

SIM Child Psychiatric Access Project

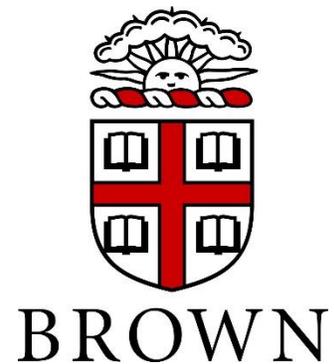
Evaluation Report

**Vendor:
Emma Pendleton Bradley Hospital**

**Prepared by:
Rhode Island State Evaluation Team**

**University of Rhode Island
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Executive Summary

The nation currently struggles with a shortage of child psychiatrists, which is a barrier to improving childhood behavioral health. This workforce shortage prevents many children and adolescents with behavioral health issues from getting timely quality care. Bradley Hospital's Child Psychiatric Access Project, later named the PediPRN program, supports better integration of psychiatry in the scope of pediatric primary care practice by making child psychiatric services accessible to pediatric primary care providers (PPCPs) throughout the state. Current services include: prompt consultations, including recommendations for prescribing of medications; face to face psychiatric evaluations as-needed, with return to the treating primary care practitioner for ongoing medication management following stabilization; phone availability for ongoing collaborations; and referral to other mental health services and programs based on the needs of the child/adolescent.

The University of Rhode Island conducted an evaluation of the PediPRN program and found strong support for the program:

- It is serving 63 practices across the state and has enrolled 370 practitioners to date;
- Service utilization is on par with similar efforts in other states, with 46.7% of the enrolled practitioners utilizing the service;
- 625 different children and adolescents have been served by the program, with 23% having multiple encounters;
- 50% of the children and adolescents being served have multiple behavioral diagnoses, reflecting their complex needs;
- Medication consultation is the primary reason for consultation, followed by referrals for community resources and diagnostic/2nd opinion consultations;
- Practitioners report high levels of satisfaction with the service and improved comfort and confidence in managing the behavioral issues of the target population.

The program has initial sustainability through additional grant funding, however, as the program look towards long-term sustainability it will be important to highlight the strengths described above. As a neutral, payer-blind service, PediPRN is highly valuable in its ability to potentially serve all children in Rhode Island as well as save time and costs by eliminating the reporting and administrative efforts involved in the claims process.

Despite increasing efforts across the state to enhance integrated behavioral care and co-located services, it is hard to envision a future in which there is consultation capacity for child and adolescent psychiatrists (CAPs) within any single practice or collection of practices given the shortage of CAPs in the state. Having a statewide consultation model supporting a relatively limited staff is much more efficient.

Massachusetts funded their program through state line item appropriations and has recently supplemented state appropriations through levies on commercial insurers. Given the breadth of insurers benefiting from the current PediPRN program, it would seem appropriate to consider such a model in Rhode Island to ensure long-term sustainability.

Another path towards sustainability would be working with the insurers, the Office of the Health Insurance Commissioner, and Medicaid to investigate the ability of both the CAP and the referring PPCP to bill for the consultations in order to increase the financial sustainability and use of the service.

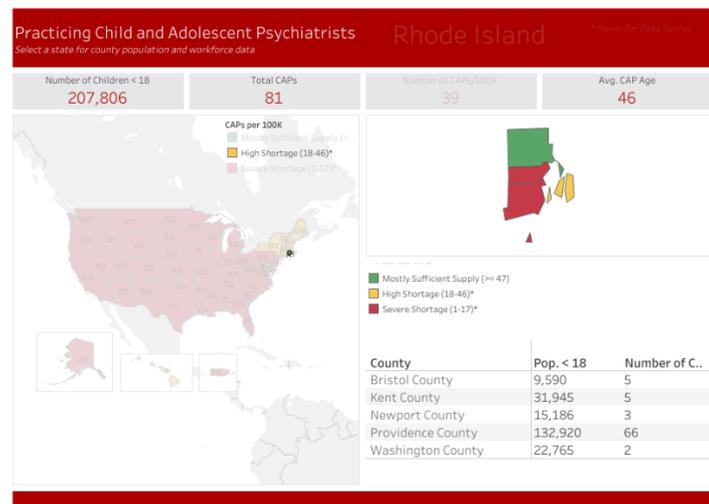
Program evaluation efforts should continue to document utilization patterns, examine potential return on investment, and contribute to informing quality improvement efforts.

INTRODUCTION

According to data from the Centers for Disease Control and Prevention, mental health disorders among children have been increasing in prevalence (<https://www.cdc.gov/childrensmentalhealth/data.html>). These conditions include: attention deficit disorder, major depression, anxiety, and mood, thought, and conduct disorders. In Rhode Island, the need for pediatric behavioral health services is significant, and meeting the demand is challenging.

The nation currently struggles with a shortage of child psychiatrists, which is a barrier to improving childhood behavioral health. This workforce shortage prevents many children and adolescents with behavioral health issues from getting timely quality care. This is challenging for PPCPs (e.g. pediatricians, family medicine physicians who treat children, and pediatric nurse practitioners). These practitioners often accept responsibility, albeit reluctantly, for the mental health care of their young patients due to limited access to psychiatric referral options. This care can involve identification, diagnosis, case management (i.e., identifying community resources and treatment options), and prescription of psychiatric medications. PPCPs express significant concerns about assuming this treatment

responsibility given limited training in psychiatry, not to mention the sub-specialty of pediatric psychiatry. As can be seen in the figure above, Rhode Island has not escaped this shortage, with many counties in the state having only a handful of appropriate specialists. In addition, in Providence County it is unclear how many specialists are seeing and accepting patients from all insurers, as the relatively larger number of child and adolescent psychiatrists is driven by the higher number at Bradley Hospital who often do not see outpatients.



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The Child Psychiatric Access Project is a system change initiative in Rhode Island that aligns with the guiding principles of the state's State Innovation Model Test Grant (SIM) Operational Plan and Population Health Plan. In support of improved health for all Rhode Islanders, both the SIM Operational Plan and Population Health Plan sought to:

1. Make investments that better integrate behavioral health and physical health
2. Change the focus of the health care payment system toward value and less on volume
3. Increase use of data to provide feedback to policy makers, providers, and consumers about quality of care, outcomes, and costs/benefits of specific health care interventions

4. Address the social and environmental determinants that affect the overall health of individuals
5. Empower consumers, both individuals and families, to assume greater control and choice over their own health care
6. Support health care providers who are embarking on practice transformations that emphasize value over volume and providing services in the least restrictive settings possible (such as community-based versus hospital interventions)
7. Identify and address disparities in health outcomes across various population groups or communities

Evaluation Goals

As part of its contract with the State Innovation Model Test Grant, the University of Rhode Island's State Evaluation Team was tasked with conducting an evaluation of the PediPRN program. Working with the vendor and appropriate stakeholders, an evaluation framework was developed to guide the evaluation efforts (see Appendix A for greater detail). The overall evaluation goals were to assist the RI SIM project in determining if the following project goals are achieved:

1. Increased availability of mental health care for children and adolescents by introducing psychiatric consultation services into the scope of primary care practices
2. Creation of a strong primary care/specialist mentoring relationship between PPCPs and child and adolescent psychiatrists
3. Promotion of the rational use of scarce specialty resources for the most complex and high-risk children and adolescents
4. Alignment and integration with RI SIM Grant Operational Plan and Population Health Plan
5. Collection of data to track key indicators, including but not limited to:
 - a. type and amount of services provided
 - b. number of children and adolescents served and their psychiatric diagnoses
 - c. number of pediatric primary care practitioners with access to the program's services

Evaluation Questions

The following overarching evaluation questions guide the evaluation of the SIM effort:

- What is the PediPRN Model?
- Which practices and practitioners are enrolled in the model?
- How many patients have received consultation and who are they?
- What types of services are being utilized?
- What are impacts on medication usage?
- What are the impacts on providers?
- What is the return on investment?

Subsequent pages step through the evaluation questions, present data, and offer interpretation and guidance for sustainability and future efforts when appropriate. This report only covers data available for analysis through March 31, 2019, although, as previously stated, the PediPRN program continues past the SIM grant period.

What is the PediPRN Model?

Organizational Structure:

Bradley Hospital's Child Psychiatric Access Project, later named the PediPRN program, supports better integration of psychiatry into the scope of pediatric primary care practice. Current services include: prompt consultations, including recommendations for prescribing of medications; face to face psychiatric evaluations as-needed, with return to the treating primary care practitioner for ongoing medication management following stabilization; phone availability for ongoing collaborations; and referral to other mental health services and programs based on the needs of the child/adolescent.

The program was largely modeled on the very successful Massachusetts Child Psychiatric Access Program (MCPAP). MCPAP was developed to improve access to treatment for children with behavioral health needs and their families by making child psychiatric services accessible to primary care providers throughout Massachusetts. They continue to provide prompt access to psychiatric consultation and referrals for ongoing behavioral health care. The program supports PPCPs in the integration of behavioral healthcare into their practices, and has served the state of Massachusetts since 2004 using 6 regional hubs to deliver access across the state. The Rhode Island model represents one comparable hub in terms of its staffing and expected service population.

The PediPRN program is currently in its implementation stage; it began taking patient calls on December 15, 2016.

Resources required for program implementation and operation:

The primary resource being utilized is staff positions at Bradley Hospital to coordinate and provide the necessary services. Staff positions include 1.0 Full Time Equivalent (FTE) Board Certified Child Psychiatrist, .5 FTE Licensed Clinical Social Worker (LCSW)/Licensed Mental Health Counselor (LMHC), and .5 FTE Care Coordinator with the following responsibilities.

Child and Adolescent Psychiatrist: 1.0 FTE

- 1) Telephonic consultations with pediatric primary care practitioners
- 2) Face to face evaluations of children and adolescents for diagnostic clarifications and pharmacological consults
- 3) Face to face brief treatment of children and adolescents when deemed clinically appropriate
- 4) Involvement in outreach, education, and training activities for pediatric primary care practitioners
- 5) Involvement in community engagement activities to build a stronger referral network in the community
- 6) Participation in information sharing and relationship building on behalf of Bradley Hospital with key SIM initiatives focused on integration of behavioral and physical health care (e.g., PCMH-Kids)

LICSW/LMHC: .5 FTE

- 1) Face to face evaluations
- 2) Telephonic support to children and families
- 3) Identification of specific therapy needs and making referrals
- 4) Provision of interim care for families
- 5) Involvement in outreach, education, and training activities for pediatric primary care practitioners
- 6) Involvement in community engagement activities to build a stronger referral network in the community

Care Coordinator: .5 FTE

- 1) Scheduling of face to face appointments with brief intake over the phone
- 2) Chart preparation, insurance verification, and billing and coding
- 3) Faxing reports to pediatric primary care practitioners and outside agencies as needed
- 4) Data collection

Program Activities:

The program operates during normal business hours (8:30 AM to 5PM), exclusive of Saturdays and Sundays. If a child/adolescent patient of a PPCP is experiencing a mental health crisis after normal business hours, the practitioner will access the Bradley Hospital and/or Hasbro Children's Hospital emergency access pathway. There is also an additional service, Kids' Link RI, operated by Bradley Hospital as a 24/7 hotline to help children and adolescents experiencing behavioral health crises. This evaluation focused solely on the PediPRN program and its impacts.

The program's core elements are described below.

Initial Elements:

1. Staff recruitment

The staff includes: 1.0 FTE Board Certified Child Psychiatrist; .5 FTE LICSW/LMHC; and .5 FTE Care Coordinator.

2. Enrollment of Pediatric Primary Care Practitioners and Practices

The process of enrolling practitioners and practices into the program emphasized outreach and relationship building with community providers throughout the state. This includes visits to PPCPs' offices to introduce Bradley's new program staff and to provide written protocols about services, including emergency on-call procedures. After the initial enrollment phase, Bradley staff continued to reach out to pediatric primary care practices that have not used their services in the prior quarter.

3. Training and Mentoring of Pediatric Primary Care Practitioners and Practices

As the Child Psychiatric Access Project introduced program protocols, there was a focus on creating a culture of empowerment for PPCPs. The Bradley psychiatrists generally

do not write prescriptions for requested PediPRN consultations; instead, the psychiatrist works with the PPCP to support prescribing within primary care.

4. Orientation of Practitioners and Practices to Data Collection and Reporting Requirements

Generally, the PPCPs or practices used their own medical record systems for case files and for building their own set of referral information. The Bradley staff took responsibility for collecting and reporting data necessary for program evaluation. These data were reported by the referring practitioner as part of the consultation process.

Outputs/services:

1. Psychiatric Telephone Consultation

The psychiatrists for the program provide telephonic consultation with a PPCP in response to his/her diagnostic or therapeutic question. The psychiatrists may recommend that the practitioner prescribe a particular medication and dosage to address the needs of the child or adolescent. The psychiatrists may also recommend protocols to practitioners regarding the frequency of face-to-face contact with children and adolescents who have been prescribed psychiatric medications in order to assure safe, appropriate management of their care.

2. Psychiatrist or Clinical Nurse Specialist Face to Face Evaluation

The psychiatrists for the program or another Bradley child psychiatrist or clinical nurse specialist may conduct a face-to-face evaluation of the child/adolescent and, if needed, provide brief treatment on a transitional basis. Brief treatment is provided pending return to the PPCP for ongoing treatment or pending referral to services by a specialty mental health referral source. (Note that the psychiatrists for the program can perform other work during the coverage period, provided that he/she responds to phone calls in a timely manner.)

3. Social Work and Care Coordination

The social worker provides, as needed, face-to-face evaluations and brief treatment and family support to stabilize the child or adolescent. With the assistance of the Care Coordinator, the social worker assures that the family accesses ongoing behavioral health services as appropriate. This may include referral for ongoing mental health counseling or other interventions by non-psychiatrist clinical staff at Bradley or other community organizations. At all times, the goal for children and adolescents with behavioral health conditions is community-based instead of inpatient treatment. Inpatient services are only considered when a child or adolescent's condition represents a clear and present danger to his/her own safety and/or that of others. As is customary, Bradley Hospital coordinates with public and private insurers regarding availability of coverage for any extended services that a child or adolescent demonstrates need for.

4. Community engagement

Through this project, Bradley Hospital took steps to build a stronger referral network through ongoing outreach to and dialogue with referral partners in local communities. These outreach activities provided opportunities for information sharing, relationship

building, and collaboration between Bradley Hospital, a recognized leader in the child and adolescent mental health field, and other community organizations which serve or advocate for children (e.g., Community Health Teams, Community Mental Health Centers, etc.). Community engagement activities include regular participation with an identified group of stakeholders and pediatric leaders who are championing another Rhode Island SIM initiative, Primary Care Medical Homes for pediatric populations (PCMH-Kids). PCMH-Kids represents thirty-six primary care practices in Rhode Island, serving children, adolescents, and families. These practices receive support to increase the quality of their medical services through supplemental payments and on-site, distance, and collaborative learning and coaching services.

5. Training, mentoring and education sessions

During the start-up phase of the program, as Bradley Hospital enrolled and oriented PPCPs to the program, PediPRN staff conducted a needs assessment through a survey sent to practitioners to get input on their areas of interest and preferred methods for learning about behavioral health conditions and treatments. PediPRN staff then fostered training opportunities in these areas with indicated methods of delivery. These training opportunities have included:

- Collaboration with Bradley Hospital Pediatrics Department on inclusion of behavioral health topics in regular pediatric grand round sessions;
- Periodic presentations to practitioners in their respective trade associations (e.g., Rhode Island Pediatric Society, Family Practice Association);
- Listserv (electronic mailing distributions) with updates in the field of child and adolescent behavioral health;
- Invitations to the Bradley Conference lecture series (with Continuing Medical Education credits) that Bradley Hospital sponsors annually. Among upcoming trainings for the next year are sessions on eating disorders and substance abuse. Bradley Hospital maintains documentation of the training opportunities offered to the PPCPs participating in the program.

Who are the Practices and PPCPs Served?

From its beginning, the PediPRN program worked to outreach to potential practices and their associated practitioners to introduce the program and its services. This allowed the program to answer questions and build relationships with those practices. Over 50 practices have been visited to encourage practitioner enrollment and utilization,



explanation of the program, and onboarding of new sites. Other enrollment and outreach efforts include: telephone calls, mailings, emails, monthly E-blasts, exhibitor tables at events like Rhode Island Chapter of the American Academy of Pediatrics (RIAAP) annual meeting, and presentations. Another tool being used is the PediPRN website (image to

left) that has been revamped to provide current information for the community at

large. PediPRN staff have also developed media blurbs to be distributed by partners like Blue Cross Blue Shield of Rhode Island and RIAAP, and have participated in larger media opportunities via Turnto10 (local news) with Barbara Morse Silva. Ms. Silva interviewed PediPRN staff in March 2018 about the importance of PPCPs screening for teen depression. Dr. Karyn Horowitz, PediPRN child psychiatrist, discussed the new teen depression guidelines for children over the age of 12. Dr. Cindy Klipfel, a provider at East Greenwich Pediatrics, talked about accessing PediPRN services, and a patient and her mother talked about how they were helped by Dr. Klipfel and PediPRN.

How many practices have access to services?



As of March 31, 2019, there are 63 practices enrolled in PediPRN, slightly below the modified enrollment target of 65 practices that was agreed upon by SIM, the vendor, and CMS. Regardless of the targeted number of practices, the ultimate goal of

the project and its recruitment of practices was to ensure appropriate enrollment of eligible practitioners across practices and allow for program saturation and availability across the state. As noted below, the program was successful at enrolling more providers than initially estimated, suggesting that the program is available to sufficient practices statewide.

One of the goals of the PediPRN program was to ensure it complemented ongoing efforts in the state to reform care coordination for children and adolescents. Pediatric Patient-Centered Medical Homes (PCMH-Kids) is a multi-payer primary care payment and delivery system reform initiative that was convened in 2013 to extend the transformation of primary care to practices that serve children across Rhode Island. The mission of PCMH-Kids is to engage practitioners, payers, patients, parents, purchasers and policy makers to develop high quality family- and

Current PCMH Kids /PediPRN Practices
Anchor Pediatrics
Coastal Narragansett Bay Pediatrics
East Greenwich Pediatrics
Hasbro Medicine -Pediatric Primary Care Center
Hasbro Pediatric Primary Care
Pediatric Associates, Inc.
Wood River Health Services, Inc.
Aquidneck Pediatrics
Barrington Family Medicine
Barrington Pediatric Associated, Inc.
Coastal Medical Bald Hill Pediatrics
Coastal Waterman Pediatrics
Coastal Medical Toll Gate Pediatrics
Kingstown Pediatrics
Northern RI Pediatrics
Cranston Pediatrics, LLC

patient-centered medical homes for children and youth. PCMH-Kids aim to assure optimal health and development through a commitment to quality measurement, accountability for costs and outcomes, a focus on population health, and dedication to data-driven system improvement. In late January 2018, PediPRN began working with PCHM-Kids by cross-referencing the PCHM-Kids practices enrolled in PediPRN. To date, PediPRN has enrolled 16 practices out of 20 enrolled in PCHM-Kids from their first two cohorts (list above). Staff from PediPRN coordinate with the Care Transformation Collaborative-RI and PCMH-Kids Leadership team to further discuss ways to partner and collaborate. Together, new practices continue to be successfully enrolled as the PCMH-Kids program expands to new practices beginning in July 2019. PediPRN is on track to have 28 out of the planned 36 PCMH-Kids practices enrolled.



Provider Type	Valid Percentage
Pediatrician	90%
Nurse Practitioner	6%
Family Practitioner	1.5%
Other	2.5%

- Initial target: 240 practitioners enrolled
- April 2019: 370 practitioners enrolled
- Exceeded enrollment target despite lower number of practices enrolled

As of March 2019, there are 370 practitioners enrolled in PediPRN, exceeding the initial target of 240 practitioners by a significant margin (an additional 54.2% enrollment of practitioners). This is a meaningful increase in the potential exposure of the program across the state’s pediatric practitioners.

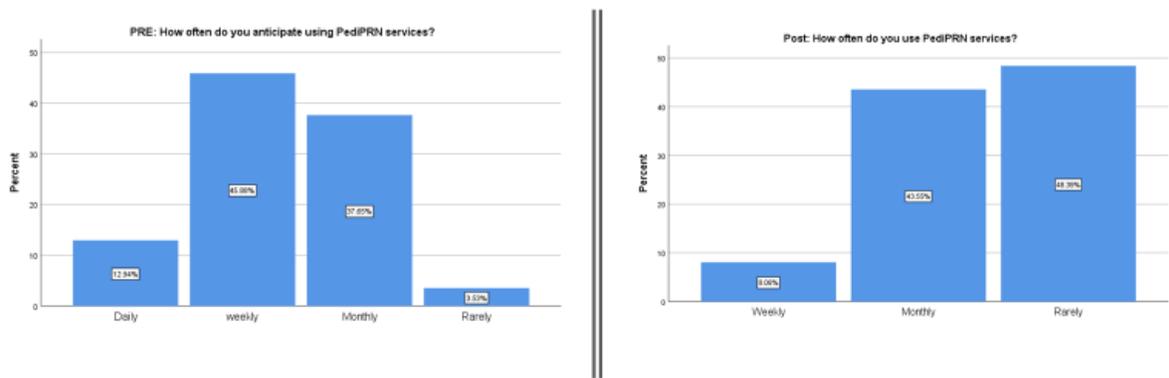
Of those using the services, 90% are pediatricians, 6% are nurse practitioners, 2% are family practitioners, and 2.5% are other or missing. These rates align with the mission of the program and reflect targeted practitioners.

Despite enrolling 370 practitioners, only 173 practitioners have utilized the service to date, which represents 46.7% of enrolled practitioners. This is a number which compares very favorably with the usage of the MCPAP services, which was 44% of the enrolled practitioners as of data availability in FY2015, a comparable time point. It is important to note that this usage rate is likely much higher than the usage seen when similar consultation services are provided by health plans (MCPAP Strategic Planning Report, April 20, 2016). Therefore, despite only around half of the practitioners using the program, it is a reasonable and realistic usage rate.

Of the 173 practitioners that have utilized the services through March 31, 2019, the average usage was 4.8 consultations per practitioner, but there is a wide range in usage, from one consultation to thirty-one consultations by a single practitioner. Approximately 1/3 of all utilizers have had only one consultation to date. Further investigations into low- and high-utilizers may be a fruitful area of inquiry to understand any moderators of such disparate usage rates (such as confidence, availability of co-located expertise, etc.).

Although the usage rate parallels what is happening with the more established MCPAP program, there is a significant difference between the rate at which providers expected to use the services versus their actual usage rates, as can be seen in the figure below. 63% of respondents indicated that they thought they would utilize the service either weekly or daily. However, only 10% are using it at that rate, with 42% reporting monthly use and 48% rare usage. It is desirable to make every effort to ensure that

Significant difference in how often they anticipated using services when compared to reported frequency of using services

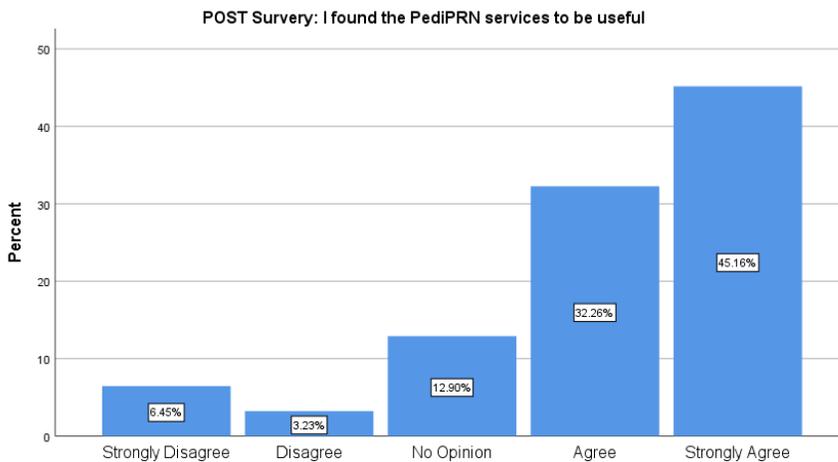
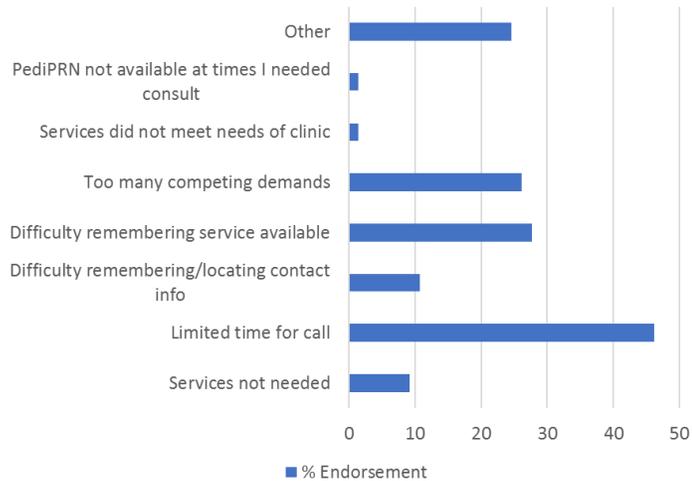


practitioners can use services when appropriate; to that end, survey questions were designed to assess the potential barriers that practitioners are facing when attempting to utilize PediPRN services.

The following survey results highlight the reasons why practitioners report not using the services:

Many of the reported barriers may be related to workflow issues, such as too little time and too many competing demands. However, it is positive that there was a low level of endorsement of items such as the services were unavailable, not needed, or did not meet their needs. Therefore, quality improvement efforts may be effective at enhancing program usability in practices. The PediPRN program has engaged in quality improvement efforts, and as a result has identified that many practitioners were unaware that that they could have office staff support call to schedule the consultation. This utilization method potentially alters the workflow patterns that obstructed the ability or willingness of practitioners to engage the service because of time or other demands. In addition, PediPRN has supplied simple point of contact cues and reminders such as stickers with contact information, specifically to address concerns around having difficulty remembering that the service is available and /or experiencing difficulty in locating the contact information.

Barriers to Service Utilization



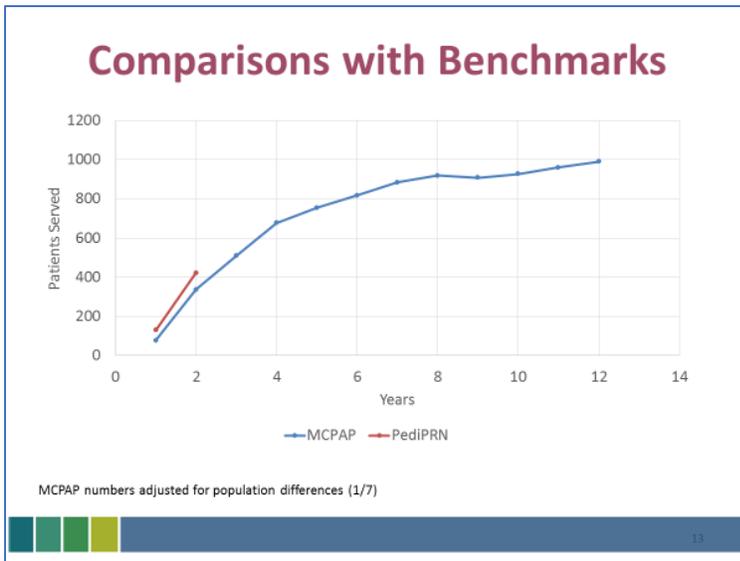
When practitioners use the services, they report high levels of satisfaction. As seen below, over 78% of those surveyed had an endorsement of Agree/Strongly Agree (4.1 average scale response, on par with MCPAP “consults are useful” average scores of approximately 4.2/5)

These high levels of satisfaction are a definite strength of the program and speak to the long-term viability of provision of these services.

How many patients have received consultation?

To date, there have been 625 different children served by the program since its inception.

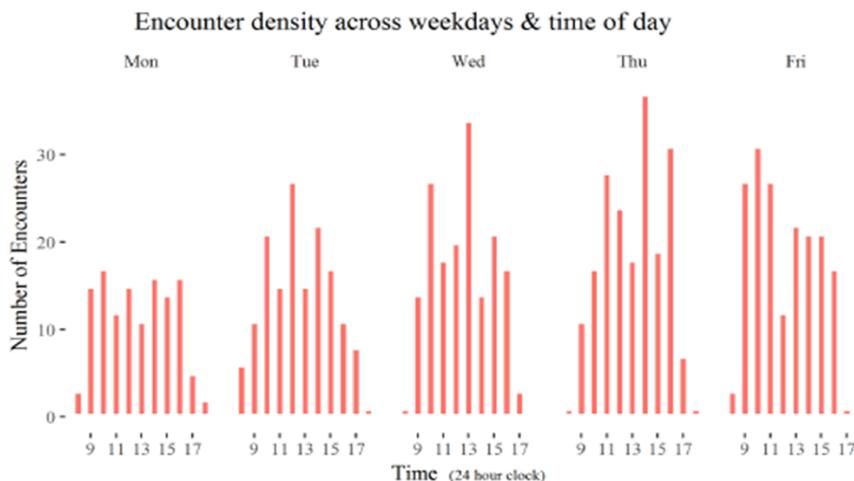
- 77% of those had only one encounter to date
- 17% had two encounters
- 6% had 3 or more encounters



As seen in the figure to the left, there has been growth over time in children served that is on par with the MCPAP program when adjusted for eligible population. The tracking of encounters by the two programs differs, making that comparison more difficult.

The figure below represents the frequency of consultation calls placed to the program during the week. Although there does seem to be some growth in

encounters across the week, there is not a consistent pattern that would suggest a different staffing model would be supported. When surveyed about their preferences, 54% of practitioners surveyed preferred to receive a return call within 30 minutes, while 32% preferred calling for an appointment at a later time. However, there was no consistently identified date/time preferred other than a slight preference toward availability during lunch hour. Given the lack of clear preferences and little to no complaints regarding service availability, it would appear that the staffing and operational model is acting efficiently.



One of the main components of the MCPAP program is the desire to ensure a call back to PPCPs within 30 minutes. However, in the PediPRN program, PPCPs almost always pre-arranged a convenient time for consultation. As a result, a metric for 30-minute callbacks was not a meaningful approach to assess timeliness. However, survey data can provide an important indication of implementation satisfaction. The survey data indicates that prior to the program, only 4% agreed that they were able to get a

 86% of encounters were phone consultations completed with the PCP

 Overall 72% of consults were completed in 20 minutes or less.

psychiatric consult in a timely manner, and following program enrollment, nearly 30% of those surveyed agreed that they could get a timely consultation, over 7x the number previously reported. There are still numerous individuals (63%) who disagree that they are able to get timely consultation, but that data cannot be directly linked with their use, or lack thereof, of the PediPRN service, and likely is simply a reflection of limited access to child psychiatric services or co-located services in general.

This point can be further supported through examination of the reported barriers to usage, in which only around 7% of respondents endorsed items which suggested that availability and lack of a timely response were significant barriers to their use of the service. They were much more likely to endorse limited time (29%) and too many demands (17%).

As expected by the program, the vast majority of consultations were completed on the phone with the PPCP (86%) and took less than 20 minutes to complete. This is an important validation of the program delivery model. Only 6% of encounters resulted in face-to-face evaluations of some sort (initial evaluation or medication evaluation). The program appears successful at minimizing these higher-cost encounters. 3% of encounters resulted in phone discussions with the family. This low frequency should be expected as the program is meant as a consultation service to the practitioner. If there is a need for the family to be involved, it might be done in further follow-up or in-person consultation, which only happens in 2% of encounters.

Who are the patients being served by the program?

To date there have been 625 different individuals that received services via the PediPRN program. The majority (77%) have had one encounter within the program, and 17 % have engaged with the PediPRN service on multiple occasions. It is important to note that all of the demographic information assessed is reported by the PPCP, and can raise questions regarding its validity even as it explains the fairly large amounts of

missing data. For the descriptive purposes of this report, we feel the data is worth reporting. As seen in the table below, the mean age of patients was 13 years old, 70% were white, and there was essentially a 50/50 gender split.

Total Children served = 625

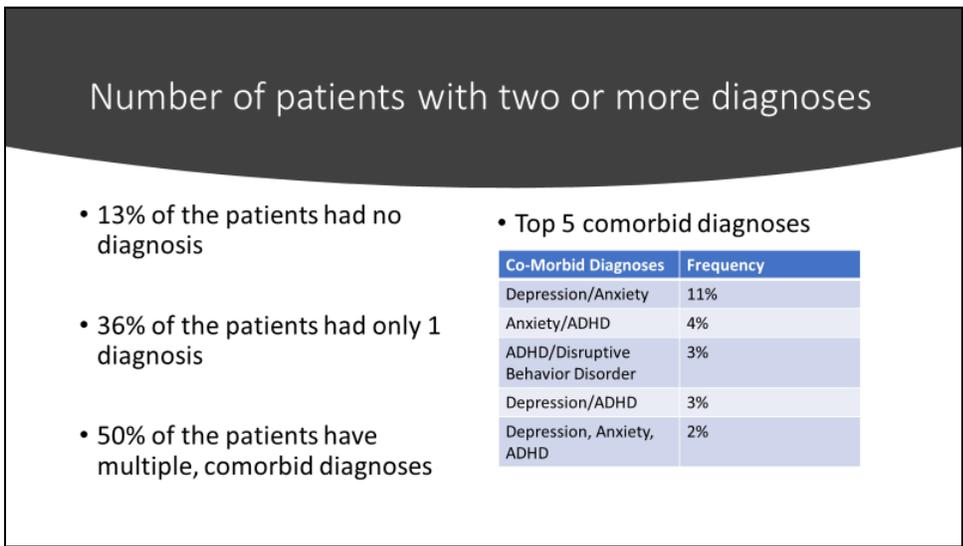
Variable	Level	%(n)
Number		625
Number of Encounters	1	77% (478)
	2	17% (107)
	3	3% (20)
	4	2% (11)
	5	1% (5)
	6	0% (1)
	8	0% (1)
	Age	<i>mean(sd)</i>
0		0% (2)
2		0% (3)
3		1% (6)
4		1% (9)
5		4% (26)
6		3% (20)
7		4% (28)
8		4% (24)
9		5% (32)
10		6% (35)
11		6% (35)
12		6% (35)
13		7% (43)
14		9% (57)
15		9% (59)
16		11% (68)
17		10% (65)
18		5% (29)
19		2% (12)
20		2% (12)
21	1% (5)	
	<i>Missing</i>	3% (20)
Ethnicity	<i>Non-Hispanic</i>	57% (354)
	<i>Missing</i>	23% (142)
	<i>Unknown</i>	15% (96)
	<i>Hispanic</i>	5% (33)
Gender	<i>Male</i>	52% (326)
	<i>Female</i>	47% (292)
	<i>Missing</i>	1% (5)
	<i>Questioning/Other</i>	0% (1)
	<i>Transgender</i>	0% (1)
Race	<i>White</i>	72% (453)
	<i>Unknown</i>	14% (85)
	<i>Black or African American</i>	4% (25)
	<i>Other</i>	4% (24)
	<i>Missing</i>	4% (23)
	<i>Multiple</i>	2% (11)
	<i>Asian</i>	0% (3)
	<i>American Indian or Alaska Native</i>	0% (1)

As presented in the table below, the majority of diagnoses indicated by the PPCPs were anxiety (26%), ADHD (19%), and depression (17%), closely reflecting overall population

prevalence rates of these diagnoses. Substance abuse was only diagnosed in 10 encounters (1%) but is reflective of the relatively young age of the targeted population. Again, caution is warranted in interpreting these results as they are reported by the PPCP seeking a consultation, not from patient files or EMRs.

Abbreviations: *ADHD* Attention Deficient Hyperactivity Disorder; *OCD* Obsessive Compulsive Disorder; *ODD* Oppositional Defiant Disorder; *PDD* Pervasive Developmental Disorder; *ASD* Autism Spectrum Disorder; *PTSD* Post Traumatic Stress Disorder; *NOS* Not Otherwise Specified; *CD* Conduct Disorder; *DMDD* Disruptive Mood Dysregulation Disorder; *RAD* Reactive Attachment Disorder.

Diagnosis	<i>Anxiety</i>	26% (373)
	<i>ADHD</i>	19% (277)
	<i>Depression</i>	17% (239)
	<i>None</i>	8% (110)
	<i>Disruptive Behavior Disorder</i>	5% (65)
	<i>ASD/DD</i>	4% (60)
	<i>PTSD/Acute Stress Disorder</i>	3% (47)
	<i>Adjustment Disorder</i>	3% (41)
	<i>Other</i>	3% (40)
	<i>Sleep Related Issue</i>	2% (32)
	<i>OCD</i>	2% (31)
	<i>Mood Disorder</i>	2% (30)
	<i>Developmental Delay/Learning Disorder</i>	2% (26)
	<i>Bipolar</i>	1% (11)
	<i>Eating Disorder</i>	1% (10)
	<i>Substance Abuse</i>	1% (10)
	<i>Somatic Disorder</i>	1% (8)
	<i>Tic Disorder</i>	0% (6)
	<i>Neurological Condition</i>	0% (4)
	<i>Gender</i>	0% (2)



Of those patients with diagnoses, 36% have a single diagnosis and 50% have comorbid diagnoses. This highlights the appropriateness of the program in targeting complex patients in which specialized care and consultations are needed to

appropriately coordinate care and manage treatment and medication for these patients.

Variable	Level	% (n)
SI/SA	<i>No History of SI/SA</i>	66% (548)
	<i>Missing</i>	16% (133)
	<i>History of Suicidal Ideation</i>	10% (83)
	<i>Recent Suicidal Ideation</i>	6% (47)
	<i>History of Self-Harm</i>	2% (19)
	<i>History of Suicide Attempt</i>	2% (13)
	<i>Recent Self-Harm</i>	1% (11)
	<i>Recent Suicide Attempt</i>	0% (3)

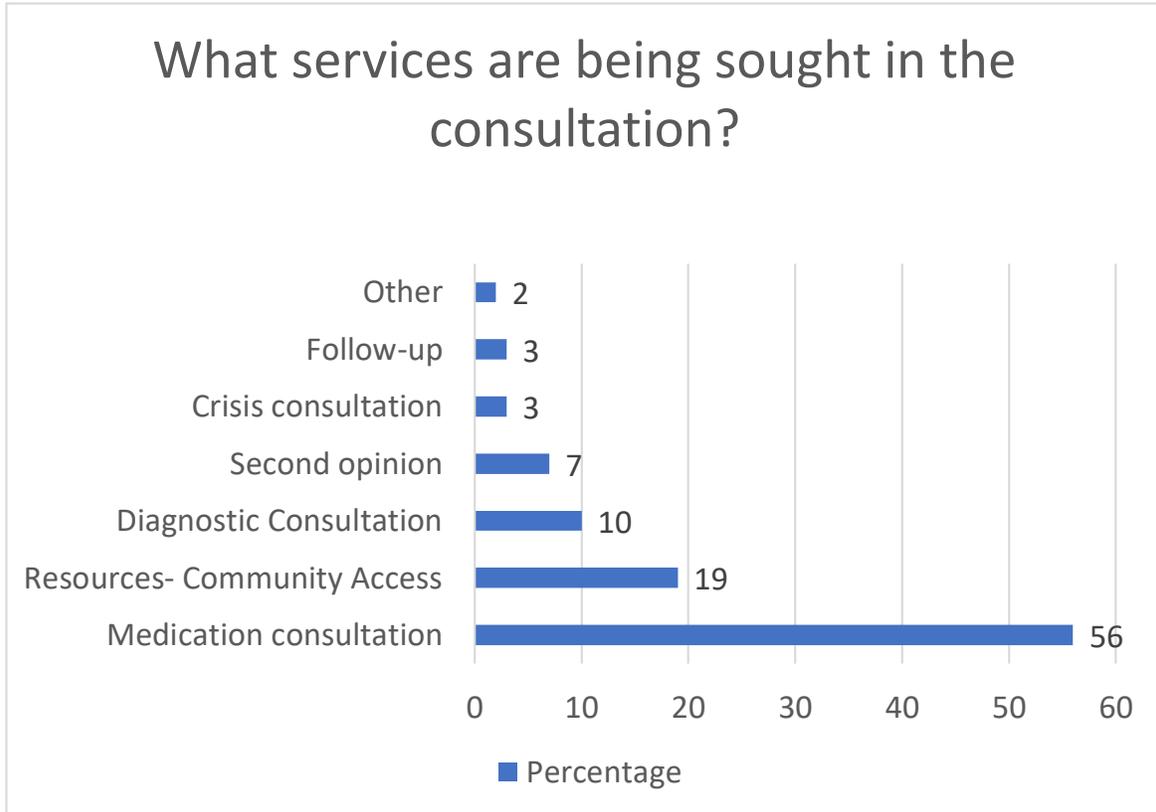
self-harm incident (3%).

As seen in the table, 16% of the patients served presented with either a history of or recent occurrence of suicidal ideation. This is on par with RI's reported high school rates of suicidal ideation or behavior from the Youth Risk Behavior Survey data from 2016 (15.9%). Additionally, patients have a reported suicide attempt (2%) or

When these demographic and patient level data are examined together, the data highlight several important factors related to the program targets. Most importantly, the program seems to be reaching its targeted population. PPCPs are utilizing consultation services for children and adolescents with multiple, co-morbid diagnoses, suggesting relative complexity in the patients served. As will be discussed later, most consultations addressed medication and prescribing. The sample seems representative with respect to race/ethnicity and gender. Likewise, the rates of reported history of or recent suicidal ideation are in line with Rhode Island data. Overall, it appears that the PediPRN program is meeting its mission in serving practitioners in managing the cases of vulnerable Rhode Island children and adolescents.

What types of services are being utilized?

As shown in the table below, the majority of encounters were related to medication consultation (56%), aid in accessing community resources (19%), and diagnostic consultation (10%).



Given the lack of confidence providers are reporting in medication prescribing, it is not surprising that medication consultation was the major reason for requesting PediPRN services. Understanding and identifying resources for their patient in the community was the 2nd highest reason, which highlights the need for local experts such as those cultivated by this program, and why having a national/regional consultation service may not be as efficacious. The rate for community resource calls is higher in MCPAP, supporting the notion that they may be receiving “lower level” calls being handled in other ways in RI with other services like Kids’ Link, which takes triage calls for children, parents, and caregivers to help children suffering from behavioral problems or psychiatric illness.

Diagnostic consultation and 2nd opinions were the next highest reasons for requesting consultation, which reflects a potential lack of confidence. As the program grows and has greater contact with and provides training for PPCPs, it will be interesting to track changes in the primary reasons for requesting a consultation. Potentially expanding practitioner ability to diagnose and manage less complex cases as a result of engagement with PediPRN may change usage behavior.

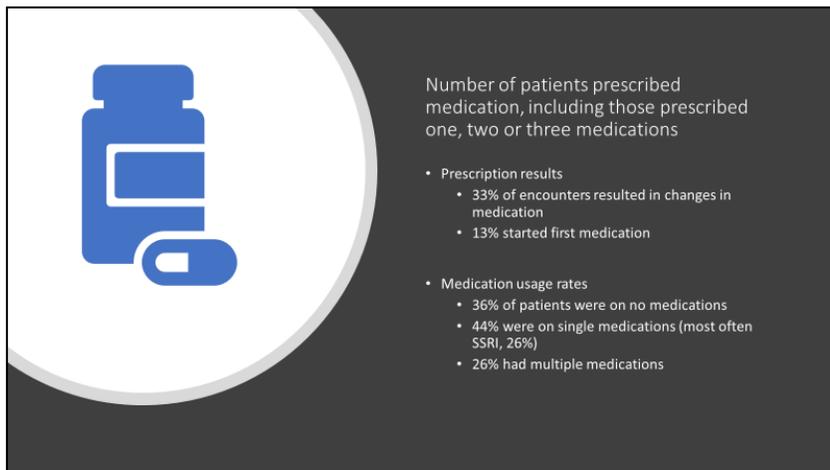
Examining the results of the consultations, it is clear that the majority of cases for which there is data suggest no change in patient diagnosis (83%), 6% deferred or gave provisional diagnosis, 4% changed diagnosis, and only 1% gave the first diagnosis. However, it should be noted that there are a great deal of missing data in this variable. The high amount of missing data was due in part to a change in how this question was asked. Diagnosis action was added in August of 2017 to better describe the work of PediPRN clinicians in helping determine diagnosis. The revised item mirrors the medication action item and has the following options: 1) Change Diagnosis, 2) First Diagnosis, 3) No Diagnosis, 4) Deferred/Provisional, and 5) Other. All participants preceding that date are missing.

Finally, as seen in the table below, the care plan end results are as follows, with most often the PPCP handling the follow up (51%), but care coordination and referrals by PediPRN occur frequently as well. Only 2% of the consultations resulted in recommendations for emergency services and 3% for partial hospitalization.

Variable	Level	% (n)
Plan	<i>PCP</i>	51% (639)
	<i>Care Coordination-PediPRN</i>	17% (213)
	<i>Therapist Appointment-PediPRN</i>	7% (94)
	<i>New Referral to a Psychiatrist</i>	6% (76)
	<i>Medication Evaluation-PediPRN</i>	6% (71)
	<i>Therapist Appointment-Outpatient</i>	4% (47)
	<i>Refer to Partial Hospitalization</i>	3% (37)
	<i>Other</i>	2% (31)
	<i>Refer to Emergency Services</i>	2% (25)
	<i>Home Based Services</i>	1% (11)
	<i>Continue Existing Behavioral Health Treatment</i>	1% (7)
<i>Refer to an Existing Psychiatrist</i>	1% (7)	

What are the Impacts on Medication Usage?

One of the major reasons for consultations was medication-related issues (56% of consultations). This is a high cost driver in healthcare expenditures, but also an area in which the practitioners report less confidence in their abilities as compared to screening and diagnostic behaviors. More detail is presented in the following section.



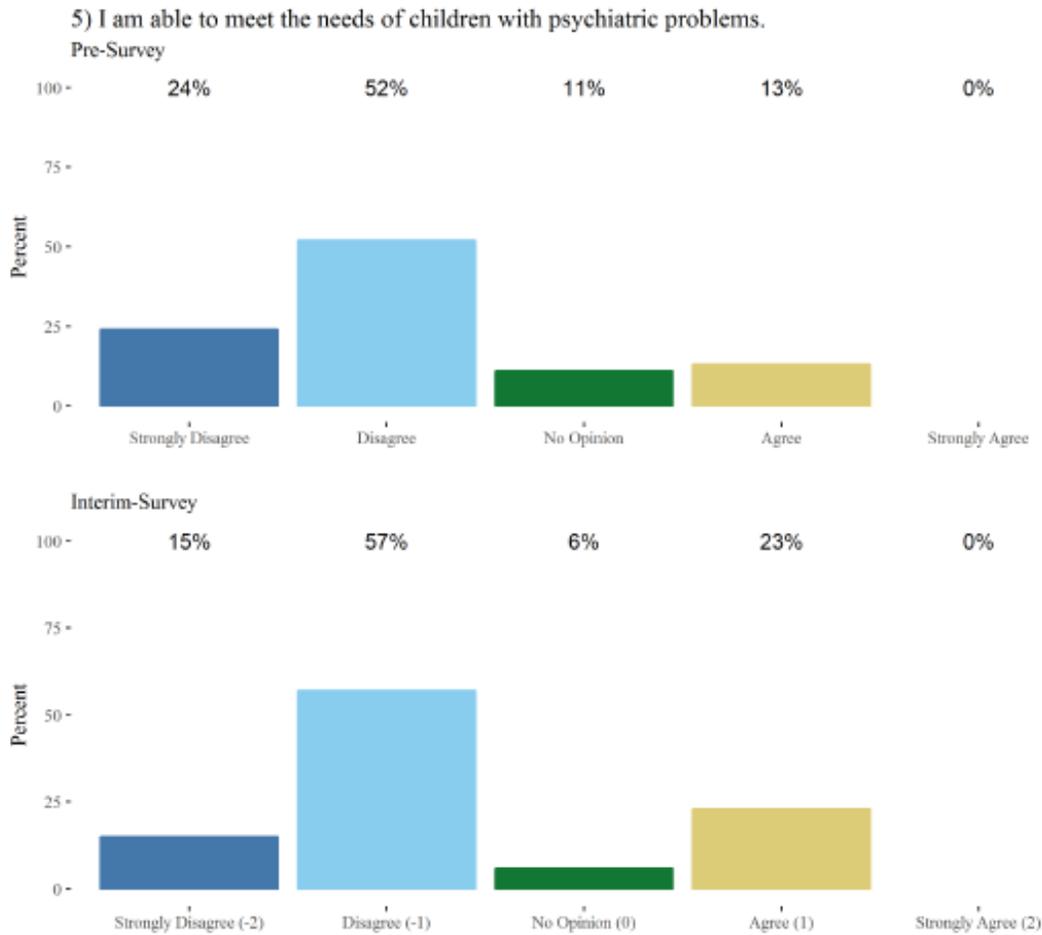
In nearly half of the encounters there are medication-related issues, including changing (33%) or starting medications (13%). This points to a clear impact of the consultations and provides evidence of the potential program impact.

Approximately 1/3 of the patients served were not on any psychiatric medications (36%), 44% were on a single psychiatric medication, and 1/4 of the patients were on multiple psychiatric medications (26%).

What are the Practitioner Impacts?

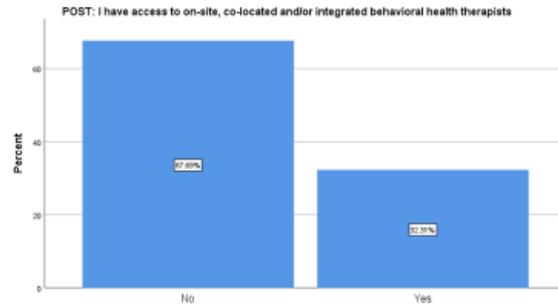
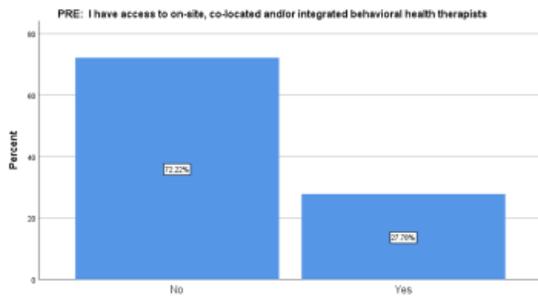
The PediPRN program is intended to provide education opportunities to expand the capacity and confidence in providers to manage child and adolescent psychiatric problems. Over time, it is expected that training and repeated consultations will reduce practitioner reliance on the services, allowing them to manage the less complex cases on their own where appropriate.

Overall, there is some indication that providers who have used the service feel more confident that they can meet the needs of children with psychiatric problems, increasing from 13% to 23%. However, there is tremendous room for growth.

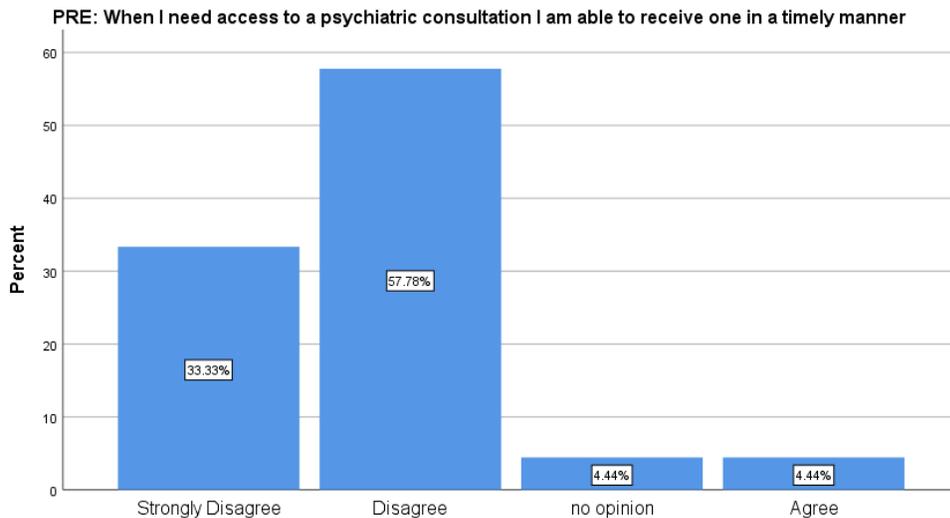


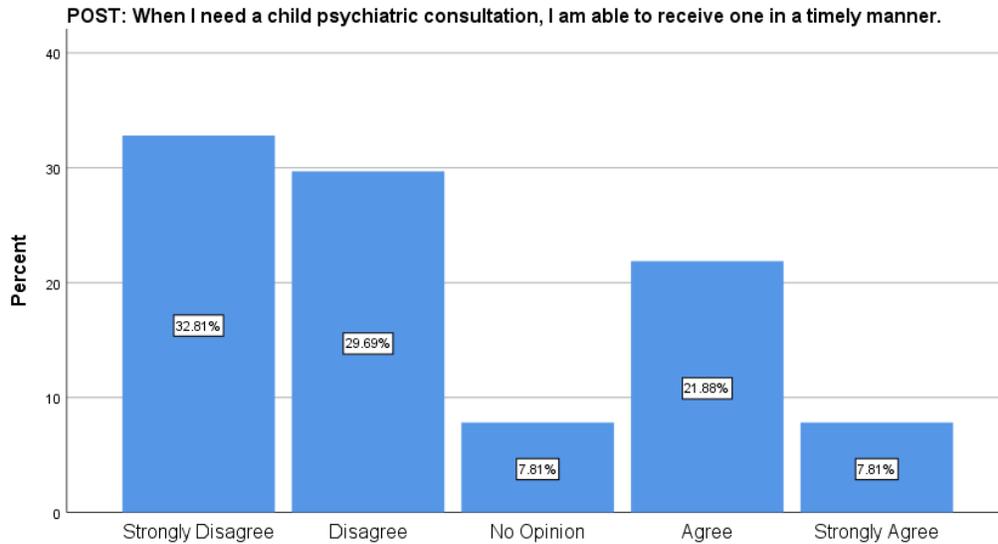
As seen in the figure below, there were also changes in practice level data suggesting a trend of increasing co-location with a behavioral health therapist (from 26% to 36% availability), child psychiatrist (from 4% to 11%), or other behavioral health service resource beyond PediPRN (from 32% to 47%). There are several behavioral health integration strategies and interventions occurring across the state that might be impacting the results observed in this analysis.

Access to on-site, co-located behavioral therapists
 Slight increase (Pearson Chi-Square = 9.775, sig = .002), which may limit need of service over time



When changes in service availability are considered, it is promising to see such growth in those agreeing that they are able to receive a psychiatric consultation in a timely manner from 4% endorsement to nearly 30%. This represents a true validation of the services with a 700% growth, but also suggests room for improvement still exists given that approximately 60% of those surveyed did not feel as if they could get a psychiatric consult in a timely manner at follow-up.





When examining provider confidence to screen for, diagnose, or treat specific conditions, there were no discernable patterns of change, but there are some broad takeaways as outlined in the figure below.

Broad takeaways from the provider confidence survey

- Only 15-22% agree that they have abilities to meet needs of children with psychiatric problems
- Fairly confident with screening measures identification (~70%) and interpretation (~70%)
- Fairly confident in diagnosing depression, anxiety, and ADHD (75-85%)
- Slightly lower confidence in treating depression, anxiety and ADHD (62-90%)
- Not confident (~85%) in prescribing medications

To further examine and enhance the impact of the program on PPCPs, PediPRN staff meets face-to-face with enrolled practitioners and conducts qualitative interviews as a subset of the Interim PediPRN Provider Survey to gauge the following questions:

- In what situations do you use PediPRN?
- What gets in the way of using PediPRN?
- How can PediPRN better support you?
- What percentage of patients in your practice have behavioral health problems that would lend themselves to PediPRN assistance?
- How many children do you see yearly in your practice?
- How can PediPRN best support your education around behavioral health topics (Lectures, case consultations, grand rounds, etc.)? What time is preferable?

To date, they have met with 15 enrolled practices for a total of 46 enrolled providers. A result of the initial meetings was the creation of the PediPRN Intensive Program (PIP) which launched in March 2019. The visits will continue as the program still has 45 practices to meet with in person.

The PediPRN Intensive Program (PIP) was developed to meet a need identified by the enrolled PPCPs to provide an in-depth training in child mental health topics. The program was conceptualized from the needs assessment conducted by the SIM-funded PediPRN, however, Bradley Hospital, SIM staff, and the Rhode Island Department of Health (RIDOH) worked together to successfully pursue a grant award from the Health Resources and Services Administration (HRSA) to help ensure program sustainability. This program is in part modeled after the Child and Adolescent Psychiatry for Primary Care (CAP-PC) program in New York. PIP will enroll up to 16 providers from 16 unique practices for the 10-session certificate program. The goal is to create a group of practitioners embedded in each of their home practices who will serve as local experts. This will not replace the availability of PediPRN for all enrolled participants, but instead will enhance the local expertise and competence with more challenging mental health problems that this subset is motivated to treat.

The course will cover topics that the PPCPs have identified as areas of interest for more in-depth training. These may include, but not be limited to, such topics as: how to conceptualize a behavioral health case; crisis management; psychiatric levels of care and systems of care; specific conditions such as anxiety, depression, and ADHD; developmental, behavioral, substance use, and sleep disorders; and collaboration with schools. Based on the applications of the enrolled participants, the PediPRN program will work to tailor the curriculum to the needs and interests of those providers. PIP will provide CMEs for all sessions and will make all classes available online to the full PediPRN community.

The start date for the PediPRN Intensive Program was March 30, 2019. The first day was a half-day introductory session for participants to learn about the PIP curriculum and the mental health services continuum of care for children and adolescents.

The PediPRN Intensive Program will continue with 9 sessions (1.5-2 hours each) on Wednesdays (4:30-6pm) once per month. Participants must attend the initial session and can only have one absence to be considered for the program. The PIP sessions are scheduled as follows:

April 10, 2019; May 15, 2019; June 19, 2019; July 17, 2019; August 21, 2019; September 18, 2019; October 16, 2019; November 20, 2019 and December 18, 2019 (again, continuation of the program is due to additional funding via RIDOH and HRSA).

The first cohort of the program is pictured to the right. It will be important to continue to evaluate the utility of the program in enhancing the confidence of the enrolled practitioners in working with child and adolescent psychiatric issues. Likewise, given the local or practice level expertise being fostered by this intensive training, it will be worth examining the diffusion of the expertise across their practice. That is, are these “experts” serving as on-site resources for other practitioners?



What is the return on investment?

Although initial evaluation plans were to examine a variety of questions related to return on investment, after coming to a greater understanding of the program, its intentions, and its deliverables, we determined that those evaluation goals were unrealistic for a variety of reasons. Essentially, the primary cost driver of concern would be the diversion of individuals from high cost inpatient stays. It is widely acknowledged that examining events that did not occur is always a challenging, assumption-laden model at best. This problem is especially difficult when examining these types of models in children given the numerous unknown parameters. Although there might be the future possibility of using the All-Payers Claims Database to examine factors such as pre- and post-program admission rates for psychiatric inpatient stays by enrolled practitioners, it is a complicated analysis that would likely yield limited results given the limited number of program consultations being used by most practitioners. It is quite telling that the MCPAP program, which has been operating for over a decade with a much greater volume of consultations, has yet to provide any type of return on investment analysis. The analysis may be more useful with a focus on validation of self-reported data regarding patients and to help reduce the amount of missing data. The analyses can also focus on service utilization pre- and post-PediPRN implementation when compared to those practices not receiving PediPRN services.

To the question of whether to examine a cost per consultation, we have determined that it is not relevant at this time. Simply dividing the total SIM expenditures by the number of encounters does not reflect the need for start-up costs and ignores the training component of the program, the value of which does not appear in the consultation number. The data is also only useful in the context of an evaluation that can examine potential savings to determine relative value. Without outcomes data, we do not believe the true cost per consultation is worth exploring at this point.

It seems that the general question being asked is whether the program is “worth it”. Determining worth can be a challenging issue, but we can look at a few different indicators. One useful tool is a comparison of operating costs for the PediPRN program versus the MCPAP program. MCPAP had an FY16 appropriation of \$3.1M to operate 6 hubs, or approximately \$500,000 per hub. The state of RI operates the equivalent of one hub at a lower per year rate than that in Massachusetts. In Massachusetts, commercial insurers currently pay a surcharge to cover use of services, but that is returned to the state general fund rather than specifically to the program.

The following chart contains the information regarding the insurance providers for those individuals who obtained services. The providers reflect the pattern of state coverage and would suggest that a model in which commercial insurers are eventually asked to cover the costs of the program might be feasible in Rhode Island.

Insurance Providers (C.13)

Variable	Level	% (n)
Insurance	<i>BCBS</i>	31% (191)
	<i>NHP</i>	25% (156)
	<i>UBH</i>	22% (133)
	<i>Missing</i>	10% (60)
	<i>Tufts</i>	3% (19)
	<i>Childrens Medical Security</i>	3% (16)
	<i>Cigna</i>	2% (10)
	<i>HPHC</i>	2% (10)
	<i>Aetna</i>	1% (5)
	<i>None</i>	1% (5)
	<i>Tricare</i>	1% (5)
	<i>Healthnet</i>	0% (3)

Summary

The broad objectives of the PediPRN program were to:

1. Increase availability of mental health care for children and adolescents by introducing psychiatric consultation services into the scope of primary care practices.
2. Creation of a strong primary care/specialist mentoring relationship between primary care practitioners and child psychiatrists.
3. Promotion of the rational use of scarce specialty resources for the most complex and high-risk children and adolescents.

As has been highlighted throughout this report, the PediPRN program achieved its objectives. The program has enrolled more practitioners than originally targeted across the state. In so doing, they have helped establish relationships between primary care practitioners and child psychiatrists, which has led to the creation of an intensive training program to further bolster those relationships. Providers report high levels of satisfaction with the

program. The program has served 625 children or adolescents to date, providing over 800 consultations related to high complexity and high risk cases, typically involving medication consultations. Those being served, although representative of the state population, are also presenting with multiple, co-morbid diagnoses.



Take home messages

- The program has been implemented successfully
 - Strong engagement with providers
 - Comparable usage rates with MCPAP
 - Strong satisfaction
 - Consistent with implementation plan (number of calls, availability, etc.)
- Reaching an appropriate sample of children and adolescents
 - High need, comorbid conditions
 - Medications of importance

Sustainability and Recommended Next Steps

The PediPRN program achieved initial sustainability through additional funding, which will continue and expand the program via a RIDOH/HRSA award. As the program looks toward long-term sustainability, it will be important to highlight its strengths. As a neutral, payer-blind service, PediPRN is highly valuable in its ability to potentially serve all children in Rhode Island. This allows for service provision and access for all interested PPCPs and children across the state, and lowers costs and time spent on administration as there is no documentation for insurance coverage associated with the consultation. Given its neutrality and lack of association with a specific health plan, the recommendations of the child psychiatrists in the consultations are delivered independent of health plan coverage considerations and more likely reflect best practices and care models. PPCPs who have utilized the services of PediPRN report high levels of satisfaction and a timely response. They often receive medication consultation and referrals to local resources. The service enhances care coordination for high need, high risk children and adolescents.

When examining the landscape of care and the increasing emphasis on behavioral health integration in the state, it will be important to contextualize the services being provided by PediPRN. As more practices move toward having on-site behavioral health providers and the PediPRN program continues to train local, practice-level experts, it will be important to monitor the use of the program regarding the level of case complexity. It may be expected that providers and practices will become more adept at handling simpler cases, but the PediPRN program will receive an even greater proportion of complex cases going forward. Tracking the complexity of the patients being served by PediPRN may be critical for documenting the program's value in a system increasingly geared towards integrated behavioral health.

It is hard to envision a future in which there is consultation capacity for child and adolescent psychiatrists (CAPs) within any single practice or collection of practices given the shortage to CAPs in the state. Having a statewide consultation model supporting a relatively limited staff is a much more efficient model. Given the time-limited nature of grant funding, it would be beneficial to seek additional, sustainable levels of support for the PediPRN program. Massachusetts elected to fund their program through state line item appropriations, and has recently supplemented that through levies on state commercial insurers. Given the breadth of insurers benefiting from the current PediPRN program, it would seem appropriate to consider such a model in Rhode Island for long-term sustainability. Another path toward sustainability would be working with the insurers, the Office of the Health Insurance Commissioner, and Medicaid to investigate the ability of both the CAP and the referring PPCP to bill for the consultations.

It would also be worth considering the evaluation of the PediPRN Intensive Training program not only on those providers enrolled in the program but also on the diffusion of their expertise within the practices in which they are embedded. It is possible that they will be providing on-site (formal or informal) consultation to other practitioners and those would need to be documented to fully assess the impact of the PediPRN program going forward.

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List of Acronyms

SIM: State Innovation Model Test Grant

PPCP: Pediatric Primary Care Provider

LICSW: Licensed Clinical Social Worker

LMHC: Licensed Mental Health Counselor

FTE: Full time equivalent

MCPAP: Massachusetts Child Psychiatry Access Program

PCMH-Kids: Patient Centered Medical Home-Kids

RIAAP: Rhode Island Chapter of American Academy of Pediatrics

BCBSRI: Blue Cross Blue Shield Rhode Island

SSRI: Selective serotonin reuptake inhibitor

ADHD: Attention deficit hyperactivity disorder

PIP: PediPRN Intensive Program

CME: Continuing medical education

RIDOH: Rhode Island Department of Health

HRSA: Health Resources and Services Administration