Behavioral Health Grants Overview 2022

Parkview Health

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BEHAVIORAL HEALTH GRANTS OVERVIEW 2022
To strengthen awareness around mental health, support needs in our community, reduce stigma, and encourage people to connect with care.
Suicidality, substance use, and mental health problems are interrelated public health issues that affect a considerable proportion of the population at a great economic cost to communities. As an example, in a Medicaid population, the monthly cost of an individual in 2016 was 3.4 times greater for those with a mental health disorder compared to those without and commercial insurance 2.7 times greater cost when a mental health diagnosis was present.

For substance use disorders specifically, direct health care costs associated with these disorders total $118.5 billion in 2019. Federal Health Affairs data demonstrated that mental health disorders cost the government $201 billion, which far exceeds the cost of heart disease ($147 billion) and cancer ($143 billion). Suicides are estimated to cost society $70 billion per year. Individuals with mental health conditions are also more likely to be readmitted within 30 days without consistent follow up care, which can result in reimbursement penalties.

Rates of stress, anxiety, depression, substance use, and suicide have seen spikes since the pandemic, exacerbating an already existing mental health crisis in America. Statistics show consistently that 1 in 5 adults and 1 in 6 youth in the US experience a mental illness; while six of ten people who have mental health needs do not get help; there is no other health condition that exists where we would consider those statistics acceptable. As a healthcare system, we are at the frontline of this crisis, as 1 in 8 emergency department visits involve mental health or substance use disorders and mood disorders are the leading cause of hospitalization in people under the age of 45 in the United States.

Although we often interface with patients at a late stage, such as after they have overdosed, suffered a mental health crisis, or had a suicide attempt, we are a critical nexus point in the continuum of care, and our intervention work saves lives. Much of our effort in the past few years has been devoted to developing effective methods of intervention utilizing peer recovery coaches and community care teams.

Since 2015, we have been committed to innovative solutions to provide comprehensive, wraparound behavioral health care to these patients, with the aim of lowering costs to the individual, the healthcare system, and the broader community.
Behavioral Health Outreach Initiatives

Initiatives

In conjunction with various community partners, such as the Lutheran Foundation and Park Center, we have been recipients (full or partial) of awards totalling more than $11.96 million since 2015.

Our outreach efforts are directed towards many complementory mental health initiatives, including substance use disorder support, suicide prevention, and domestic violence.

As shown below, we have interacted with more than 10,000 individuals, gathering critical information about and addressing mental health needs in our community, and disseminated findings in 34 scientific peer-reviewed articles, which provides a strong foundation for future grant funding.

Many internal projects have led to securing this external funding, providing critical foundational pilot work that is often required for external fundings.
## EXTERNALLY FUNDED RESEARCH

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| Youth Mental Health        | 2015-2018   | Robert Wood Johnson Foundation          | $325K          | Gather mental health and wellness information and perceptions of telemental health from youth | 3418 area youth provided mental health information using polling software in high schools | • 31% reported anxiety or depression  
• 16% had seriously contemplated suicide. |
|                            |             |                                         |                |                                                                          |                                                                          | Publications  
• JAMIA  
• 2018 eGEMS  
• 2018 College Student Journal  
• 2018 Telemedicine & eHealth  
• 2019 JMIR Mental Health  
• 2019 JMIR Formative Research  
• 2020 Pervasive Health  
• 3 sponsor reports |
| Substance Use Disorder Support | 2016-2018  | Indiana DMHA Department of Mental Health Administration | $500K          | Development of Peer Recovery Coach network                              | 5 coaches 1 MSW leader  
515 Contacts  
240 engaged  
63 referrals for pregnant women | • 224 in some type of treatment  
Publications  
• 1 sponsor report |
| Suicide Prevention         | 2017-2018   | Indiana DMHA Department of Mental Health Administration | $591K          | Sources of Strength (SOS): Prevention for suicide, violence, bullying and substance abuse | SOS, QPR, and Project Northland was implemented at 8 participating schools | • Staff displayed improvement in attitude towards helping suicidal students, students seeking help, and student agency (“having a voice”).  
Publications  
• 2 sponsor reports |
| Youth Mental Health        | 2018-2019   | The Lutheran Foundation                 | $150K          | Sources of Strength (SOS) program: Engages students and staff by reinforcing the eight strengths that form the foundation of the program: mental health, family support, positive friends, mentors, healthy activities, | SOS, QPR, and Project Northland was implemented at 19 participating schools.  
SOS: 937 students were trained as peer leaders and 242 school staff members were trained as adult advisors. | • Four key themes that emerged from this data: enhanced communications, connections, purpose, and creativity.  
• Sources of Strength programming has positively impacted the way in which students and educators communicate, enhancing communication practices. |
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<tr>
<td>Substance Use Disorder Support</td>
<td>2018-TBD</td>
<td>FSSA Family and Social Services Administration</td>
<td>$1.5M</td>
<td>Mobile integrated response system for nonfatal overdoses</td>
<td>Mobile response team (FWPD &amp; Peer Coach) made 958 overdose runs, 396 recoverees engaged with Lutheran Services for wraparound care, and Peer Coaches made 8470 contacts via phone, card, or face-to-face.</td>
<td>Students emerging as leaders among their friend group and expanding their interactions with other students in different friend groups. Students feeling a stronger sense of purpose, increased soft skill management in teamwork, conflict resolution, leadership, and new skill acquisition.</td>
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<tr>
<td>Substance Use Disorder Support</td>
<td>2018-2022</td>
<td>SAMHSA Substance Abuse and Mental Health Services Administration</td>
<td>$1.6M</td>
<td>Whole health integration: OUD/SUD care continuum initiative (Medication assisted therapy; MAT clinic)</td>
<td>861 patients engaged in MAT services.</td>
<td>Peers and social workers accompany law enforcement on overdose runs to distribute Narcan &amp; materials and connect recoverees and family/friends with treatment &amp; wraparound care.</td>
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<tr>
<td>Substance Use Disorder Support</td>
<td>2018-2020</td>
<td>American Hospital Association</td>
<td>$100K</td>
<td>Develop mobile app to support Recovery Coach - Recoveree communication</td>
<td>13 people in recovery and coaches shared their lived experience of recovery 5 people in recovery and 5 coaches evaluated a mobile application prototype for coach-client communication.</td>
<td>A prototype mobile application for communication between recovery coaches and clients was created. The mobile app will be piloted in 2022.</td>
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| General Mental Health              | 2018-2020       | The Lutheran Foundation                             | $186K          | Optimizing health & wellness through behavioral health integration into primary care | More than 200 individuals (youth and adults) accessed mental health support | • 29% report functioning in everyday life  
  • 38% report no serious psychological distress.                                               |                                                 | 3 annual sponsor reports                                                                   |
| Substance Use Disorder Support     | 2019            | Bio Crossroads                                      | $25K           | Using SUD information and information related to social and physical community decay, using machine learning tools to predict locations around the state where new treatment facilities would be most beneficial. | Developed a spatio-temporal model based on 29 curated state/federal datasets. Analysis took place over a 4-year time period for all 92 counties in IN. | • Collaboration with IU faculty  
  • Provided a list of urban, suburban, and rural locations that                                 |                                                 | 1 annual sponsor report                                                                   |
| Substance Use Disorder Support     | 2019-2022       | HRSA Health Resources and Services Administration   | $725k          | MAT RCORP Rural Expansion—expanding MAT care to rural counties           | MAT services extended into Adams, Wells, Whitley, Wabash, Huntington, DeKalb, Noble, and Lagrange counties via clinicians and physical sites. | • Abstinence measures improved by 70% and 73.4% at 3- and 6-month follow-up, respectively. Employment and education also increased to 72.8% and 69% at the 3- and 6-month follow-up |                                                 | 10 sponsor reports                                                                   |
| Suicide Prevention                  | 2020-2022       | SAMHSA Substance Abuse and Mental Health Services Administration | $772K          | Suicide prevention navigators coordinating care for suicidal crisis and domestic violence victims | 1909 referrals to program  
409 individuals enrolled  
176 6-month follow ups  
60 12-month follow ups | • 123% improvement in serious psychological distress  
• 149% improvement in everyday functioning | 1 annual sponsor report | 17 sponsor reports                                                                   |
| Family Behavioral Health           | 2020-2023       | NIH National Institutes of Health                   | $322K          | Healthy Digital Habits in Parents of Infants: Understanding parent smartphone use via real-time passive sensing, mental health, and strategies for developing healthier habits. Collaboration with UMich. | 299 parents enrolled for baseline survey, 8 days of phone tracking and time diaries, and follow-up survey; 48 parents assessed via in-depth interviews; and 2 focus groups completed thus far. | • Different types of phone users exist (e.g., low, high, gamers, etc.)  
• Feelings about phone use are complex; many experience both support and guilt.  
• Over 80% desire to change their phone habits, but many express difficulties with change.  
• Healthy Digital Habits Intervention for parent phone use and mental health in development. | 2 annual sponsor reports |
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<tr>
<td>Substance Use Disorder Support</td>
<td>2021-2024</td>
<td>HRSA Health Resources and Services Administration</td>
<td>$1M</td>
<td>HRSA Rural Community Opioid Response Program (RCORP) - MAT Implementation</td>
<td>Expansion of MAT services, initiation of peer support and provision of SUD/OUD education to community and healthcare providers. Thus far, over 100 SUD/OUD patients have been served.</td>
<td>• 3 Peer Recovery Specialists hired and embedded in the 3 counties’ Emergency rooms. &lt;br&gt;• Stigma reduction, naloxone and opioid educational sessions have been conducted in all 3 counties. &lt;br&gt;&lt;br&gt;&lt;strong&gt;Publications:&lt;/strong&gt; 6 sponsor reports</td>
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<tr>
<td>Community Mental Health</td>
<td>2021-2023</td>
<td>SAMHSA Substance Abuse and Mental Health Services Administration</td>
<td>$3.79M</td>
<td>CCBHC; increased access to mental health services; crisis services expanded</td>
<td>• Expanded access to crisis mental health services via implementation of 24/7 helpline, walk-in clinic, and community-based mobile intervention team (MIT). &lt;br&gt;• Provided screening or services to thousands of patients as of August 2022, including: 0 5,000+ patients served in clinic 0 4,000+ virtual psychiatric screenings in Parkview EDs 0 200+ patients engaged with MIT 0 25,000 helpline calls taken</td>
<td>• For clients reassessed after 6 months, there was an average reduction in PHQ-9 scores of 29%. &lt;br&gt;• All National Outcomes Measures (NOMs) were either stable or improved when reassessed over time.  &lt;br&gt;• Perception of care as indicated on NOMs interviews was over 90% positive across all measures.  &lt;br&gt;• Increased number of clients receiving services through specialized teams like MIT, Maternal Recovery Services (MRS), and Assertive Community Treatment (ACT). &lt;br&gt;&lt;br&gt;&lt;strong&gt;Publications:&lt;/strong&gt; 4 sponsor reports</td>
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<td>Youth Mental Health</td>
<td>2022-2023</td>
<td>CIGNA Foundation</td>
<td>$100K</td>
<td>School-based case management and mental health services for students with acute mental health concerns</td>
<td>• Not yet serving patients</td>
<td>• Anticipated reduction in barriers to mental health care, increased school attendance, and improvement in depression and anxiety &lt;br&gt;&lt;br&gt;&lt;strong&gt;Publications:&lt;/strong&gt; 2 sponsor reports</td>
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## Behavioral Health Outreach Initiatives

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<td>Family Behavioral Health</td>
<td>2022-2026</td>
<td>NIH National Institutes of Health</td>
<td>$275K</td>
<td>Maternal technology use during feeding and infant self-regulation and growth. Examining habitual maternal device use and meaning for maternal mental health and infant development over the first 12 months of life. Collaboration with Cal-Poly State University.</td>
<td>• Data collection began in Feb. 2023. Will screen approx. 350 mothers. Assessments occur prenatally and then at 1, 4, 6, 9, and 12 months after birth, and include surveys, time diaries, passive sensing of real-time phone use, and experimental lab tasks.</td>
<td>• Developed protocols and assessments for measuring real-time maternal device use. • Anticipate informing evidence-based guidelines for mothers’ technology use within family contexts while bolstering parenting and infant development.</td>
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## INTERNALLY FUNDED RESEARCH

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<tr>
<td>Community Mental Health</td>
<td>Community Health Needs Assessment 2022</td>
<td>2022-2023</td>
<td>CHNA-Park Center 2021 report; system level report (access); 8 county level reports</td>
<td>5053 residents and providers were surveyed about their health priorities and needs</td>
<td>• Through county-level metrics, surveys of residents and providers, and live county presentations, health system selected health priorities</td>
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<td>Youth Mental Health</td>
<td>Cyberbullying Assessment</td>
<td>2018-2022</td>
<td>Providing insight into bullying/cyberbullying and how it is related to youth mental health</td>
<td>Screened children (&gt;2000) and parents at inpatient unit child bullying &amp; cyberbullying victimization and perpetration</td>
<td>• Cyberbullying and bullying assessment initiated for children and parents at intake and discharge &amp; bullying programming developed • Contributed to 1 PhD</td>
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<tr>
<td>Youth Mental Health</td>
<td>Adverse Childhood Events</td>
<td>2021-2023</td>
<td>Examining the association and consequences of the experiences of ACEs within youth populations who have been cyber/bullied using their EHR data in clinical settings</td>
<td>Used screening data and clinical notes of 719 patients who were admitted between June 2018 and January 2019</td>
<td>• Explores the importance of analyzing unstructured clinical narratives to find association between ACEs and Cyber/bullying as part of ACEs assessment • Provides computational and clinical design guidelines to integrate both structured and unstructured data sources for improving the assessment and treatment outcomes of ACEs</td>
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**Publications:**
- 2020 JAPNA
- 2019 APHA
- 2022 ACM CSCW
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<td>General Mental Health</td>
<td>Digital Self-Harm</td>
<td>2018-2023</td>
<td>Understanding how people use social media share about eating disorder activities, behaviors, drives and how this connects to the everyday health and wellness of patients.</td>
<td>Multiple studies focused on • Characterizing online behavior • How policy shapes behavior • Gender impacts of online presentation • How online content is moderated • Evaluation of severity of online content • How providers perceive online ED content</td>
<td>• Contributed to change in standard of care at PKVW Outpatient ED clinic and Digital Psychiatry division at BIDMC • Contributed to 2 PhDs • 11 invited talks • Two best paper awards</td>
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<tr>
<td>Substance Use Disorder Support</td>
<td>Digital Social Re-entry</td>
<td>2021-2022</td>
<td>Engaging with recoverees and care providers to understand the role that social media play in supporting and/or destabilizing recovery during initial stages of re-entry</td>
<td>Conducted 29 semi-structured interviews in central and northern IN; used an inductive thematic approach for analysis</td>
<td>• Social media can be destabilizing because change in person is not immediately reflected in stored data about the person in the platform • Guidance is needed to help scaffold people’s digital re-entry in similar ways to re-integration into the community • Collaboration with IUPUI • Contributed to one PhD</td>
</tr>
<tr>
<td>Family Behavioral Health</td>
<td>HDH-Pilot</td>
<td>2020</td>
<td>Examining parent phone use and links with mental health and sleep.</td>
<td>42 mothers completed daily surveys and phone tracking.</td>
<td>• Greater mother phone use at bedtime associated with exhaustion and less happiness the next day. • Mothers use their phones more on days when they are feeling more depressed.</td>
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**Funding:**
- Data used for NSF grant (declined)
- Data used for Alliance for ED proposal (declined)
- Surack Family Foundation (in-progress)
- Oracle Fellowship (in-progress)

**Publications:**
- 2016 ACM CSCW
- 2016 ACM CSCW
- 2016 ACM GROUP
- 2017 ACM CSCW
- 2017 ACM CHI
- 2018 ACM CSCW
- 2019 ACM CHI
- 2019 ACM CSCW
- 2021 ACM CHI
- 2022 ACM GROUP
- 1 state policy brief
## Behavioral Health Outreach Initiatives

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| **General Mental Health**          | PPCC Pilot Data          | 2022-2023  | Engagement of Parkview Post-COVID Clinic (PPCC) Covid Long Haul (CLH) patients to better understand their CLH journey. | 15 patients enrolled and engaged over 3 months via surveys, an interview and analysis of Fitbit data. | • Challenged assumptions that EHR data provide enough insights into the characterizations of this emerging chronic illness
  • Uncover depth of mental health issues connected to PPCC patients that was undocumented
  • Provide indicators that lack of deep sleep could be a contributing factor to severity of symptoms
  
  **Funding:**
  • Foundation for an NSF CISE Small grant (in progress)
  
  **Publications:**
  • 2022 Paediatrica
  • SRCD conf. presentation
  • 1 article under review |
| **Community Behavioral Health**    | Screen Free Week         | 2021       | Program evaluation to assess the impact of screen free week programming (at a local child facility) on maternal mental health, parent-child relationships, and technology use limits. | 24 parents participated in the screen free week and evaluation measures at baseline, 1 week, and 4 weeks. | • SFW program decreased parent depressive symptoms, increased the parenting of child screen time, and decreased parent and child screen time.
  • Parent phone use during parent-child time was decreased.
  
  **Publications:**
  • 2023 ACM CSCW (under review)
  • 2023 AMIA (under review) |
| **Community Behavioral Health**    | School Devices           | 2020-2021  | Examining parent perceptions of how school-issued devices in K-5th grade are used at home, positive and negative impacts at home on learning and behavior/emotion, resources/training provided by schools, and associations between these variables. | Survey results from pre-COVID (32 parents) and after readjustment to COVID (79 parents). | • Children’s use of school devices at home for academic skills predicted positive impacts on learning and child behavior.
  • In contrast, use of school devices for entertainment purposes predicted negative impacts on learning and child behaviors and more conflict.
  • Many parents felt device training from schools was insufficient. |
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<td>Suicide Prevention</td>
<td>Missed Suicide Intervention</td>
<td>2019-2022</td>
<td>Retrospective chart review to evaluate for risk factors, warning signs, and time factors for their potential influence on patients ending their life by suicide.</td>
<td>Charts of 77 patients, who had received care at Parkview, and died by suicide within a recent 3-year period were reviewed.</td>
<td>• Confidential findings provided to PBHI leadership for review.</td>
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<td>General Mental Health</td>
<td>MBM</td>
<td>2019-2021</td>
<td>Comparison of Practice Models of Two Psychiatry Services within the Same Health System regarding the Economics of Patient Care, Patient outcomes and Ease of Access</td>
<td>Examined the effectiveness of innovative practice model using nurse practitioners (n = 3194) and standard practice model (n = 1060)</td>
<td>• Patients at innovative practice model clinic have fewer urgent care, inpatient, and ED visits compared to patients who are seen at a standard practice model clinic, but PHQ-9 scores are similar</td>
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<td>General Mental Health</td>
<td>Genomind</td>
<td>2018-2020</td>
<td>Identification of correlations between medication response and genotype with the goal of determining the probability of response and tolerability to specific medications used to treat patients with major depressive disorder (MDD).</td>
<td>High-dose bupropion is beneficial for MDD patients with Met/Val or Val/Val COMT genotypes, but not for patients with Met/Met genotype</td>
<td>• Findings have been become one of the tools used by PPG MBM providers to guide their medication prescribing practices</td>
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<td>Youth Mental Health</td>
<td>Parkview Youth Mental Health Conference Series</td>
<td>2018-2021</td>
<td>Annual mental health and technology conference geared to help families take charge of their mental health. Consists of personal stories, helpful tips, and presented research</td>
<td>Over 600 community members attended these events (in-person and virtually).</td>
<td>• National/local researchers and community members collaborated to bring a wide breadth of knowledge, experience, and research to help parents, teens, and community members who work with youth learn healthy habits and safety regarding technology and mental health.</td>
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