

Great Rivers Regional System for Addiction Care 2021 to 2022 Annual Report

Organization

Name Marshall Health

Report Period

From June 15, 2021

To May 15, 2022

PROJECT DIRECTOR

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Progress and Results

INTRODUCTION

OUR VISION: To save lives and improve health outcomes for individuals, children and families impacted by the opioid crisis through development of a comprehensive, coordinated system of addiction care by integrating services across the system.

SYSTEM COMPONENTS: Comprehensive Harm Reduction, Community-Based Quick Response Teams (QRTs), Project Engage Model, PROACT Hub and Spoke Model, Naloxone Education and Distribution and Community-level Engagement and Education, characterized by integrated services across the system.

NOTE: *The COVID-19 pandemic continues to pose a serious public health risk. The Governor of WV mandated that all non-essential employees work from home beginning in March 2020, during the first quarter of 2020. Several of the Great Rivers team continue to work remotely through present day. Others are working a blended model which includes limited days in the office and in the community. Fortunately, the Great Rivers Regional System for Addiction Care has very successfully continued to work virtually with the four counties to provide support and to carry out their strategic plans.*

GREAT RIVERS LEADERSHIP AND PARTNER ORGANIZATIONS

In 2021-2022, the Great Rivers Advisory Group has grown to from 216 to 251 members/partners who continue to advance their respective county, and the regional, strategic plans and guide development of a comprehensive, coordinated system of addiction care across Cabell, Kanawha, Jackson, and Putnam counties.

EXECUTIVE COMMITTEE: Michael Kilkenny, MD; Deb Koester, PhD, DNP, MSN, RN; Lyn O'Connell (PI) PhD, IMFT, Stephen Petrany, MD and Tina Ramirez, BA

Great Rivers Regional System for Addiction Care was developed with the goal of increasing collaboration among organizations and agencies serving those with opioid use disorder in the Great Rivers region. Outcome focus #12 in the evaluation plan was set with the aim to measure baseline collaboration among participating organizations and track change over the grant period. Baseline findings were presented in the midpoint evaluation report (covering November 2019–April 2021), and final findings are presented in this report (covering May 2021–April 2022).

Social network analysis, which provides maps and quantitative metrics reflecting how people, groups, and/or organizations are connected across a defined universe, was selected to measure collaboration. ORAU evaluators used the validated Levels of Collaboration instrument (Table 36; Frey et al., 2006¹) in the data collection and analysis process, and standard social network analysis techniques. The Levels of Collaboration instrument asks organizational representatives to rate their level of interaction with other organizations in the system on a 6-point scale.

. Overall Network Metrics in Year 1 and Year 2

Network Metric	Year 1	Year 2
Density (% of possible relationships)	31%	53% overall 77% among organizations responding to the survey
Average number of relationships	7	20.6 overall 17.7 among organizations responding to the survey
Average number of relationships outside the county	3	8.5
Network Diameter (maximum number of steps between organizations)	4	5

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¹ Frey, B. B., Lohmeier, J. H., Lee, S. W., & Tollefson, N. (2006). Measuring collaboration among grant

partners. *American Journal of Evaluation*, 27(3), 383-392.

				data) WV 9.16% increase https://www.cdc.gov/nchs/nvss/vsrr/drug-overdose-data.htm		Overdose Deaths	April 2021 – April 30 2022	April 2021- April 30 2022
Cabell	151	111	159	146	↓	8%	1053	1480
Jackson	5	*supressed 1-4	7	12	↑	-71%	106	54
Kanawha	150	153	212	194	↓	8.5%	1454	1063
Putnam	20	12	21	13	↓	38%	167	128

Goal 2: Increase the number of individuals entering and staying in treatment.

Overall, there was a 23% increase in Great Rivers residents entering opioid use disorder treatment via PROACT in 2019 compared with the previous year. Provider Response Organization for Addiction Care & Treatment ([PROACT](#)) has provided 2018–2021 client intake data in support of this evaluation effort (Table 8). PROACT began in October of 2018 and has grown substantially since then. While it is located in Huntington, West Virginia, PROACT has a large service area that includes outlying West Virginia counties, along with portions of Ohio and Kentucky. PROACT is currently not able to provide data on treatment retention or completion.

The evaluation team narrowed the PROACT intake data to reflect individuals who lived in one of the four Great Rivers counties and listed an opiate as one of their top three drugs of choice. From 2018 to 2021, this segment represented 2,228 out of almost 3,500 intakes, with 98% of individuals from Cabell County. Of these 2,228 individuals, 20 (0.9%) had a known pregnancy and 73 (3.3%) stated their pregnancy status as unknown at intake.

PROACT Intakes by Year and County (Source: PROACT)

County	2018 ^a	2019	2020	2021	Total
Cabell	133	629	849	570	2,181
Jackson	0	0	1	0	1
Kanawha	1	6	7	5	19
Putnam	1	9	8	9	27
Grand Total	135	644	865	584	2,228

^a PROACT formally began offering services in October 2018, so 2018 reflects a partial year.

Types of treatment offered or scheduled were not recorded for every intake record, but the most common types of treatment listed were

- Medicated-assisted treatment (MAT), including Vivitrol, Subutex, Suboxone, or other forms of MAT (n=1,988, or 89%);
- Abstinence (n=104, or 5%);
- Withdrawal management (n=34, or 2%);
- Behavioral health (n=21, or 1%); and
- Residential treatment (n=8, or <1%).

The most common types of referral sources for patients entering PROACT included

- Self-Referral (n=1,064, or 48%);
- Friend/Family (n=458, or 21%);
- Hospital (n=153, or 7%);
- Other treatment program/provider (n=136, or 6%);
- Court system (n=83, or 4%);

- Community program (n=81, or 4%);
- Advertising (n=79, or 4%); and
- Medical provider (n=66, or 3%).

Overall, there was a 32% decrease in Great Rivers residents entering opioid use disorder treatment via PROACT in 2021 compared with the previous year (Figure 1). This decrease in treatment entry followed a 34% increase between 2019 to 2020.

Table 2. Treatment Referrals by Great Rivers County for 2018–2021 (Source: St. Thomas AHC)

County	Referred to AHC 2018	Referred to AHC 2019	Referred to AHC 2020	Referred to AHC 2021	% Change in 2021	% Net Change from 2018
Cabell	22	54	44	37	-16%	68%
Jackson	17	17	2	7	250%	-59%
Kanawha	259	433	278	353	27%	36%
Putnam	38	44	40	37	-8%	-3%
Total	336	548	364	434	19%	29%

Medication-Assisted Treatment Providers

The West Virginia Office of Health Facility Licensure and Certification offers an [online search tool](#) that can be used to identify facilities that are licensed to administer medication-assisted treatment (MAT) for substance use disorder (SUD). Evaluators have tracked licensed MAT providers in the Great Rivers region to provide context on availability of this type of treatment provider during the past year of the grant period. As of April 1, 2022, there are 61 licensed providers in the Great Rivers region, two more providers than in the previous year (Table 18). Compared to April 2021, there are two additional providers in Cabell County (11% increase), one fewer provider in Jackson County (33% decrease), one additional provider in Kanawha County (3% increase), and the same number of providers in Putnam County.

Harm Reduction: Health Departments in all four counties continue to provide harm reduction services including naloxone education and distribution, education on disease prevention, Hepatitis and HIV testing, sexually transmitted disease testing and treatment as well as pregnancy prevention. One county, Cabell, continues to provide a syringe service program (SSP).

QRTs (Quick Response Teams): All counties have established QRTs

Since 2020, across the QRTs in the four counties, there were

- 1,076 overdoses reported
- 1,135 contacts made
- 1,437 QRT eligible individuals
- 162 individuals referred to (or entered) treatment
- 74 individuals training in using Narcan

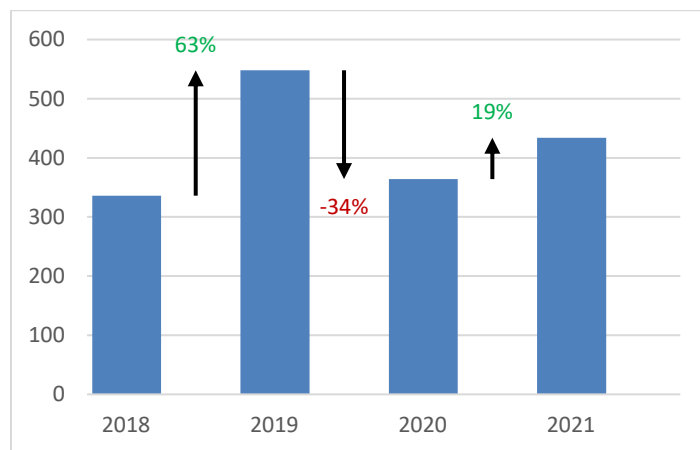
Project Engage:

Great Rivers Treatment Providers

Among the Great Rivers advisory board members who represent treatment facilities, St. Thomas Addiction Healing Center (AHC) was able to provide requested data for 2018 through 2021 (Table 15). All AHC patients are served by peer recovery coaches. Comparisons across the four years show a 29% net increase in referrals. Since 2018, referrals oscillated up and down (Figure 6).

Table 3. Treatment Referrals by Great Rivers County for 2018–2021 (Source: St. Thomas AHC)

County	Referred to AHC 2018	Referred to AHC 2019	Referred to AHC 2020	Referred to AHC 2021	% Change in 2021	% Net Change from 2018
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Project Engage uses a model to identify individuals with addictions in the hospital setting, treat addiction withdrawal, and link individuals to recovery services. Between October 2021–March 2022, St. Mary's Medical Center (SMMC) had a total of 21,448 emergency room (ER) visits; 1.7% of those pertained to opioid use. The Screening, Brief Intervention, and Referral to Treatment (SBIRT) approach was completed for 85% of total ER visits. Of total SBIRT completed, almost 8% (n=1,428) were positive screens, meaning that further assessment was needed. A total of 376 visits, or almost 2% of ER visits, included an initial brief intervention for opioids.

Table 9. SMMC Measures from October 2021–March 2022

SMMC Measure	6-Month Total	Monthly Average	% of Total ER Visits
Total Number of ER Visits	21,448	3,575	—
Opioid Use	359	60	1.7%
SBIRT Completed	18,148	3,025	84.6%
Initial Brief Intervention Opioid	376	75	1.8%
Positive SBIRT Screens	1,428	238	6.7%

The SMMC program tracked various types of referrals made for patients from ER visits (Table XX). Over the 6-month period, there were 16 referrals to opioid treatment, 3 referrals to SMMC's Clinical Evaluation Team for MAT, 4 MAT patients referred to treatment, 3 MAT patients linked to treatment, and 4 referrals to the Opioid Overdose Survivors Outreach Program (OSOP). These 30 referrals amount to 0.1% of all ER visits.

Table 10. SMMC Measures for Referrals

SMMC Measure	6-Month Total	Monthly Average
Referral to Opioid Treatment	16	8

Referred to Clinical Eval Team for MAT	3	1
MAT Patients Referred to Treatment	4	2
MAT Patients Linked to Treatment	3	2
OSOP Referrals (Opioid Overdose Survivors Outreach Program)	4	2

It is anticipated that increasing use of the Mosaic© System among Great Rivers partner organizations will enable tracking and reporting of detailed Screening, Brief Intervention, and Referral to Treatment (SBIRT) data over the coming year. The data is also expected to include linkage to treatment data and referrals to support services. Great Rivers also collaborates with CAMC's Opioid Team and is a collaborative, community partner for their Addiction Care Program, working closely with them on the Yale Learning Collaborative MOHRE which will provide additional data.

Goal 3: Prevent new viral Hepatitis an HIV infections and reduce deaths.

HIV in Great Rivers Counties

West Virginia's Office of Epidemiology and Prevention Services publishes data on HIV diagnoses by county.² Data in Table 31 and Figure 12, which includes data through December 31, 2021, shows a 179% increase in HIV cases in Great Rivers counties between 2018 and 2019, before then decreasing by 6% from 2019 to 2020 and further decreasing by 7% from 2020 to 2021. From 2019 through 2021, 80% or more of the diagnoses were in cases with self-reported injection drug use (IDU).

Table 4. HIV Cases by Great Rivers County for 2018–2021 (Source: West Virginia Office of Epidemiology and Prevention Services)

	2018			2019			2020			2021		
County	Cases ^a	IDU Cases ^{a,b}	% IDU	Cases ^a	IDU Cases ^{a,b}	% IDU	Cases ^a	IDU Cases ^{a,b}	% IDU	Cases	IDU Cases ^{a,b}	% IDU
Cabell	17	13	76%	67	62	93%	45	45	100%	31	28	90%
Jackson	*	0		0	0		0	0		*	*	
Kanawha	17	*		28	14	50%	44	40	91%	52	40	77%
Putnam	*	0		*	*	*	*	*	*			
Total	34	13	38%	95	76	80%	89	85	96%	83	68	82%

^a Fields with an asterisk are suppressed data fields (1–4 HIV diagnoses).

^b IDU cases are those cases with self-reported injection drug use as an exposure category and those attributed to male-to-male sexual contact and IDU (both risk factors reported), and those infections linked to IDU (person did not report IDU as a risk factor but is linked to a person whose diagnoses is attributed to IDU).

ORAU reviewed two log formats used by the CHWs. The first log format was used from February 2020 to mid-January 2022 and CHWs logged 192 weekly entries over this period. The top three needs addressed pertained to drug treatment, medical treatment, and transportation and are detailed in Table 32 in order of most prevalent to least prevalent. Drug treatment was documented in 70% of weekly entries, while medical treatment and transportation were each noted in 40% of entries. The social determinants of health (SDOH) categories were matched to the CHW needs addressed.

CHW entries most commonly fit into the SDOH categories for healthcare access and quality (46%) and economic stability (29%) (Table 33). The least used SDOH category was education access and quality.

The second log format was used mid-January 2022 through mid-March 2022. Every entry included transportation (100%) and most entries related to the client's living situation/housing (80%)

Using the new log format, CHW entries most commonly addressed the SDOH categories of economic stability (36%) and neighborhood and built environment (28%) (Table 35). The category for education access and quality was not used.

Goal 4: Reduce health disparities related to service utilization among individuals with substance use disorders, opioid overdose, hepatitis, and HIV.

Great Rivers 2020-2021 community health worker (CHW) logs document the top needs addressed with clients pertained to Social Determinants of Health categories for healthcare access and quality (e.g., SUD or other medical treatment) (46%) and economic stability (e.g., food, housing) (29%). In 2022, CHWs have most commonly addressed the SDOH categories of economic stability (e.g., housing) (36%) and neighborhood and built environment (e.g., transportation) (28%) with clients.

Measures from Great Rivers Community Health Workers' Logs

Quarter	# of Clients Seen	# Referred to SUD Treatment	# HIV+	# Hepatitis C+	Clients Prescribed PReP
2020					
Qtr1	276	17	14	17	1
Qtr2	167	20	48	134	10
Qtr3	416	71	136	321	29
Qtr4	508	73	83	364	12
2021					
Qtr1	541	60	84	329	5
Qtr2	848	43	161	687	20
Qtr3	770	31	111	499	4
Qtr4	785	54	103	417	11
2022					
Qtr1	1,080	27	80	390	41
Total	5,391	396	820	3,158	133

Goal 5: Increase availability of educational opportunities and resources to enhance awareness and understanding of substance abuse and addiction and effects on individuals, families and communities.

We continue to support the efforts of the Prevention Coalitions throughout the counties that offer multiple evidence-based curriculum, as well as the Governor's Council on Public Education, Healthy Connections and the Hope in Action Alliance who all provide various educational offerings. The coalitions have held 45 meetings with a total of 789 attendees. Putnam Wellness Coalition has offered 12 educational trainings to 531 attendees. At these meetings, staff are able to represent Great Rivers' current efforts, further develop community partnerships, facilitate resource sharing, and identify opportunities for collaboration with like-minded organizations, agencies, or initiatives. These meetings often include representatives from local health departments, faith-based organizations, and NGOs. Great Rivers' staff cited being able to help mentor individuals or organizations new to the field of addressing SUD as a beneficial outcome of attending community meetings which results in increasing collaboration and overall community capacity to achieve shared goals.

Great Rivers App: Great Rivers has a mobile app that provides quick access to various system resources, including a database of peer recovery coaches that can be filtered by county. The app includes a comprehensive resource guide, available trainings, and county specific toolkits. It also includes a geolocation feature, allowing users to search for providers and facilities using a mapping feature. Processes have recently been set in place to additional metrics to track engagement over the coming year. As of April 2022, there were 12 active users who participated in 12 unique use sessions with a total view of 59 pages.

Advisory Group Meetings: Monthly Advisory Group continue to provide updates and education. Held virtually during COVID-19, attendance each monthly ranged from 28 to 48 attendees.

Goal 6: Conduct formal process and outcome evaluation and dissemination of findings for the Great Rivers Regional System for Addiction Care.

Evaluation Focus	Select Great Rivers Evaluation Summary Highlights
	Process Evaluation

1	Harm Reduction	Cabell County Harm Reduction program has seen 75 new clients in the past 6 months and conducted more than 12,000 client visits in 2021. They routinely collected between 70%-127% of the syringes they dispensed.
2	Naloxone	The Controlled Substance Monitoring Program data shows increasing naloxone dispensing in the Great Rivers region from 2018 to present, with a 71% increase in 2021 compared to 2020. This outpaced a 30% increase in Naloxone dispensed statewide over the same period.
5	PROACT	Overall, there was a 32% decrease in Great Rivers residents entering opioid use disorder treatment via PROACT in 2021 compared with the previous year. This decrease in treatment entry followed a 34% increase from 2019 to 2020. MAT was the most common treatment offered at intake.
Outcome Evaluation		
7	Overdose Reduction	Overdose deaths in the Great Rivers region have oscillated since 2015. Prior to Great Rivers, there was a substantial increase in overdose deaths by 68% from 2016 to 2017. Great Rivers was formed in 2018, which correlated with a 23% decrease in overdose deaths from 2017 to 2018, and another decrease by 17% from 2018 to 2019. Concurrent with the COVID-19 pandemic, a 58% increase occurred from 2019 to 2020. From 2020 to 2021, the trajectory changed to a decrease in overdose deaths by 50%. The increase in overdose deaths in the Great Rivers region from 2019 to 2020 is smaller than the corresponding increase in West Virginia as a whole during the same period.
8	Increase Treatment	Among the Great Rivers members who represent treatment facilities, St. Thomas Addiction Healing Center (AHC) consistently provided data for 2018 through 2021. The AHC has had 1,682 treatment referrals, all of which are served by peer recovery coaches. Comparisons across the four years show a 29% net increase in referrals.
9	Improved HIV and Hepatitis services	Cabell County harm reduction services has had to curtail HIV testing during the COVID-19 response. Previously they tested all new clients, but changed to only testing individuals who specifically request an HIV test. From June 2020 - September 2021, they identified 16 new HIV cases while under curtailed testing processes. Clients who have previously tested positive for HIV receive education, including a discussion of PrEP, each visit. These services are especially critical as Cabell and Kanawha counties are in the midst of a concerning HIV outbreak. In the 6-month period pre-COVID-19, Cabell identified 26 new hepatitis C cases. CDC surveillance data for hepatitis C in West Virginia shows a decrease in incidence and prevalence of hepatitis C from 2017 to 2018, after two years of increases in each. West Virginia's Office of Epidemiology and Prevention Services shows a 179% increase in HIV cases in Great Rivers counties between 2018 and 2019, before then decreasing by 6% from 2019 to 2020 and further decreasing by 7% from 2020 to 2021. From 2019 through 2021, 80% or more of the diagnoses were in cases with self-reported injection drug use.
10	Disparities Reduction	Great Rivers 2020-2021 community health worker (CHW) logs document the top needs addressed with clients pertained to Social Determinants of Health categories for healthcare access and quality (e.g., SUD or other medical treatment) (46%) and economic stability (e.g., food, housing) (29%). In 2022, CHWs have most commonly addressed the SDOH categories of economic stability (e.g., housing) (36%) and neighborhood and built environment (e.g., transportation)(28%) with clients.
12	Increase Collaboration	By administering the valid Levels of Collaboration network analysis tool, at two points over the evaluation, it is possible to measure changes in collaboration between Great Rivers organizations. Year 2 data demonstrates a significant improvement on most metrics compared to Year 1. The Great Rivers network has fostered more connections overall, more connections across counties, and a greater proportion of the potential relationships. While the network diameter has grown, indicating that organizations would now need to take more steps across the network to reach the furthest partners, this is partly due to the growth of the Great Rivers network from 28 to 40 organizations.

No Cost Extension Work Plan

As the project is focused on continuing to create an infrastructure that can be replicated across communities in a region as well as replicating individual-level interventions, several goals and objectives will continue to be the focus during the no cost extension period. Some of these objectives lend themselves to outcome-based performance measures (what has changed because of the intervention) while others are process in nature (what we did and with whom). The following table details performance measures and their relationship to the appropriate objective.

Goals and Objectives	Performance Measures	Course Corrections or Adjustments
Goal 1	Reduce overdoses and overdose deaths by 10% per year by establishing the infrastructure to fully implement the components of the Great Rivers Regional System for Addiction Care, as an innovative and cutting-edge model to address the opioid epidemic.	
Objective 1.1	Establish a process for identification, recruitment, training, and retention of staff to support and execute the program.	<p>Support is requested for the Program Director (50% effort) to supervise all aspects of the program. They will continue to be responsible for meeting regularly with the Advisory Committee, Evaluation Team, and program staff to ensure the goals of the program are being met. Additional duties will include reporting to the Merck Foundation on outcomes, overseeing day-to-day operations and hiring and supervising staff.</p> <p>Funds are also requested for the continued employment of one Specialized Community Health Worker in Kanawha and Putnam counties (75% effort). These position will continue to work directly with clients and the community to provide not only addiction recovery but also to serve the overall health including HIV/HepC linkage to care and wellbeing needs of clients and the target area.</p>
Goal 5	Increase the availability of educational opportunities and resources to enhance awareness and understanding of substance abuse and addiction and its effects on individuals, families, and communities.	
Objective 5.1	Develop community tools and implement evidence-based programs targeting various age groups and sectors on prevention and promotion of health related to substance abuse and addiction.	<p>PROACT toolkit development and dissemination.</p> <p>Breakthrough Stigma campaign</p>

Financial Update

Please attach a financial report in Excel format that reports expenditures in USD against the categories listed below. Please note that other line items may be added, as needed.

	Total Approved Budget	Budget for Current Reporting Period	Expenditures for Current Reporting Period	% Variance Current Reporting Period	Cumulative Expenditures to Date	% Variance on Cumulative Expenditures
Salary and fringe benefits	\$1,031,198	\$366,134	\$311,781	-14.85%	\$1,199,231	16.29%
Travel and transportation	\$19,200	\$18,500	\$7,271	-60.70%	\$21,792	13.50%
Equipment	\$0	\$0	\$0	0.00%	\$0	0.00%
Supplies	\$31,800	\$4,200	\$639	-84.77%	\$29,752	-6.44%
Trainings, workshops, and events	\$14,000	\$22,000	\$1,385	-93.71%	\$27,218	94.42%
Contractual	\$440,273	\$54,500	\$51,093	-6.25%	\$213,767	-51.45%
Other direct costs	\$174,000	\$79,106	\$23,593	-70.18%	\$74,537	-57.16%
Indirect costs	\$256,571	\$81,666	\$57,677	-29.37%	\$228,078	-11.11%
Total	\$1,967,042	\$626,106	\$453,440	-27.58%	\$1,794,376	-8.78%

*Expenses through April 30, 2022