



Enhancing the Substance Use Recovery Landscape

Physical Activity and Access to Nature

Dr. Shawn F. Dorius, Kelsey Van Selous, Sarah Walker, Matthew J. Voss, & Sydney Etten

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Overview

The link between physical activity, access to nature, and well-being is a well-established connection spanning scientific and health domains, where emerging research offers compelling evidence of benefits in substance use recovery. Physical activity helps people in recovery manage anxiety, regulate mood, and release “feel-good” hormones, which contribute to physical and mental health. Engaging in physical activity enhances recovery by reducing substance use cravings, improving self-esteem, and replacing unhealthy behaviors with healthy ones. Importantly, people in recovery don't need to engage in vigorous physical activity to achieve health benefits: even low doses of exercise or recreational activity can enhance recovery.

In speaking with dozens of people in recovery and leaders of community-based recovery organizations across Iowa, we learned that people are generally aware of the benefits of physical activity for recovery and have some understanding that time in nature has positive effects on substance use recovery. In sharing their personal stories, people in recovery described physical and mental health benefits, enlarged social networks and deeper connections to friends and family, healthier routines, habits, and lifestyles, and a greater sense of purpose in life. Iowa's recovery community organizations all sponsor physical activities, and each is eager to learn and do more to support recovery through effective physical activity programming. Put differently, *recovery community center leaders are motivated to expand physical activity and nature-based programming within their organizations and among their recoverees.*

Given the broad health benefits to the at-risk, using, and substance-use recovering populations, Iowa State University's Public Science Collaborative (PSC) recommends that state and local governments, community-based organizations, and individuals promote physical activity and access to nature. Doing so can simultaneously bolster prevention, improve treatment outcomes, and sustain recovery.

Our research team reviewed the scientific literature, collected and analyzed a large amount of place-based physical activity-promoting infrastructure, spoke with treatment providers and people in recovery, and conducted site visits with community-based recovery organizations in four states. The following text summarizes and shares some key insights and learnings that led to three key recommendations to enhance Iowa's recovery-oriented physical activity programming and service provision.



Offer physical activity programming EARLY and OFTEN in recovery: People are especially vulnerable to relapse during the early days, weeks, and months of substance use recovery, where concern about weight gain, the experience of social isolation, being anxious or stressed about life circumstances, or feeling intense cravings can induce a return to substance use. Offering physical activity programs EARLY and OFTEN can help build self-confidence, deepen social connection, improve mental health, and replace bad habits with health-positive routines.



Partner: Our investigation highlighted the importance of partnerships to advance physical activity among recoverees. Partner with YMCAs and private gyms to offer scholarships or discounted memberships to people in recovery. Partner with community recreation centers, gyms, state and regional parks departments, county conservation boards, and recovery organizations like The Phoenix to offer a broader range of physical activity opportunities that support multiple pathways to recovery. And most importantly, partner with recoverees, volunteers, and RCC staff to learn about their interests and leverage their expertise.



Assess physical activity resources in your community: The scientific literature and feedback from recovery leaders highlight the importance of proximity to sports facilities, gyms, parks, and trails. Use [PSC's physical activity resource locator](#) prototype to identify the resources in your community or PSC's [community recreation dashboard](#) to assess your community's recreation and physical activity infrastructure relative to other Iowa communities. Pay special attention to resources within 10 miles or 30 minutes of your recovery community center and leverage these resources to design recovery-positive physical activity programming.

Introduction

Physical activity is a powerful tool for healing from substance use in both long-term and initial recovery. For example, when exercise is integrated within early recovery, such as during substance use treatment, it can significantly reduce the risk of returning to substances after treatment. This evidence is supported by a study conducted in 2010 showing that 66.7% of individuals who participated in exercise interventions did not return to using substances at the end of their 12-week exercise intervention (Brown et. al., 2010). Implementing physical activity in recovery can also reduce cognitive damage stemming from excessive substance use. For example, a study in 2021 found that exercise led to improved cognitive function, such as improved attention, working memory, and executive function, when implemented during the initial 3 months of recovery (Liu, 2021).

These interventions do not have to be physically vigorous. More is better, but even a low dose of physical exercise can result in life-altering benefits. Low-intensity activities such as walking, fishing, or gardening can be just as impactful as moderate and vigorous activities. And low-intensity exercise programs tend to be more manageable for people in treatment to adhere to, leading to better treatment outcomes (Salem et. al., 2022). Studies have also linked low and moderate-intensity recreation with lower levels of substance cravings (Salem et. al., 2022; Lu et al., 2021).

In the summer of 2024, Iowa State University's Public Science Collaborative spoke with recovery community leaders in Iowa, Colorado, Pennsylvania, and Vermont to learn how physical activity and access to nature impact the lives and well-being of people in substance use recovery. Our Iowa outreach included six facilitated focus groups with people in recovery and interviews with leaders and key personnel at three recovery community centers and four treatment centers. To better understand the national recovery context, we also conducted seven interviews and six site visits with recovery community leaders in Colorado, Vermont, and Pennsylvania

The following sections will provide an overview of:

1. Benefits of Physical Activity in Recovery
2. Current Iowa Offerings
3. Barriers to Physical Activity
4. Recommendations from National Leaders
5. Iowa's Physical Activity Infrastructure

Data for this report includes:

- 6 focus groups and 5 interviews with Iowa RCC leaders and people in recovery.
- 4 Interviews with Iowa treatment centers
- 3 site visits and 1 interview with recovery leaders in Colorado
- 2 site visits to community-based recovery organizations in Pennsylvania
- 1 site visit to an RCC in Vermont
- 32 scientific literature articles reviewed
- 24,000 recreation and physical activity resources from the Iowa Department of Natural Resources and Open Street Map

Benefits of Physical Activity in Recovery

In our research and outreach, we consistently heard that physical activity and access to nature played a crucial role in substance use recovery by supporting physical and mental health improvements, building safe social connections, and creating healthy habits that can last a lifetime. This was supported by scientific research, which shows that physical exercise can reduce tension, fatigue, and confusion (Weinstock et al., 2017). Practicing yoga, for example, can help to curb impulsivity, regulate emotions, and reduce substance cravings (Petker et al., 2021). Physical activity, either recreational or formal exercise, is a protective factor against youth substance use and physical activity contributes to positive social connections and healthy routines that reduce the likelihood of developing a substance use disorder later in life (Cabrera, 2020). These and other social and health benefits of physical activity can transfer to individuals at any stage in the recovery journey. Importantly, exercise can deliver these benefits without the side effects common to psychiatric medications (Weinstock et al., 2017).

Improvements in physical and mental health: Among the recoverees we spoke with, nearly everyone shared personal stories about the mental health benefits of physical activity in their recovery. Stories from people with lived experience align with the scientific literature, which finds that physical exercise can improve overall emotional well-being in recovery (Zheng et al., 2024) by rebalancing and restoring dopamine and serotonin levels that have often been depleted during chronic substance



use (Lu, 2021). This restoration can lead to improved mood regulation, reduced anxiety and depression, and enhanced self-esteem (Lu, 2021). Many participants shared that participating in physical and outdoor activities like yoga, biking, and fishing helped them relax, be more organized, better process emotions, break negative thought cycles, distract from cravings and relapse fear, and improve their self-esteem. For example, we heard:

"Yoga and biking are the only two times that like I feel like my brain isn't just like racing. It helps me think clear." – Recovery leader and person in recovery

"When I'm fishing, I can relax. I don't think about the outside world too much, you know, so that helps me." – Person in recovery

"To me, it is a form of antidepressant... I think it helps with your self-esteem. I think it helps with your confidence. I think it gives your brain... another thing to zone in on to take away from maybe what distracts your brain from what addiction looks like." – Recovery leader and person in recovery

"For me, my mental health is better. I'm more organized. I'm less in my head because [exercise] clears my head out for whatever reason. To me, it is a form of antidepressant." – Person in recovery

"Physical activity offers a healthy way to release pent-up feelings, particularly in the early stages of recovery when individuals might struggle with fight-or-flight responses. Engaging in exercise helps to redirect energy away from negative behaviors and towards positive physical activity." -Iowa recovery leader

In our interviews and focus groups, people in recovery frequently discuss their mental health and link it to addiction and risk of return to use, which aligns with research showing that over 25% of individuals entering recovery also experience poor mental health (e.g., depression, anxiety, bipolar disorder) (Petker et al.). Troubling though is that people in recovery with co-occurring mental health disorders are significantly *less likely* to report their symptoms and to seek support (Petker et al., 2021). This makes the effect of physical activity on mental health all the more important for recovery since it can fill gaps in well-being where individual and group therapy may not be possible. For this reason, we recommend that community-based recovery organizations create programs to support people *early and often* in their recovery journey.

People we spoke with also shared stories of benefits flowing from their participation in physical activity during recovery. For example, we heard that physical activity helped with weight management, particularly early in recovery. Stories of weight gain and loss are frequent among people who use methamphetamine, and worry about weight gain is a deterrent to treatment-seeking for many female methamphetamine users.

"Yeah in early recovery cuz you gain a lot of weight as you know, when you get into early recovery in and it's like it's it messes with like your self-image and stuff. And so, I know for me I struggled with a lot and I still do kind of struggle with it. So, as you know, you get comfortable in sobriety you gain some weight and you struggle with that and it's not necessarily talked about. sometimes it's talked about but not all the time. So, I'm just wondering if it would be a conversation piece if it would be brought up a little bit more. there might be some more people apt to be more interested in that, you know, because there are people that do struggle with that both men and women, you know, you know it might be a vulnerability piece to not necessarily want to bring up you know cuz it is an insecurity and I know for me it isn't something I just want to bring up. Yeah it's hard to talk about that stuff if you don't have like the space or background knowledge to know that other people are also going through that." -Person in recovery and recovery leader

"They always say you gain weight in recovery and I don't want to get fat. I mean I don't. So, I walk the extra steps. I mean like I don't. So, I walk extra steps so I don't you know. Cuz I used to be like 300 pounds and I'm proud of being skinny. ... All I can say is in my active addiction, I didn't eat and my, I mean, I was really emaciated by the time I came into recovery" -Person in recovery

"I'm recovering from methamphetamines. And the first year of my recovery. I put on about 40 to 50 lb and I'm also a grandma now and I decided I wanted to live a little bit longer since I'm taking care of all the other things and so and I'm a little vain I'm not going to lie. So that's why I started to go I was tired of hauling around extra weight. It was doing damage to my mental health. My self-esteem. It was like food or what? I mean like, I think that's just part of how my addicted brain works. It was food or drugs. So now I try to zero in on the other things are important to me. So, I still am pretty very mindful of what I eat. I'm doing some other things to help lose weight. I have a medication I'm taking but I know I need to be in the gym because I don't want to lose muscle mass either" -Person in recovery and recovery leader

"When I was early in recovery, there was no way I could walk 4 miles... my body being so tired. If someone told me to walk 5 miles today, it wouldn't be a big deal, but back then, I just couldn't do it." -Person in recovery and recovery leader

Building safe social connections: Recovery leaders and individuals in recovery found that adding exercise like daily walks or yoga, introduces greater structure in their lives, which is vital for long-term recovery. Group activities, such as walking clubs or yoga sessions, build community, fostering accountability and reducing isolation, and growing recovery capital. This aligns with scientific research showing that physical activity programming creates positive relationships rooted in trust and support that enhance a person in recovery's social capital in the early days of recovery (Curran et al., 2016). One participant mentioned that outdoor recreational activities, such as group hikes, helped them reconnect with nature and others, significantly affecting their emotional and spiritual recovery. Another participant noted that it helps build healthy relationships and reduces feelings of isolation. When engaged in physical activity, people often reported improved friendships, connection, and receiving encouragement and stability from their community. For example, we heard:

"A big piece of my recovery has been around healing through nature and being with other veterans, having that camaraderie." - Person in recovery

"Even if I do work up the nerve to go exercise or be outside, I want it to be in an environment that I'm with other people who are in recovery." - Person in recovery

When we asked recovery leaders and people in recovery what kind of physical activity programming they would like to see, we often heard a need for programming that helps build social connections. For example, we heard:

"I'd love to see something like a recovery-based CrossFit or bowling league. It helps us come together in recovery, doing physical activity, building confidence, and keeping us engaged." – Person in recovery and recovery leader

"I think CrossFit would be pretty awesome... instead of going to an NA meeting, we'd spend an hour sweating it out, building fellowship." – Person in recovery

"I would love to see like a bowling league, like a recovery-based bowling league...because it gets us together in recovery, and we're doing an activity." – Person in recovery

"The thing that I miss the most about CrossFit was, you know, there's 50 of us in a gym, we did lots of really cool stuff together. We were friends. We hung out together." – Person in recovery



"I used to play sand volleyball when I was drinking, but I'd like to do it sober." – Person in recovery and recovery leader

One of the reasons formal physical activity programming in the recovery space is so important is that alcohol and substance are a mainstay among bowling teams, cycling groups, and other outdoor activities in Iowa. Creating substance-free programming during beloved activities can help people in recovery return to their favorite activities within a safe environment and supportive community. For example, one recovery leader shared:

"Myself, I like to play volleyball. I have not been in a while, but I used to play sand volleyball when I was drinking and then go to the bar, and that would be a thing. But that's been a while to. Like volleyballs a cool thing for me. And for me to be able to do it is really neat." -Recovery leader and person in recovery

Similar to the research about moderate physical activity benefits in recovery, we also heard that not everyone was interested in formal activities. For example, we also heard requests for gardening classes and picnics, outdoor activities that are easy to access for all accessibility levels.

"I do hear people talking about going to the gym and lifting weights, but it's not as common as it is for people just wanting to kind of be outside and enjoy a social kind of setting, maybe work in the garden or have the picnic or something like that." -Recovery leader and person in recovery

Creating an environment for people in recovery to build safe social connections is essential, with research showing that people in recovery often feel like they are "losing themselves" early in recovery. These feelings of loss early in recovery represent a barrier to treatment completion and sustaining recovery (Leighton et al., 2021). Not only can physical activity reduce feelings of isolation, but it can also be a platform for people to meet others in recovery, allowing them to benefit from peer mentorship and friendship and enjoy the outdoors.

Promoting Healthy Routine: Another theme that emerged from our interviews and focus groups was the importance of building a daily routine that included physical activity. People shared how a structured daily routine can provide stability, reduce decision fatigue, and create a sense of control during a significant change in early and mid-recovery. Small, achievable goals—like maintaining a regular sleep schedule or engaging in daily physical activity—help establish consistency, which helps turn positive actions into lasting habits. Physical activities, mindfulness practices, and creative outlets improve overall well-being and provide constructive substitutes for the urge to use substances. These recovery-oriented routines can be especially helpful for identifying triggers and replacing old habits with healthier alternatives, strengthening resilience, and supporting long-term recovery. This kind of 'replacement therapy', where people in recovery replace substance use with a healthy habit like walking or going to the gym, was prevalent among people in recovery.

"it [exercise] gives people an outlet... a place to go to release the feelings that they have in early recovery because we oftentimes suffer from fight and flight, and if you can throw yourself into the gym or throw yourself into a healthy habit, it's hard at first, but once you get going, it kind of comes naturally." – Recovery Leader and Person in Recovery

"This has become something that's positive that I can trade this addiction for. Maybe a gym addiction, that's what I sometimes call it. Yeah, I traded something that I was compulsively doing for something that is healthy. But I not so much compulsively do it but I do it for a structure in the beginning of my day." – Recovery leader and person in recovery

*"We're trying to start putting walking back into our regiment too and It's just I just noticed it in my recovery. Everything you do is a routine. You can make it into a routine and it's easy to just stop if one of those aspects of your routine stops happening. So, I'm going to have to try to figure out a way to push that into my routine to get back into push-ups because I thought it was possible the way I felt when I was doing four or five hundred push-ups a day. It was I didn't even think I could do that many push-ups a day. It was easy for me by the time I turned around I was doing 500 and it was no big deal. I did 40 the other day and I was sore. It's a little embarrassing. I did. So, I know I can get back into it. But yeah, I used to do that for me. And I want to get back to that. So, I'm not ashamed that I slipped. It's just, **I would rather slip on that activity than actually slip on relapse.** But I do think it does have some connection to like how people can relapse to get off what they usually do or their routines with how they stay sober"*
 -Person in recovery

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"We absolutely believe physical activity is good and it is helpful in recovery. We promote everything from walking to working out. It builds coping skills, and relaxation, and is a replacement activity for adrenalin highs." – Iowa treatment provider

Current Iowa Offerings

Iowa's Recovery Community Centers currently support a variety of pro-social and pro-health physical activities such as yoga, walking groups, and meditation. Groups that are being held in the Recovery Centers in Iowa include:



Pavement Pounderz (Full Circle Council Bluffs) This group is a relaxing time to walk the beautiful trails in the community. Leaders introduce walking trails and opportunities to engage in nature while offering fellowship, observing nature, and enjoying the company of family and friends.



CaBrie's Come-As-You-Are Yoga (Full Circle Des Moines) This group is a beginner restorative class incorporating meditation to explore yoga's physical, mental, and spiritual benefits without judgment to find the best practice for you.



Meditation to Support Recovery and Health (Full Circle Des Moines) This group is open to everyone and is a time of silent meditation.



Yoga 12-Step Recovery Group (CRUSH in Cedar Rapids) This group is for substance use recovery and well-being recovery in general, combining the practices of the 12-step program with the ancient wisdom of yoga. It is open to anyone dealing with their addictive behavior or those affected by the addictive behaviors of others.



Dodgeball Tournament Fundraiser (Full Circle Des Moines) This physical activity is a fun, family-friendly, sober team event to raise money for the center. Costumes are encouraged, and food and prizes will be provided.

Barriers to Physical Activity Programming

Advancing recovery-oriented physical activity programming in Iowa will benefit from the design of programming that is mindful of the barriers that people in recovery face. Some of the biggest obstacles we heard in our fieldwork included transportation, time, and finances. For example, we heard,

"Cuz sometimes it is, it is just hard to be physically active sometimes. Transportation. Transportation to a lot of the outdoor stuff outside the city limits is just that. Its off the bus line, so not being able to afford the tickets and stuff." -Person in recovery

"Definitely see the time aspect with a lot of the people I work with as a substance abuse counselor. Like the amount of requirements, they have from courts is really time-prohibitive. Like to have time for selfcare outside of all of the required meetings and services and trying to find work and taking the bus to get all of their things like almost impossible to have the time or the energy to like do those things when you have a lot on your plate already. And a lot of that is because there is such a lack of these events and activities so that the time framing is real specific at this certain time, or they have been working every time, you know, it's just the lack of you know, we can't have it all throughout today. It's just one directed time and it doesn't work for everybody. So, one week you might have five people the next week, you'll have twenty. The following week you won't have any." -Treatment provider and person in recovery

"So, like, and I just talked to my PO about it today, right? Before I came over here. I was like you have me on a 9 curfew. I work all night, and then I go back to the hotel and I'll sleep until I got to go to work the next day or if I got a meeting to go to and I was like I have no time. Like I used to go to the gym all the time when I got out. When I first got out, I was there every day and now like I don't have a second to do it and it's right behind my hotel. So, I can sit there and be like, you, I need a little bit later but she keeps telling me no. Cuz I get bored. And I don't know about anybody else, but when I get bored, it's like I just don't care about what's going to happen next to nothing. And like I feel like that's just so I can add it to mine. Say like when you get bored the first thing you want to do is ninety-nine percent of the time is the worst thing you can do." -Person in recovery

As recovery community centers design and implement physical activity and nature-based programming, attention to some key principles that emerge from the research can help. For example, the majority of outdoor physical activity happens within 10 miles of where people live (The Outdoor Foundation, 2018). The principle here for recovery leaders is to be aware of local resources and, whenever possible, design activities around existing community infrastructure close to the recovery center and within easy access (e.g., distance or bus routes) to people in recovery. Low-intensity programs like walking, gardening, or yoga are generally more accessible to a wider range of people and more likely to be sustained over the long term. Thus, implementing low-intensity recreation programs close to home and recovery communities can further an individual's recovery.

The recovery leaders we spoke with noted the importance of assessing and addressing foundational needs, such as safety, housing, and mental health, because of their impact on a person's ability to participate in physical activity programming. For example, a leader of a community-based recovery organization in Pennsylvania shared that they work with a large homeless population. While their recovery organizations also provide trauma-informed yoga, their priority is working to first establish stable housing ahead of any physical activity participation. We also heard from a person in recovery that their mental health can be a big barrier to participation:

"I tend to struggle with depression. And so, when I am more depressed it's a lot more difficult to be motivated to do, you know to do physical activities, but I do try and I wouldn't force myself. But you

know, I try and make that effort to you know, to get out more because I mean it does help, I do feel better, but sometimes in that moment I'm like I don't want to. I'm just, you know, I crawl into it, you know, go to bed and never come out, you know, but that's just not sustainable. So, you know, I do try it, you know, and I've been doing that since I've been at I'm at a sober living house. You know, I'm in recovery from you know, alcoholism ... but sometimes it can be difficult in that moment if I'm more depressed or sad or you know, those emotions where you the low energy of motion so I would say those are the biggest barriers." -Person in recovery

The recovery leaders we spoke with emphasized the importance of meeting individuals where they are and offering resources in a recovery-focused environment that aligns with recoverees' holistic needs. When considering physical activity programming, remember to meet the needs of the whole person and not just their addiction recovery. For example, depending on a person's race, gender, and fitness level, they will have different needs and barriers (Outdoor Foundation 2018). Women and men use green spaces differently; women are more likely to use pools, playgrounds, and walking paths, whereas men are more likely to use soccer fields, gyms, and skate parks (Cohen et al., 2021). Women are also more likely to bring children to green spaces than men, which frequently limits them to child-friendly options (Cohen et al., 2021). Feeling unsafe or lacking knowledge about an activity can also be a barrier for women participating in physical activity (Johnson et al., 2001). Upgrades such as improved lighting, cleaner streets, and regularly maintained trails, sidewalks, and greenery are all strategies to enhance feelings of safety in outdoor recreation spaces.

Additional barriers for both men and women to participate in recovery-based physical activity programs include feeling overweight, lack of fitness, feeling imbalanced, or perceived poor athletic ability (Sari et al., 2017; Beynon et al., 2013; Neale et al., 2012). For example, people in substance use recovery with high fitness before their substance use had a more challenging time re-engaging in physical activity programming due to their fitness loss during active addiction, where this can be exacerbated by feelings of guilt or shame related to their overall fitness (Sari et al., 2017; Beynon et al., 2013; Neale et al., 2012). Research also reveals that feeling a lack of support from fitness instructors or social networks can also hinder physical activity engagement. For example, one study found that while people were aware of the benefits of physical activity, they lacked the confidence to increase physical activity without social support and wished they had more instructor interactions (Beynon et al., 2013). Suggestions for increasing support during physical activity programming include increasing the number of structured activities or implementing a buddy system within physical activity programming (Beynon et al., 2013).

Recommendations from National Leaders

Because Iowa Recoverees and Recovery Leaders were already aware of the benefits of physical activity and access to nature in physical activity programming, we conducted site visits in Colorado, Vermont, and Pennsylvania to learn recommendations from national leaders about how Iowa can enhance physical activity programming and access to nature in substance use recovery. The recommendations shared with us are summarized in Figure 1, reflecting four common themes:

1. Partner with other community-based organizations and with experts
2. Build relationships
3. Honor recoverees and recovery staff
4. Be creative, flexible, and patient in your approach to physical activity programming

Partner with Organizations and experts: A nearly universal recommendation from our site visits and national outreach was to partner with organizations that aligned with your recovery mission and with local experts to enhance your physical activity and access to nature programming. For example, a recovery community center (RCC) we visited in Colorado had an advanced network of community partnerships, connecting them directly with yoga instructors, fitness instructors, and artists who could provide free programming within the RCC. Because of these partnerships, the RCC can provide consistent yoga practice, group workout classes, and art shows. Additional ideas for partnerships include partnering with your local YMCA

or gym to offer discounted memberships to recoverees and bring certified instructors to teach classes in your recovery space.

We also heard recommendations to connect with The Phoenix (<https://thephoenix.org/>), a national organization offering free classes and events such as CrossFit, yoga, music, card games, and art. Group activities organized through The Phoenix significantly reduce social isolation, a significant challenge for those in recovery. These events offer a safe and supportive environment where individuals can break free from the stigma of addiction, engage in healthy activities, and build meaningful relationships with others who share similar experiences. Consider exploring live-stream classes on The Phoenix App for free or starting an Iowa Chapter of the Phoenix. A physical space is not required to start a chapter in Iowa, just a skilled instructor to champion the movement in Iowa. Visit the Volunteer page on The Phoenix to get started: <https://thephoenix.org/volunteer>. We also spoke with a recovery leader from an organization in Colorado offering Phoenix classes who recommended classes be offered that vary in size and structure, are tailored to diverse physical and recovery needs, and have multiple certified instructors who rotate leading classes to avoid burnout.

We also spoke with Adventure Recovery (<https://www.adventurerecovery.com/>), a national provider of one-on-one and group adventure-based recovery coaching. Adventure Recovery's model includes facilitated, nature-based activities such as hiking, camping trips, paddle boarding, surfing, and rock climbing led by trained adventure recovery coaches. The goal is to support people, connect with nature, and advance their mental health and substance use recovery. They also offer Adventure Recovery Coach training, which expands on the tenets of traditional Recovery Coach Training to include wilderness safety and leadership courses, as well as the power of nature-based storytelling and activities.

Build Relationships: The community-based recovery organizations we spoke with also emphasized building relationships when offering physical activity and access to nature programming. For example, another recovery organization we visited in Colorado had a recovery-focused gym offering a variety of free classes such as strength and conditioning, boxing, and cardio for people in recovery. We had the chance to speak with instructors from the gym who shared the importance of recognizing that everyone attending physical fitness classes will have a unique set of needs.

For example, someone attending a fitness class may have three days, three months, or three years in recovery. They may also be someone who is a lifelong athlete or someone just beginning their fitness journey. You may also have attendees with various injuries and abilities. The instructors we spoke with stressed the importance of being flexible and sensitive to the needs of your participants and adapting appropriately. This can help to not only make your participants feel more comfortable, but also can help encourage them to return to classes in the future. Some participants may respond well to a loud booming voice during workouts, while others may need a softer approach. Get to know your participants so you can curate an experience that will keep people returning and feeling comfortable.

Honor Recoverees and Recovery Staff: During each site visit, we asked our national leaders to share how they informed their selection of physical activity programming. Leaders shared a consistent sentiment: honor the interests and expertise of BOTH your recovery staff and recoverees. Some organizations had formal procedures for how they evaluated their program offerings. For example, an organization in Vermont had recoverees submit a formal request form for an activity that was evaluated by staff, leading to the development of a recovery-based hiking group. Other organizations have created activities based on the expertise of leaders. For example, the director of one recovery community center in Colorado has a background in professional fighting and offers a Sober Fight Club. Being responsive to the interests of your staff, volunteers, and recoverees allows you to leverage knowledge, excitement, and passion across various activities, allowing the activity to be more easily translated to your center.

Be Creative, Flexible, and Patient: Finally, our national leaders also stressed the importance of being creative, flexible, and patient in their approach to physical activity programming. One of the most essential pieces of advice we received was, "*People in recovery are opening to trying new things*". This advice can be really important when assessing which type of programming to offer. National recovery organization leaders often reminded us that physical activity programming can





Partner with Organizations & Experts

- **Partner with Aligned Organizations:** Connect with organizations that align with your mission to enhance collaboration. Consider renting your space to partner organizations and physical activity experts to better leverage resources and expand program offerings. For example, consider partnering with the local YMCA or yoga studio to offer discounted memberships to recoverees and bring certified instructors to teach programming in your recovery space.
- **Connect with national experts for training:** Follow organizations like The Phoenix (<https://thephoenix.org/>), Adventure Recovery (<https://www.adventurerecovery.com/>), or the Connecticut Community for Addiction Recovery's Ocean Recovery Community Alliance (<https://www.oceanrecoverycommunityalliance.org/>) for event inspiration or training offered by national experts.
- **Start an Iowa Chapter of The Phoenix:** No physical space or certifications are required, just a skilled instructor in one discipline. Visit the Volunteer page on The Phoenix to get started: <https://thephoenix.org/volunteer>.



Build Relationships

- **Build Relationships:** Get to know participants and adapt your approach to their needs. Flexibility and sensitivity help reduce isolation and encourage return participation. Focus on activities that build relationships among participants and promote a supportive environment.
- **Include a Broader Audience:** Welcome people recovering from various issues (e.g., gambling, food addiction), along with their friends and family.
- **Individualized Recovery:** Assess each person's needs, focusing on consistency and accountability using skills they already have. For example, if someone enjoys fly fishing, help them create a regular routine around it.
- **Build Structure and Support:** Teach practical skills like budgeting and creating social boundaries so they can still experience things they love like live music concerts or sporting events without compromising their recovery.



Honor recoverees and staff

- **Build programming around staff and recoveree's interests and expertise:** Encourage input from both groups, while ensuring someone with expertise is leading your programming.
- **Instructors who are peers:** Select instructors who are in recovery themselves and have used physical activity in their own recovery journey. When possible, use certified trainers who can adapt programming to meet the needs of program participants.
- **Create Standard Operating Procedures:** Create guides to support staff, volunteers, and partners follow established procedures for handling situations that can ensure the physical well-being of those participating in a physical activity class or being accompanied on outdoor activities.
- **Create Educational Materials:** Add educational material in your recovery space, like posters, hand-outs, and collages outlining the benefits of physical activity and access to nature in recovery. Make your posters easily accessibility for staff and participants to reference throughout the day.



Be creative, flexible, and patient

- **Offer a wide range of programs.** Design classes suitable for all levels of recovery and fitness. You may have participants with one day or three years of recovery, with varying fitness levels and injuries, so offer adaptable programming. Include family-friendly and adult-only programs, and label them accordingly in promotional materials.
- **People in recovery are open to trying new things.** Think beyond traditional programming by offering activities like Four Square, Badminton, Dodgeball, or skills training curriculum (e.g., water rescue, survival courses, rock-climbing).
- **Use storytelling.** Nature-based storytelling practices such as fire ceremonies can help create connections with nature and other people in recovery, even in urban settings.
- **Understand Available Resources:** Use nearby parks or trails for regular outdoor activities, and if they're farther away, provide transportation support or keep travel time within 30 minutes. Simple activities like park visits can be just as valuable as more intense sports and nearby outdoor spaces can be cost-effective.
- **Stick with it!** Building regular programming attendance takes time.

include many activities, like badminton, four square, or dodgeball. We also heard recommendations to think outside the box by offering skill-based curricula like survival courses, water rescue, or rock climbing.

The recovery leaders we spoke with also recommended to include storytelling or daily reflections within your physical activity programming. For example, one recovery organization offers fire ceremonies to help build connections in nature. We also heard other instructors offering a daily reflection, reading, or recovery-based group discussion following a physical activity program to help build social connections and maximize how post-workout endorphins can help people process their emotions. Most importantly, we heard several recovery leaders share the wise words of wisdom to *“Stick with it!”* when offering new types of programming, as it can take time to build regular programming attendance with new classes.

Iowa’s Physical Activity Infrastructure

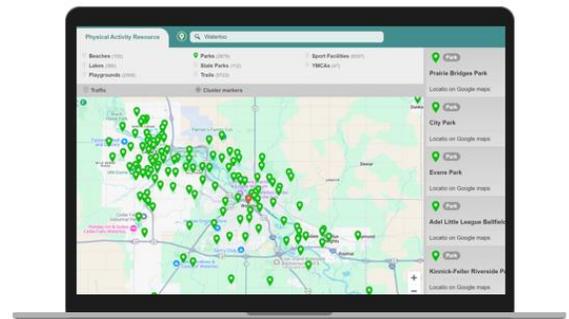
In addition to our local and national outreach to learn about the role of physical activity in substance use recovery, we collected, analyzed, and mapped nearly 24,000 resources to assess the physical landscape of Iowa’s physical activity and recreation infrastructure. The resources include the locations of natural resources such as hiking and walking trails, local parks, lakes, state parks, and recreation areas, as well as built infrastructure such as the locations of sports fields, tennis courts, playgrounds, and YMCA gyms. The data can be accessed for every community in Iowa in PSC’s [Physical Activity Resource Finder](#) Prototype and PSC’s [Physical Activity Community Dashboard](#) and came from the Iowa Department of Natural Resources and OpenStreetMap, an open-source geographic database. These tools are built for community members and organizations to be able to identify their local resources and decide how to use them best.

Our quantitative assessment of these variables revealed that every community in Iowa is within at least 30 miles of at least one park or recreation area and 30 miles of one lake. This means that all Iowans are within a reasonable driving distance to many outdoor recreation activities. However, there is a much more significant disparity in neighborhood access to the community resources that people use more often, such as local parks and athletic fields. For instance, athletic fields tend to be most concentrated at large complexes on the outskirts of communities. That may mean these facilities are inaccessible for children and families, presenting an opportunity for community intervention.

Are you curious to see the physical activity resources in your community? PSC created two tools to help people in recovery and communities locate and assess their physical activity infrastructure.

1. **PSC’s Physical Activity Resource Finder Prototype**

(http://public-science.org/physicalactivity/index_desktop.php) can be used for recovery organizations, people in recovery, and community members to assess the community resources you can access across the state. Use this tool to explore the locations of local and state parks, beaches, lakes, playgrounds, hiking trails, sports facilities, and YMCAs. Identify areas within 10 miles or 30 minutes of your recovery organization to assess the resources most accessible to you and design physical activity offerings leveraging these resources. The image below provides an example of the Physical Activity Resource Finder. You can use the search bar at the top to find your community and the resource buttons to layer in physical activity resources. The menu on the right shows additional details, such as the name and location of resources.



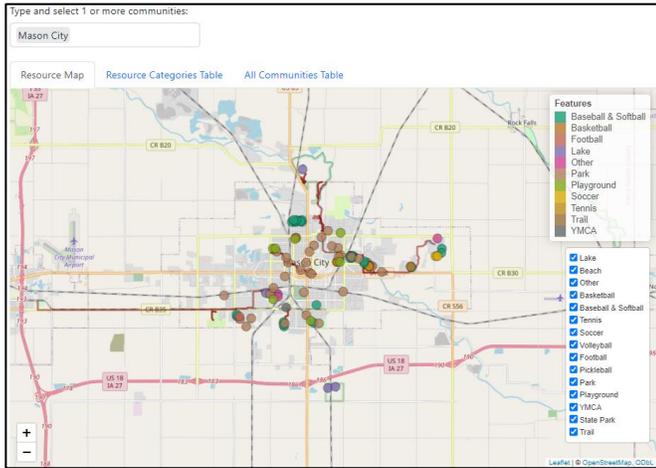
2. **PSC’s Physical Activity Community Dashboard**

(https://publicsciencecollaborative.shinyapps.io/recreation_community_dashboard/) takes the physical activity data a step further. In addition to allowing viewers to search for community resources using the search bar at the top and the menu on the left-hand side, as seen in Figure 2 A, community members can also use the “Resource Categories Table” tab to display the total number of resources for their community, and the “All Communities Table” tab to generate custom tables for every community in Iowa. For example, the “All Communities Table” tab

(Figure 1 C) can be used to view the count of resources in communities ranging in population above 50,000, between 10,000 and 49,999, 2,500 to 9,999, 1,000 to 2,499, and under 1,000 people. These custom tables can be useful to see how your community ranks in physical activity infrastructure compared to similar communities. This kind of data might be useful in identifying community strategies to increase physical activity resources or finding nearby communities with complementary resources to yours.

Figure 2: Physical Activity Community Dashboard

A. Resource Map



B. Resource Categories Table

Resource Count	
Mason City (Pop: 27,271)	
Baseball & Softball	26
Basketball	2
Beach	0
Football	4
Lake	5
Other	3
Park	29
Pickleball	0
Playground	7

C. All Communities Table

City	Population	Sports Facilities Count	Sports Facilities Per 10k	Playground Count	Playground Per 10k	Park Count	Park Per 10k
Des Moines	213K	368	17.3	171	8.0	92	4.3
Cedar Rapids	137K	411	30.0	163	11.9	82	6.0
Davenport	101K	247	24.3	62	6.1	55	5.4
Sioux City	85K	164	19.2	51	6.0	48	5.6
Iowa City	75K	202	27.0	19	2.5	24	3.2
West Des Moines	69K	186	27.1	104	15.1	33	4.8
Ankeny	68K	158	23.1	70	10.2	52	7.6
Waterloo	67K	92	13.7	62	9.2	58	8.6
Ames	66K	182	27.5	81	12.2	50	7.5
Council Bluffs	63K	155	24.7	55	8.8	33	5.3
Dubuque	59K	142	23.9	81	13.7	58	9.8
Urbandale	46K	75	16.5	47	10.3	40	8.8
Marion	41K	143	34.5	54	13.0	20	4.8
Cedar Falls	41K	94	23.1	38	9.3	61	15.0
Bettendorf	39K	146	37.4	29	7.4	29	7.4

For questions or additional information about the activities described in this report, please contact Dr. Shawn Dorius at sdorius@iastate.edu.

Shawn Dorius, PhD
Iowa State University
Public Science Collaborative

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