOLOGY-BASED INTERVENTIONS FOR SUBSTANCE USE DISORDERS

Telehealth Platforms

Telehealth has emerged as the most widely adopted technology in SUD treatment, accelerated by COVID-19 pandemic waivers that expanded reimbursement and relaxed cross-state licensing restrictions (U.S. Department of Health and Human Services, 2024). For rural Montana, telehealth offers transformative potential: individuals in remote areas can access addiction medicine specialists, participate in group therapy, receive medication management for buprenorphine or naltrexone, and engage in psychosocial interventions without traveling hundreds of miles (Weiner et al., 2024; Yang et al., 2023). Research on online delivery of Community Reinforcement and Family Training (CRAFT), an intervention that supports family members of individuals with substance use disorders, indicates that online formats are feasible and acceptable in rural settings (Thapa et al., 2026). Clinicians reported that CRAFT enhanced their confidence and enabled concerned significant others to develop skills in self-care, positive communication, problem-solving, and supporting healthy behaviors (Meyers et al., 2015; Thapa et al., 2026).

However, successful implementation depends on several factors: clinician enthusiasm, flexible delivery modes (both online and in-person), tailored content, ongoing feedback, and reliable broadband infrastructure. Challenges include participants' emotional overwhelm, competing responsibilities, limited digital literacy, and insufficient alcohol and drug services for loved ones (Thapa et al., 2026). Socio-cultural factors, including reluctance to discuss substance dependence in small communities, also limit engagement (Bond et al., 2021). For Montana social workers, these findings suggest that telehealth is not a panacea but a tool that requires thoughtful implementation, attention to digital access disparities, integration with in-person services when possible, and privacy protections for participants in small communities where virtual backgrounds may not fully conceal identifying information.

Mobile Health Applications

Smartphone applications for SUD recovery have proliferated in recent years, offering tools for craving management, relapse prevention, contingency management, and peer support. Evidence-based apps include: reSET® and reSET-O®, FDA-authorized prescription digital therapeutics delivering cognitive behavioral therapy for stimulant and opioid use disorders (Marsch et al., 2024); A-CHESS, which provides monitoring, messaging, and support resources with demonstrated reductions in heavy drinking days (Gustafson et al., 2019); and Pear-004, currently under investigation for methamphetamine use disorder (National Institute on Drug Abuse, 2024). Free or low-cost apps such as Sober Grid, I Am Sober, and Nomo offer peer support, tracking features, and motivational content, though few have undergone rigorous evaluation (Ashford et al., 2024).

For rural Montana, mobile apps address several barriers. They provide continuous availability when professional support is inaccessible; they enable anonymous engagement for individuals concerned about stigma; they can store content offline for use in areas without cellular coverage; and they support self-monitoring between telehealth or in-person sessions (Marsch et al., 2024; Tofighi et al., 2023). However, app effectiveness depends on user engagement, which tends to decline over time (Ashford et al., 2024). Moreover, few apps have been validated with rural or Indigenous populations; content may not reflect rural realities or cultural values. Social workers should approach app recommendations cautiously, evaluating evidence base, privacy policies, and cultural appropriateness. Ideally, they would work with clients to co-create digital recovery plans that integrate apps as one component of a broader support system (Tofighi et al., 2023).

Wearable Sensors and Remote Monitoring

Emerging wearable technologies offer novel approaches to relapse prevention and overdose detection. Wrist-worn biosensors can detect physiologic precursors of drug craving or intoxication, including changes in skin conductance, heart rate variability, and body temperature (Carreiro et al., 2024; Chai et al., 2023). Some devices integrate with smartphone apps to deliver just-in-time interventions, breathing exercises, motivational messages, or peer connection prompts, when physiologic indicators

suggest elevated relapse risk (Carreiro et al., 2024). More critically, wearable overdose detection systems are under development. The "Naloxone Wearable," a subcutaneous sensor, detects opioid-induced respiratory depression and automatically administers naloxone or alerts emergency services (Chai et al., 2023). While still experimental, such devices could be life-saving for individuals using opioids alone in remote Montana locations where emergency response times exceed 30 minutes.

For rural social work practice, wearables raise important considerations. They may reduce harm for high-risk individuals but require smartphone pairing, cellular connectivity, and regular charging, barriers for individuals experiencing homelessness or lacking reliable power access. Data privacy concerns are substantial: who owns physiologic data? Could it be subpoenaed in child welfare or criminal proceedings? Social workers must advocate for strong privacy protections and ensure clients provide fully informed consent before using monitoring technologies (Carreiro et al., 2024; US Privacy Act of 1974, 2024 amendments).

Digital Peer Support Networks

Peer support is a cornerstone of SUD recovery, and technology enables peer connection across geographic distances. Online recovery communities include 12-step meetings via Zoom, smartphone apps facilitating peer coaching, and social media groups for specific recovery pathways (Ashford et al., 2024; Valentine et al., 2020). For rural Montana, digital peer support networks address isolation, a major risk factor for relapse. An individual in rural eastern Montana can attend a virtual meeting with peers from across the state, accessing diverse perspectives and building connections that supplement local in-person meetings. Research suggests that digital peer support can be as effective as in-person support, particularly when combined with professional treatment (Bergman et al., 2024; Valentine et al., 2020).

The Sober Life in Great Falls, previously described, could extend its reach through digital peer support. Video-based coaching sessions, a private client portal with recovery resources, and a moderated peer messaging group could support clients between in-person visits and provide continuity when weather or transportation prevents travel (KPAX News, 2025b). Peer support specialist Tammy Day's observation

about the therapeutic value of lived experience, "When we get new people, just when they actually hear that we are in recovery ourselves, it really, they can just breathe" (KPAX News, 2025b), applies equally to digital spaces. A newly recovering individual seeing a peer's recovery story online may experience the same relief. For social workers, integrating peer support specialists into treatment teams requires attention to role definition, supervision, and compensation, including for digitally delivered peer support. Peer specialists bring experiential knowledge that complements clinical training, but sustainable funding for peer positions, including telehealth peer coaching, remains a challenge in Montana's predominantly grant-funded recovery ecosystem (Rieckmann et al., 2021).

Artificial Intelligence and Predictive Analytics

Artificial intelligence (AI) is increasingly applied to SUD treatment, though mostly in research settings. Machine learning models can predict overdose risk using electronic health record data, identifying individuals who might benefit from additional supports (Lo-Ciganic et al., 2024; Ellis et al., 2023). Natural language processing can analyze therapy session transcripts to assess therapeutic alliance or identify relapse warning signs (Imel et al., 2024). Chatbots and conversational agents deliver brief interventions, motivational interviewing, and cognitive behavioral therapy modules with promising preliminary results (Bickmore et al., 2024; Liu et al., 2023).

For Montana social workers, AI tools raise both opportunities and concerns. Predictive analytics could help allocate scarce treatment resources to highest-risk individuals, but algorithms trained on biased data may perpetuate disparities affecting American Indian or rural populations (Obermeyer et al., 2019). Chatbots could provide 24/7 support when clinicians are unavailable, but they cannot replace human therapeutic relationships, particularly for individuals with complex trauma histories. Social workers should engage critically with AI, advocating for transparent, fair, and accountable systems while maintaining that technology augments rather than replaces human connection (Walter et al., 2022; Floridi et al., 2022).

VI. COMMUNITY-BASED RECOVERY SUPPORTS WITH TECHNOLOGY INTEGRATION

Recovery Community Centers and Digital Infrastructure

Recovery community centers (RCCs) offer non-clinical services that address social determinants of health and fill critical gaps in the SUD continuum of care. Research from rural settings comparable to Montana demonstrates that RCCs serve an average of 41 new members per month with annual budgets of approximately \$225,000 (Bohler et al., 2025). Most participants are in early recovery (less than one year), have histories of criminal legal involvement, and lack high school education, demographics that mirror the Montana treatment population (Mancini & Linhorst, 2021). RCCs provide essential services including treatment linkage, naloxone distribution, and mutual help organizations representing alternative recovery pathways. However, research indicates that collaboration with medications for opioid use disorder (MOUD) providers remains minimal despite RCC directors holding generally positive attitudes toward MOUD (Bohler et al., 2025). This gap represents a significant missed opportunity, given strong evidence for MOUD's effectiveness in reducing opioid-related mortality (National Institute on Drug Abuse, 2024; Paquette et al., 2022).

Technology can strengthen RCCs in several ways. To begin, RCCs can serve as telehealth hubs, providing private rooms, reliable broadband, and technical assistance for members accessing remote counseling or medical appointments. In addition, they can offer digital literacy training, helping members use recovery apps, attend virtual meetings, and access online employment or housing resources. RCCs can also implement shared electronic referral systems with treatment providers, courts, and social service agencies, reducing fragmentation in the recovery ecosystem. As a final benefit, RCCs can develop online communities extending support beyond physical operating hours (Bohler et al., 2025; Ashford et al., 2024). However, implementing these technologies requires funding for hardware, software, training, and ongoing technical support, expenses not typically covered by RCCs' modest budgets.

Harm Reduction Technology

Technology is transforming harm reduction, the set of practical strategies reducing negative consequences of substance use without requiring abstinence. Montana's wellness kiosks represent one technology-enabled harm reduction strategy, but others are emerging. Fentanyl test strips, while low-tech, are increasingly distributed via vending machines and mail-based programs (Dasgupta et al., 2022). Drug checking services use Fourier-transform infrared spectroscopy or mass spectrometry to analyze substance composition; some offer mail-in or mobile-laboratory services for remote areas (Green et al., 2024). Overdose detection hotlines, services where individuals using substances alone call a number and provide their location; if they disconnect without completing a check-in, emergency services are dispatched, have prevented deaths in Canada and are being piloted in the United States (Perri et al., 2024). The "Brave" app, developed in British Columbia, provides a virtual overdose detection service accessible via smartphone.

For Montana, these technologies could significantly reduce overdose fatalities, particularly for individuals using opioids alone in remote locations. However, implementation faces barriers: law enforcement concerns about enabling illegal activity, privacy and data security requirements, and the need for 24/7 staffing for hotline services (Green et al., 2024). Social workers can advocate for harm reduction technologies as evidence-based public health interventions, educate communities about their life-saving potential, and support pilot projects in Montana communities (Becher, 2023). The divergence between decreased drug seizures and increased overdose fatalities suggests that harm reduction technologies are not optional adjuncts but essential components of a comprehensive response.

VII. RURAL BARRIERS AND ADAPTATIONS WITH TECHNOLOGY SOLUTIONS

Transportation and Housing as Treatment Determinants

Research on rural recovery services consistently identifies transportation and housing as primary barriers to treatment engagement and retention. In one study of rural RCCs, directors reported that members frequently lacked reliable vehicles, public

transportation options were nonexistent, and distances to treatment facilities exceeded 50 miles one way (Bohler et al., 2025; Pullen & Oser, 2022). Housing instability compounds these challenges, as individuals experiencing homelessness or precarious housing cannot maintain the stability required for recovery (Skinstad et al., 2021). These obstacles become even more daunting when considering Montana's frontier context, which intensifies these barriers. A person in eastern Montana may drive 150 miles to the nearest outpatient treatment provider, a round trip that consumes an entire day and significant fuel costs. For individuals in early recovery who may not have stable employment or income, such travel is prohibitive (National Center for Frontier Communities, 2023). Technology offers partial solutions. Telehealth eliminates travel for counseling and medication management, though initial in-person visits for buprenorphine induction may still be required under some state regulations (Weiner et al., 2024). Mobile health units equipped with telehealth capabilities can bring services to remote communities on rotating schedules. Online housing platforms can help individuals identify transitional or recovery housing vacancies, though rural housing shortages remain (Pullen & Oser, 2022). For transportation, ride-sharing apps are rarely available in frontier Montana, but peer-supported transportation networks coordinated via smartphone apps or text messaging systems could help. Social workers should advocate for flexible funding that can be used for gas cards, vehicle repairs, and mobile hotspot devices that enable telehealth from home (Bohler et al., 2025).

Telehealth and Online Interventions Revisited

Building on earlier discussion, telehealth for SUD requires specific adaptations for rural Montana. Synchronous video visits work well for individuals with reliable broadband and private spaces, but asynchronous options, secure messaging, recorded psychoeducation, app-based check-ins, serve individuals with limited connectivity or privacy (Thapa et al., 2026). Store-and-forward telehealth, where clinical data and images are recorded and transmitted for later review, may be appropriate for some assessments. Audio-only telephone visits remain crucial for individuals without smartphones or broadband; while less comprehensive than video, they still enable medication management and supportive

counseling (U.S. Department of Health and Human Services, 2024). For American Indian communities, telehealth should integrate cultural protocols: offering options for smudging or prayer before sessions, incorporating traditional healers as part of the care team, and respecting that some topics are not appropriate for remote discussion (Walters et al., 2020; Gone, 2021). Social workers should also address digital redlining, the systematic underinvestment in broadband infrastructure for low-income and rural areas, as a social justice issue (Federal Communications Commission, 2024).

Workforce Capacity, Burnout, and Technology Support

The CSKT healing court's experience illustrates workforce challenges facing rural SUD services. Jordan Thompson, CSKT deputy executive officer, notes that expanded felony cases have "increased the court staff's workload and pressed the system to capacity" (KPAX News, 2025a). Leadership is actively identifying additional positions needed in court systems, law enforcement, and tribal health, but federal funding, grants, and sustainable resources remain uncertain. Morigeau emphasizes the human toll: "We're just doing what we can for our people and community at large with what we have. I don't know what lies ahead on the road we're traveling. We'll continue to do what we can but we have to be mindful of staff and not burn them out" (KPAX News, 2025a). Technology can support workforce capacity and mitigate burnout. Electronic health records with decision support reduce documentation burden. Automated appointment reminders decrease no-shows and associated frustration. Online training platforms provide continuing education without travel. Peer consultation via videoconference connects isolated practitioners with colleagues for case consultation and support. AI-powered clinical documentation tools can draft progress notes for clinician review, saving time (Imel et al., 2024).

However, technology implementation itself requires staff time and creates new demands: learning new systems, troubleshooting technical problems, and managing increased data entry. Rural social workers face dual challenges: high caseloads and professional isolation. Unlike urban colleagues who may access peer consultation and specialized supervision, rural social workers often practice as generalists with

limited opportunities for professional development or respite (Canfield, 2021; Daley, 2022). Technology-facilitated peer consultation networks, online communities of practice, and virtual supervision can help address isolation, but only if social workers have protected time to participate.

VIII. PRACTICE RECOMMENDATIONS FOR SOCIAL WORKERS

Social workers in Montana should consider several evidence-based practice recommendations that integrate technology with culturally responsive, community-grounded approaches.

Adopt Technology-Enhanced Culturally Responsive Assessment Tools

Standardized assessment instruments developed in urban, predominantly white populations may not be valid for Montana's American Indian clients or rural white populations with distinct cultural values. Social workers should use assessments that have been validated with rural and Indigenous populations when available, or supplement standardized tools with qualitative interviews that explore cultural conceptualizations of substance use and recovery (Boyd et al., 2021; Greenfield et al., 2020). Technology can enhance assessment through tablet-based questionnaires that present culturally appropriate imagery and language, automated scoring that reduces clinician bias, and ecological momentary assessment (EMA), brief smartphone surveys administered multiple times daily that capture real-time substance use, craving, and contextual factors (Tofighi et al., 2023). However, EMA requires smartphone access and literacy; for clients without these, paper diaries or voice-based check-ins may be preferable. The CSKT healing court's emphasis on "connectedness" as a recovery resource suggests that assessment should inquire about cultural and spiritual practices, community ties, and family relationships, not only substance use behaviors and psychiatric symptoms (Flathead Tribal Health, 2023; KPAX News, 2025a). Digital genograms or community mapping tools could help visualize these connections.

Integrate Family Interventions with Telehealth Platforms

Social workers should deliver Community Reinforcement and Family Training (CRAFT) via

telehealth, using implementation strategies that address digital literacy, participant privacy in small communities, and coordination with limited local treatment resources (Thapa et al., 2026). CRAFT has strong evidence for supporting concerned significant others and improving treatment engagement among individuals with SUD (Meyers et al., 2015; Smith & Meyers, 2018). Telehealth delivery should include: pre-session technology checks, options for audio-only participation when video is not feasible, secure messaging between sessions, and recorded psychoeducational modules that families can watch at their convenience. Given that rural families often feel shame or reluctance to discuss substance use, social workers should normalize help-seeking and provide education about SUD as a health condition rather than a moral failing (Bond et al., 2021). Virtual family education groups, connecting multiple families across geographic distances, can reduce isolation and build collective efficacy.

Advocate for MOUD-RCC Collaboration Using Digital Tools

Research indicates that rural RCCs have minimal collaboration with MOUD providers despite positive attitudes toward MOUD, representing an actionable gap (Bohler et al., 2025). Social workers can serve as bridges between recovery community organizations and opioid treatment programs, facilitating memoranda of understanding, co-locating services, or developing referral protocols. Digital tools can support collaboration: shared electronic referral systems that track client progress across settings, telehealth "warm handoffs" where an RCC peer introduces a client to a MOUD provider virtually, and cross-agency data dashboards that monitor population health outcomes. Given that 78 percent of fatal overdoses in Montana involve polysubstance use including fentanyl, access to buprenorphine, methadone, and naltrexone is life-saving (National Institute on Drug Abuse, 2024; Volkow, 2021). Social workers should be knowledgeable about MOUD, challenge stigma within recovery communities, and advocate for policies that expand MOUD access in rural areas, including telehealth induction for buprenorphine and mobile methadone units (Haffajee et al., 2019; Paquette et al., 2022).

Address Social Determinants as Treatment Priorities with Technology Support

Housing and transportation are not ancillary concerns for SUD treatment but rather treatment priorities. Social workers should conduct systematic assessments of social determinants at intake, develop concrete plans to address instability, and advocate for flexible funding that can be used for rental assistance, gas cards, vehicle repairs, and other practical supports (Bohler et al., 2025; Pullen & Oser, 2022). Technology can support these efforts: online benefits screening tools identify eligible assistance programs; smartphone apps for food assistance, shelter locations, and transportation coordination provide practical resources; and digital case management platforms help social workers track clients' progress on social determinant goals. Montana's HEART Fund and BHSFG investments create opportunities for innovative programming that addresses social determinants, so social workers should engage in grant writing, program development, and policy advocacy to ensure these resources reach the populations most in need, including funding for digital navigation services that help clients access online resources (Montana Department of Public Health and Human Services, 2024; State of Montana Newsroom, 2025).

Support Harm Reduction as Evidence-Based Practice with Technology Enhancement

The increase in overdose fatalities despite decreased drug seizures underscores the importance of harm reduction. Naloxone distribution, fentanyl testing strips, and overdose education are evidence-based interventions that save lives (Dasgupta et al., 2022). Montana's wellness kiosk initiative represents progress, but distribution remains uneven (Montana Department of Public Health and Human Services, 2025). Social workers should carry naloxone, train clients and families in overdose response, and advocate for policies that remove legal and practical barriers to syringe services programs, recognizing that harm reduction is not oppositional to abstinence-oriented treatment but exists on a continuum of recovery support (Becher, 2023). Technology can enhance harm reduction: mobile apps that provide overdose recognition training and naloxone administration guidance; telehealth overdose response hotlines for individuals using alone; and automated

text message check-in systems. Social workers should also advocate for state funding for these technologies.

Engage in Policy Advocacy for Sustainable Funding and Technology Infrastructure

The CSKT experience demonstrates that innovative programs can be developed with grant funding and political support, but sustainability requires sustained, predictable financing (KPAX News, 2025a). Social workers should engage in policy advocacy at the state and federal levels for increased SUD treatment funding, Medicaid reimbursement for peer support services (including digitally delivered peer support), and workforce development initiatives (Rieckmann et al., 2021). Specific policy priorities for Montana include: expansion of telehealth reimbursement parity (including audio-only services), loan repayment programs for rural SUD clinicians, funding for recovery housing, broadband infrastructure investment in frontier and reservation communities, technical assistance for tribal treatment providers navigating federal grant applications, and privacy protections for digital health data that prevent its use in criminal or child welfare proceedings (Center for Behavioral Health Statistics and Quality, 2024; Montana Department of Public Health and Human Services, 2024; Tsosie et al., 2024).

Develop Digital Literacy and Telehealth Competencies

Social workers must possess digital literacy competencies to serve clients effectively in an increasingly technology-mediated environment. The Council on Social Work Education's 2022 EPAS includes technology as a cross-cutting competency, requiring that social workers understand the ethical use of technology in practice (Council on Social Work Education, 2022). Specific competencies for rural SUD practice include: assessing clients' digital access and literacy, selecting evidence-based apps and digital tools, maintaining privacy and security in telehealth sessions (including HIPAA-compliant platforms), adapting interventions for audio-only delivery when necessary, troubleshooting common technical problems, and referring clients to digital navigation resources when needed. Social workers should also be prepared to serve as "digital bridges," helping clients access online resources, complete telehealth intake forms, and navigate app-based interventions.

IX. IMPLICATIONS FOR SOCIAL WORK EDUCATION

Schools of social work preparing students for practice in Montana and similar rural contexts must emphasize several competencies, with technology integration across all domains.

To begin, students need knowledge of rural service delivery models, including telehealth, mobile crisis teams, integrated primary care-behavioral health collaboration, and the role of technology in bridging geographic distances. Curricula should include hands-on training with telehealth platforms, app evaluation frameworks, and digital intervention design principles. Beyond service delivery models, students require training in culturally responsive practice with American Indian communities, including understanding of tribal sovereignty, historical trauma, Indigenous healing practices, and the principles of Indigenous data sovereignty, the right of tribes to govern collection and use of their members' data (Tsosie et al., 2024). Technology-based interventions for tribal communities must be co-designed, respecting cultural protocols and ensuring that data remains under tribal control.

A third imperative is ensuring that social work curricula include content on substance use disorders as a specialized practice area, including screening, brief intervention, referral to treatment (SBIRT), MOUD, recovery support services, and technology-based interventions for SUD (including apps, wearables, and digital peer support). Given that SUD touches virtually every domain of social work practice, child welfare, criminal justice, healthcare, mental health, and beyond, this content cannot be relegated to an elective but must be integrated across the curriculum with attention to both traditional and technology-mediated interventions.

Students also need preparation for interdisciplinary collaboration with peer support specialists, law enforcement, tribal courts, healthcare providers, and technology vendors. The CSKT healing court's team-based approach exemplifies the type of collaborative practice that rural social workers must master, including collaboration with digital health developers and IT support staff.

Addressing the human dimension of practice, social work educators should prepare students for the emotional demands of rural SUD work, including

managing high caseloads, professional isolation, and exposure to trauma and loss. Self-care strategies, peer consultation networks (including virtual consultation groups), and organizational supports should be explicitly taught and modeled. Technology can support self-care through meditation apps, online peer support for clinicians, and digital burnout assessment tools.

Rounding out the competency set, social work education must address the digital divide as a social justice issue. Students should learn about disparities in broadband access, smartphone ownership, and digital literacy; strategies for serving clients with limited connectivity; and advocacy approaches for expanding digital infrastructure as a behavioral health priority.

X. LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

This manuscript synthesizes available evidence from Montana and comparable rural contexts, but significant knowledge gaps remain. No published studies have systematically evaluated outcomes of Montana's drug treatment courts or tribal healing courts using rigorous research designs; while anecdotal reports of graduates are encouraging, effectiveness research is needed, including studies of technology augmentation such as remote check-in systems or digital monitoring tools. Similarly, the prevalence and impact of MOUD in Montana's rural and reservation communities is unknown. Research should examine prescribing rates, pharmacy access, patient experiences, and barriers to MOUD utilization, including the role of telehealth in expanding access. Studies should also evaluate the effectiveness of technology-based MOUD supports: app-based medication reminders, virtual group support, and wearable adherence monitors.

Research on technology-based interventions specifically for rural and American Indian populations in Montana is urgently needed. Few apps or digital tools have been validated with these populations. Community-based participatory research should co-develop and test culturally grounded digital interventions, for example, a Salish-language recovery app, a virtual talking circle platform, or an AI-based overdose detection system tailored for remote areas. The Mountain Shadow Association's family healing center model could provide a natural laboratory for

such research. Additionally, the COVID-19 pandemic's long-term effects on SUD treatment delivery and recovery outcomes in Montana have not been adequately studied; telehealth utilization patterns, changes in substance use patterns, and overdose trends during and after the pandemic warrant investigation, including whether telehealth gains have been sustained as emergency waivers expire.

Workforce studies examining recruitment, retention, burnout, and job satisfaction among SUD treatment providers in Montana would inform workforce development strategies. The CSKT leadership's concern about staff burnout suggests this is a pressing issue. Research should examine whether technology support, such as AI documentation tools, virtual peer consultation, or flexible telehealth schedules, reduces burnout and improves retention. Finally, research on digital justice in rural SUD treatment is needed. How do broadband gaps, device access, and digital literacy affect treatment outcomes? What interventions effectively bridge digital divides for SUD clients? Do predictive analytics and AI tools perpetuate or reduce disparities affecting rural and Indigenous populations? Social work researchers should lead this inquiry, centering community perspectives and advocating for equitable technology design and implementation.

XI. CONCLUSION

Montana stands at a critical juncture in its response to substance use disorders. Rising overdose fatalities demand urgent action, yet the state has developed innovative models, tribal healing courts, recovery community centers, family healing villages, peer support programs, and emerging technology-based interventions, that hold promise for replication elsewhere. Social workers are essential to realizing this promise, serving as clinicians, care coordinators, technology facilitators, policy advocates, and bridges between traditional healing and digital innovation.

The evidence reviewed in this manuscript supports several conclusions. Foremost, rural recovery services must address social determinants of health as core treatment components, not ancillary concerns. Transportation, housing, and social isolation are not distractions from recovery but determinants of it. Technology can help, telehealth eliminates travel, digital peer support reduces isolation, and online resource platforms connect clients with housing and

employment assistance, but technology cannot replace affordable housing or functional public transit. Social workers must advocate for both technological and structural solutions. Beyond the imperative to address social determinants, culturally grounded interventions developed in partnership with tribal communities are not only ethically required but clinically superior to mainstream approaches imposed without adaptation. The CSKT healing court's integration of cultural practices and community connectedness exemplifies effective practice. Technology-based interventions for tribal communities must follow the same principles: co-design with tribal partners, respect for cultural protocols, integration of traditional practices, and data sovereignty. Equally important, harm reduction and abstinence-oriented treatment are compatible, not competing, approaches. The divergence between decreased drug seizures and increased overdose fatalities suggests that supply reduction without demand reduction and harm reduction is insufficient. Technology-enhanced harm reduction, fentanyl test strips distributed via mail, overdose detection hotlines, wellness kiosks with naloxone, can save lives while respecting individuals' autonomy and readiness for change.

Policy also matters profoundly. Montana's statutory framework, licensing reforms, state investments, and emerging support for telehealth create conditions for effective practice, but implementation gaps remain. Social workers must advocate for policies that translate legislative intent into community reality, policies that fund broadband infrastructure, reimburse audio-only telehealth, protect digital health data privacy, and support tribal technology sovereignty. Yet amid all these technological advances, it must be remembered that technology is a tool, not a solution. Apps and wearables do not replace therapeutic relationships; algorithms do not understand trauma; chatbots do not offer unconditional positive regard. The most powerful interventions remain human: a peer who has walked through hell offering hope, a clinician who listens without judgment, a judge who sees potential for change, a family member who refuses to give up. Technology extends the reach of these human connections, but it cannot substitute for them.

Above all, the people of Montana, including those in recovery, their families, tribal leaders, peer support specialists, frontline clinicians, and technology innovators, possess knowledge and wisdom that

cannot be captured in statutes, algorithms, or research articles. Social workers must approach practice with humility, curiosity, and commitment to partnership. The healing landscape of Montana is not waiting to be discovered; it is being built, every day, by people who have walked through hell and emerged with gifts to offer.

As Dana Comes at Night, the CSKT healing court director, reflects: "It's the most rewarding part of the job when you see the change from beginning to end. The goal is to expand. It's very possible, it's just about tidying things up and moving forward." In that spirit, attending to details while keeping eyes on the horizon, social workers, tribal communities, policymakers, and technology partners can build a recovery landscape that reaches every corner of Montana, honors every culture, and welcomes every person seeking healing.

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