Colorado Behavioral Healthcare Council

Colorado Psychiatric Access and Consultation for Kids Project (C-PACK)

Final Evaluation Report - December 2015

JSI RESEARCH & TRAINING INSTITUTE, INC.

SUMMARY OF HIGHLIGHTED INTERIM EVALUATION RESULTS

C-PACK's purpose is to address access for children and youth with behavioral health issues, increase primary care providers' capacity to perform behavioral health management, and to utilize scarce specialty child psychiatry resources more efficiently within Colorado. While the evaluation results are many, the key impacts are summarized below by C-PACK's original objectives. Please see full evaluation report for details.

C-PACK increased access to child psychiatric specialty consultation

Though we do not have access to individual client data, we know that 1,489 calls were made to the Call Center resulting in 1,364 unique cases of children or youth who the primary care providers (prescribers) called about received specialty care through C-PACK resources in a relatively short period of time (approximately 24 months). Twenty-four percent were for psychiatric consult. Seventy-seven percent of those patients remained with the prescriber without further follow-up. We can presume then that a larger percentage of ALL their patients remained under their care including those that they did not call about. The qualitative results tell us that C-PACK serves the most in need where access is an issue. Thus, one can assume even during this short period of time that C-PACK increased access to child psychiatric consultation. An appointment with a PCP is typically a family's first step in understanding the child's behavioral healthcare needs. Thus, it becomes critical for the PCP to understand and recognize how to respond. Prior to C-PACK, the PCP may or may not have had any idea of the issue and rarely knew how to intervene if recognized. Our results tell us that they often simply referred the child or youth to a psychiatrist. Sometimes that referral was unsuccessful for a number of reasons including the lack of psychiatrists (especially in more rural areas) and/or psychiatrists not taking on new patients and/or the costs to families for the referral. Now, through C-PACK, these same children are being screened for early intervention which research shows as critical[1] and are receiving the appropriate level of treatment improving overall family and community well-being and health.

The best part of the program is that it reached out to primary care doctors. Usually patients land in their office first, and behavioral health is not well taught in school/residency. (Prescriber)

C-PACK increased identification of children with undiagnosed mental health conditions

Prescribers showed a 17 percent increase in the use of evidence-based screening tools, and these prescribers were significantly more comfortable in their use of those tools. Their knowledge in and comfort with assessing and diagnosing mental health conditions significantly increased since their participation in C-PACK. These findings suggest that prescribers are identifying issues ranging in severity level and intervening with appropriate use of medication, counseling and therapy. As a result, there are potential significant cost savings to communities overall by lessening burden on the educational system, judicial system, emergency system, child welfare systems, etc. and affecting, once again, overall population well-being and health.

We are picking up low-grade problems with kids that can be addressed with counseling and therapy instead of meds. I would much rather catch a kid in the beginning of depression then have them end up in the ER. (Prescriber)

[1] *American Psychological Association (2003). Addressing Missed Opportunities for Early Childhood Mental Health Intervention: Current Knowledge & Policy Implications: Report of the Task Force on Early Mental Health Intervention.* https://www.apa.org/pi/families/resources/early-mental-health.pdf.

C-PACK increased number of children screened for mental health conditions

Children and youth are experts at masking their behavioral health needs. For example, depression is easily misdiagnosed as opposition deviant disorder, which dictates a very different treatment and systems' involvement approaches. When behavioral health issues are caught accurately and early, long term and short-term outcomes improve. At six months post enrollment, 98 percent of the prescribers were using screening tools compared to 81 percent at enrollment (17 percent increase). Ninety-six percent indicated that they were "somewhat" to "very comfortable" with their use. Eighty-nine percent screen more patients, 87 percent use more tools, and 41 percent screen the patient more often. C-PACK shows that increased numbers of children are being screened. As the PCPs become more comfortable with the use of screening tools and see the benefit of that use, the use will continue to increase with all their patients not just those they may seek assistance with through C-PACK. In addition, consistent use of the tool by the C-PACK enrolled provider often influences other PCPs in their practice who are not enrolled to use the tool further increasing the number of children and youth screened. Another benefit of the evidence-based tools is the resulting increased office revenue when providers can bill for their use.

I feel more confident in dealing with behavioral health concerns, in using the correct screening tools, and starting medications. I feel better informed about the tools and resources available. (Prescriber)

C-PACK increased access to evidence-based medication/psychotherapy treatments

Prescribers typically "stumble" upon quality behavioral health care for referral resources. Results vary, as a match is dependent on insurance status, provider specialties, availability, and cooperation. For example, one large practice group had C-PACK staff review their current referral list. This review resulted in an up-to-date referral system for the practice that eliminated referrals to providers who no longer work in their area, added C-PACK trained counselors and therapists, and updated fees, insurance acceptance information and contact information. This large PCP practice did not have the time to do this extensive review or knowledge of what was currently available in their community. Referrals made without updated information lead to family and provider frustration.

C-PACK emphasizes training on and use of evidenced based medication and treatments. Case managers seek referral sources that match client needs. Twenty-five percent of the children/youth (1364 unique cases) of whom the prescribers sought assistance were provided a psychiatric consult and 75 percent a referral to a trained behavioral health specialist (BHS). In addition, prescribers significantly improved their knowledge of and comfort in treating issues since participating. Prescribers on average felt that 50 percent of these patients prior to C-PACK had no access to a BHS. Thus, C-PACK has increased access to evidence-based medication and psychotherapy treatments. C-PACK is one part of a multi-faceted solution in addressing limited access to behavioral health care.

The increase in my ability to help patients with psychiatric disorders is dramatic. (Prescriber)

C-PACK increased prescribers' confidence in their diagnostic and treatment skills

Eighty-eight percent of the prescribers cited that they are more comfortable addressing psychiatric/behavioral health issues in-house. There were significant increases in comfort levels in assessing/diagnosing and treatment of behavioral health issues. Additionally, the qualitative results support these quantitative findings with prescriber acknowledgments of increased confidence in assessing/diagnosing and treating their patients' behavioral health issues. Since participating, prescribers indicated a means score of 4.3 out of a 5 for confidence in their ability in treating behavioral health issues. Therefore, we can safely assume C-PACK is boosting prescribers' confidence.

I feel more comfortable so I need less help. (Prescriber)

C-PACK increased access to specialty services in complex cases

Though 17 percent of cases still were referred to psychiatry, the vast majority stayed with the prescriber. One can assume less complex cases are still being handled by PCPs and the more complex cases are referred to psychiatry. This finding also triangulates with the knowledge and comfort level analyses between enrollment and follow-up survey that showed PCPs comfort level was less with the "complex" cases of bipolar and comorbid disorders. It is with these types of cases that C-PACK becomes most useful. It was never expected that the prescribers would handle these types of patients alone, but rather that they would increase their access to appropriate psychiatrist consultation while expanding their capability to manage initial and less complicated behavioral health conditions. Practices are also seeing more of the Medicaid/CHP+ population. The referral process for this population is complex and often results in a denial thus frustrating prescribers. C-PACK care coordinators (who know the system and know what information is needed) help navigate the process for more positive results.

As prescribers become even more confident and comfortable not only in their own management of these issues but also in the use of the supporting psychiatrist consultant, the range of care expands for their patients as well as others in their practice. Eighty-eight percent of the prescribers indicated in the follow-up survey that they are more comfortable in addressing these issues in-house; 68 percent use more care coordination; 64 percent collaborate more with BHS; and 51 percent are referring less to psychiatrists. Anecdotal information from the consulting psychiatrists is also telling in that as the use of C-PACK increases, they are seeing more requests for help for complex cases and less for simple diagnoses and medication advice. In addition, the data tells us that the C-PACK psychiatrists are asking for their own referrals to PCP enrolled C-PACK members for medical evaluation and/or ongoing behavioral health care that can be managed in a primary care setting. One percent of the calls to the Call Center were for PCP referrals. The enrolled PCPs are handling more uncomplicated cases now that C-PACK is in approximately their second year of operation. While the empowerment of prescribers was the main goal, a secondary effect has also been noticed. Case managers cited how families are also being empowered. They are teaching parents about parental rights, how to advocate for themselves, how to interact with the systems that the child may be involved with, and how to access appropriate care.

I am so happy to have access to a psychiatrist to discuss management of my patient's complex psychiatric issues. (Prescriber)

C-PACK increased appropriate use of psychiatric medications in primary care

Psychotropic drugs are valuable tools in treating many mental health disorders, but inappropriate prescribing can cause serious harm. Medications are taken for the purpose of improving the emotional and behavioral health of a child or youth diagnosed with a mental health condition. There is evidence that psychotropics in particular are both over and under prescribed.[2] Overall, the use of medications in this age group has been increasing as evidence to support effectiveness when used appropriately has increased. A child who is temporarily difficult to manage or has a mood disturbance may benefit from introduction of medication with monitoring, with a goal to discontinue the medication when the issue subsides. Medications can also be under prescribed if a youth does not have access to an assessment and/or families are unable to follow-up with treatment for whatever reason, including obtaining and adhering to prescribed medications. Medications may also be over prescribed or under prescribed when prescribers have not had sufficient training in their use and/or are practicing in an underserved area where access to psychiatrists is extremely limited. Prescribers expressed that pressure to prescribe is often present from family or "systems," especially for youth that are very challenging or exhibiting dangerous behaviors.

Prescribing psychotropic medications for children and youth requires a competent prescriber with training and qualifications in their use. C-PACK supports PCPs by ensuring access to training, comprehensive evidence-based assessment tools, and psychiatric consultation. Generally, prescribers are conservative, thoughtful, and cautious of prescribing medications. Educating PCPs who prescribe the majority of medication about the best treatments available for common mental health disorders results in appropriate use. Enrolled prescribers indicated in our qualitative findings that C-PACK has helped them prescribe more appropriately. With psychiatric consult as a resource when needed, PCPs can introduce, adjust, or discontinue medications at the primary care level avoiding the time, cost, long distance travel, and potential delay of a separate psychiatric visit. Availability of psychiatric consult as a resource also helps to address service gaps due to a shortage of pediatric psychiatrists in most areas.

I feel like I am more comfortable with med use. (Prescriber)

Providers satisfied with C-PACK

An intervention program works if the target audience is satisfied with events and outcomes. In this case, prescribers rated their overall satisfaction of the C-PACK project 4.5 out of 5. Their range of satisfaction ratings of specific items was also high (3.8 to 4.6). The interview data included many statements of appreciation. In addition, care managers have received numerous appreciative emails and phone calls. (See Stories starting on page 44) This appreciation and satisfaction speaks to a tremendous need that C-PACK is addressing. The "word has spread" and C-PACK has a wait list for enrollment. As one care coordinator stated: The bar was set so low with so little help, C-PACK can only raise it.

Thank you. This was truly an empowering opportunity for all of us. (Prescriber)

[2] *American Academy of Child & Adolescent Psychiatry (2012). A Guide for Community Child Serving Agencies on Psychotropic Medications for Children and Adolescents.* http://www.ct.gov/dcf/lib/dcf/behavorial_health_medicine/pdf/educational_booklet_5-7-2010.pdf

To be able to address the overall quality of life for individuals with behavioral health issues, there must be a dedicated effort from early on in children and youth's lives to identify and treat emerging behavioral health conditions. Innovated integrated care systems such as the C-PACK model are a critical part of that dedicated effort, and represent an approach to delivering care that is comprehensively addresses the primary care, specialty care, and social support needs in a continuous and collaborative manner while also addressing a severe gap in access to behavioral health care for children and youth.

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BACKGROUND

In 2013, the Colorado Behavioral Health Care Systems, Inc. received funding from the Colorado Health Foundation to implement the Colorado Psychiatric Access and Consultation for Kids (C-PACK) project. C-PACK addresses the statewide shortage of psychiatrists and behavioral health specialists (BHS) for children in Colorado. The project uses an integrated approach to create a system of training, psychiatric consultation and behavioral health referral for primary care providers (PCPs). Through C-PACK, PCPs were expected to become better equipped to meet children's integrated healthcare needs, regardless of payer source.

Over the course of its first year, C-PACK trained PCPs and BHS as well as established regional teleconsultant teams to deliver real-time psychiatric telephone consultation and care management. Participating BHS served to facilitate access to care for child patients with behavioral health needs. The pilot project focused on an incremental rollout in both the Denver Metro and Southern Colorado regions partnering with Colorado Access and Beacon HealthOptions, formerly ValueOptions. JSI Research & Training Institute, Inc. (JSI) was contracted to design and implement a comprehensive evaluation of this rollout. The evaluation plan included staff and provider experience, access indicators, patient demographics, and key provider outcomes. The expected outcomes as cited in C-PACK's funded proposal are:

1. Increased access to child psychiatric specialty consultation,
2. Increased identification of children with undiagnosed mental health conditions,
3. Increased number of children screened for mental health conditions,
4. Increased access to evidence-based medication and psychotherapy treatments,
5. Increased PCP confidence in their diagnostic and treatment skills,
6. Increased access to specialty services in complex cases,
7. Increased appropriate use of psychiatric medications in primary care, and
8. Increased provider satisfaction.

EVALUATION METHODS

PLANNING

JSI in collaboration with C-PACK stakeholders used the RE-AIM Framework[3] to guide the development of the evaluation plan and its implementation to address both effectiveness and reproducibility of the C-PACK project. Russell Glasgow and his associates designed this framework to expand assessment of interventions beyond efficacy to multiple criteria that better identify the translatability and health impact of health interventions. They proposed that the translatability and health impact of such initiatives is best evaluated by examining all five of the following dimensions:

- **R**each into the target population
- **E**fficacy or effectiveness
- **A**doption by target settings or institutions
- **I**mplementation—consistency of delivery of intervention
- **M**aintenance of intervention effects in individuals and populations over time

Using this Framework, an evaluation logic model, evaluation questions, indicators, and implementation plan was developed (please see separate C-PACK Evaluation Plan). Note: C-PACK also uses the term prescribers to represent all PCPs who have prescribing capabilities.

[3] *Glasgow, RE & Emmons, KM (2007). How can we increase translation of research into practice? Annual Rev Public Health 28:413-33.*

Table 1: C-PACK's Overall Evaluation Questions

RE-AIM Element	Guidelines/Questions
REACH Percent and representativeness of prescribers	• Can C-PACK attract a large and representative percent of prescribers? • Can the program reach children most in need and often not accessing behavioral health services?
EFFECTIVENESS Impact on key outcomes and unanticipated outcomes	• Does C-PACK produce robust effects and minimal negative effects for the participating prescribers?
ADOPTION Percent and representativenss of practices/prescribers that participate	• Is C-PACK feasible for the majority of primary care practices and prescribers? • Can typical practices and prescribers adopt it? • What are the lessons learned that could help other practices implement a program similar to C-PACK?
IMPLEMENTATION Process outcomes of rollout	• What did C-PACK accomplish?
MAINTENANCE Long-term effects such as sustainability	• Does C-PACK include principles to enhance long-term improvements in quality of care? • Can C-PACK be sustained over time if proving effective?

While the fundamental RE-AIM questions are listed above, more specific C-PACK questions were also developed to further guide the evaluation methodology by type of evaluation focus.

Process

- What occurred during program implementation?
- What occurred that can be described as barriers and facilitating factors for effective expansion of the intervention?
- What lessons can be learned over the course of the project period to increase efficiency in achieving the desired outcomes and inform similar pilot projects?

Prescriber and Behavioral Health Specialist Outcomes

- Are the project activities effective in improving targeted prescriber and BHS outcomes?
- Are the project activities impacting delivery of services and the way care is provided?

Child Access Outcomes

- How many prescribers on behalf of care for children use evidence-based screening?
- How prescribers on behalf of care for children are accessing psychiatric consultation?
- Are children with previously undiagnosed mental health conditions being identified?
- Are children through C-PACK accessing evidence-based behavioral health medication and/or treatment?

DATA COLLECTION

To answer these questions, quantitative and qualitative methods were used. Data collection, analysis, and reporting were conducted collaboratively by C-PACK, project partners Beacon HealthOptions and Colorado Access), and JSI. Beacon HealthOptions®, a behavioral health maintenance organization, operated a Call Center, which was originally used in a predecessor of the current C-PACK model. The Call Center collected programming and evaluation data through an electronic data collection program (SharePoint) to record all aspects of the prescribers' requests for services. C-PACK made the decision to continue use of this database during its initial start. To support the C-PACK project, additional variables were added to support both programming and evaluation. In the latter part of the first year of C-PACK implementation, Call Center Salesforce software replaced the original SharePoint software. All SharePoint data was subsequently downloaded to the Salesforce database.

In addition to using the Call Center database for process and outcome data, C-PACK and JSI also surveyed prescribers when they and their practice enrolled and six months later. BHS were surveyed on enrollment and one year later. This process enabled T_1 and T_2 data collection points for outcome change analysis. Additional qualitative data (e.g., barriers, facilitators, lessons learned, satisfaction etc.) were gathered through staff, stakeholder, and prescriber key informant interviews.

DATA ANALYSES

Quantitative data was downloaded into IBM SPSS Statistics 22.0 software. Descriptive statistics were run which included frequencies, proportions, means and ranges depending on the type of measurement for data cleaning and, if necessary, recoding. Descriptive statistics were rerun for reporting. Where appropriate, proportional Z-Scores were used for test of significance across response categories. Changes in pre/post measures were analyzed by Student t-tests (T1,& T2) for numeric data and chi-squares (2X2 or 2XN tables) for categorical data.

Key informant telephone interviews were completed in December 2014. The interviewees included three groups: C-PACK Advisory Group members (5), C-PACK staff (5), and enrolled prescribers (17). Two interview guides can be found in the Evaluation Plan. Text data from the interviews were downloaded into Atlas.ti 7 Qualitative Analysis software. JSI staff organized the text data through use of a priori coding of specific survey/interview and evaluation questions and then identified emerging themes (content qualitative analysis). The preliminary summary of results was validated through feedback of staff and stakeholders prior to final reporting.

RESULTS

The results of this interim evaluation report are organized by components of the RE-AIM Evaluation Framework (Reach, Effectiveness, Adoption/Implementation, and Maintenance). Both quantitative and qualitative findings are accounted within the individual component reports. Examples of italicized illustrative quotes are provided for qualitative results. **Note:** We collected practice, prescriber, and BHS enrollment data for the first six months of the first operational year (reached proposed pilot sample quota as cited in the original C-PACK proposal.) Follow-up surveys were only sent to these prescribers and BHSs. The descriptive analyses of the SalesForce database include all **calls** received from December 2014 through November 2015.

REACH

C-PACK has a reach of **174,500** patients. C-PACK as designed has a multiplier effect. In a later section of this report, **95 percent** of the enrolled prescribers are cited as sharing information and knowledge gained through C-PACK participation with their colleagues. The reported reach described below only includes the enrolled practices, prescribers and number of patients (cases that enrolled prescribers called about). This section does

not include the true reach (colleagues' gain in knowledge to help these patients and the patients for whom the enrolled prescribers did not call about). Thus, C-PACK not only encourages growth of prescribers with which it actively intervenes but the program also has further reach outside of those enrolled throughout the two regions.

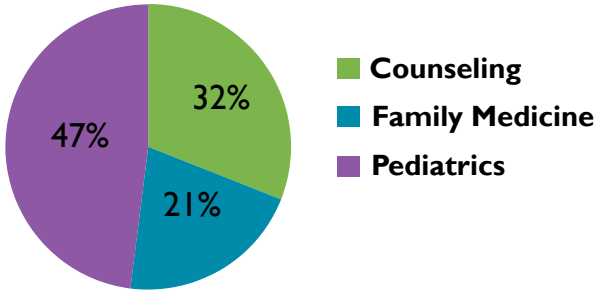
Practices

A total of 76 prescriber and behavioral health practices enrolled in C-PACK from December 2013 through May, 2014. Pediatric practices significantly outnumbered family medicine on enrollment. (Z-Score=3.92; p<.05)

Table/Chart 2: Type of Practice

Type of Practice	Frequency	Percent
Counseling	24	31.6
Family Medicine	16	21.1
Pediatrics*	36	47.4
Total	*76*	*100.0*

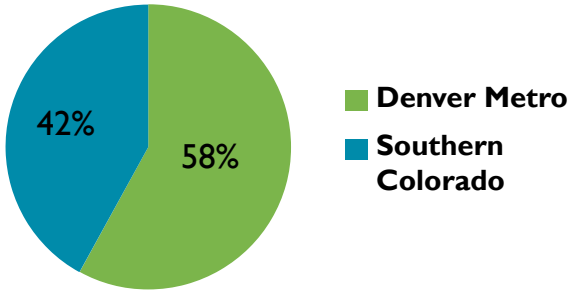
*p<.05: Testing Family Medicine vs. Pediatrics



Within this time period enrolled prescriber practices numbered 52. All prescriber practices accepted Medicaid. While more prescriber practices were enrolled in the Denver Metro region, this finding did not prove to be significant (Z-Score=1.57; p=0.11).

Table/Chart 3: Prescriber Practices by Region

Region	Frequency	Percent
Denver Metro	30	57.7
Southern Colorado	22	42.3
Total	*52*	*100.0*

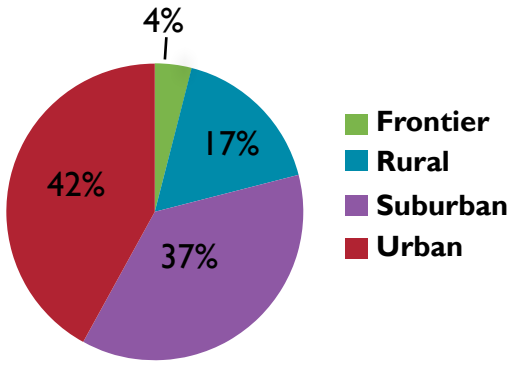


However, significantly more prescriber practices were located in urban and suburban areas than in frontier/rural areas (Z-Score=-5.881; p<.001).

Table/Chart 4: Location of Practice

Location	Frequency	Percent
Frontier	2	3.8
Rural	9	17.3
Suburban*	19	36.5
Urban*	22	42.3
Total	*52*	*100.0*

*p<.001

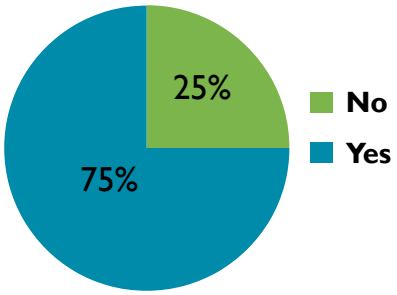


The majority of prescriber practices indicated they, at baseline, were using evidence-based screening tools in their care (Z-Score = -4.74; p<.001)

Table/Chart 5: Practice Use of Evidence-Based Screening

Current Use	Frequency	Percent	Valid Percent
No	12	23.1	25.5
Yes	35	67.3	74.5
Total	47	90.4	100.0
Missing	5	9.6	
Total	*52*	*100.0*	

**p<.001*



The next table shows the screening tools used.

Table 6: Screening Tools in Use

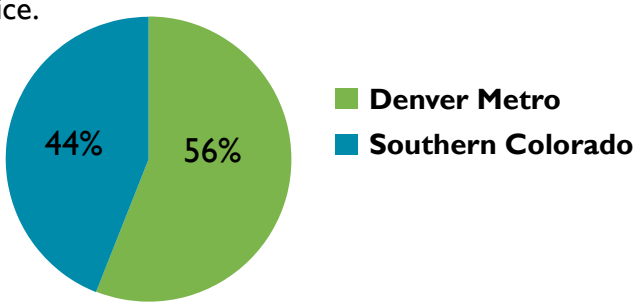
Screening Tools	Frequency
Vanderbilt	25
PHQ-9	20
Pediatric Symptom Check List	11
MCHAT	4
Scared	3
ASQ	2
Modified Aggression Scale	1
Columbia DISC Depression Scale	1
RCMAS Anxiety Scale	1
Conner - ADHD	1
ORS/CORS	1

Enrolled Behavioral Health Specialists (BHS)

Thirty-four BHS enrolled from mid-December of 2013 through mid-February of 2014. While more BHS were enrolled in the Denver Metro area than in Southern Colorado it was not statistically significant (Z-Score= 0.97; p=.33). Only four BHS cited that they were in an integrated practice.

Table/Chart 7: BHS by Region

Region	Frequency	Percent
Denver Metro	19	55.9
Southern Colorado	15	44.1
Total	*34*	*100.0*

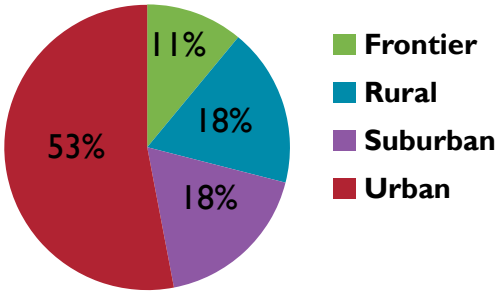


The following table/chart shows prescribers confirming their more urban/suburban vs. frontier/rural location (Z-score=-3.40; p=.001)

Table/Chart 8: BHS by Location

Location	Frequency	Percent
Frontier	4	11.8
Rural	6	17.6
Suburban*	6	17.6
Urban*	18	52.9
Total	*34*	*100.0*

**p=.001*



The type of practice varied, however, approximately one-third of the BHS worked in a mental health center setting and another third in private practice.

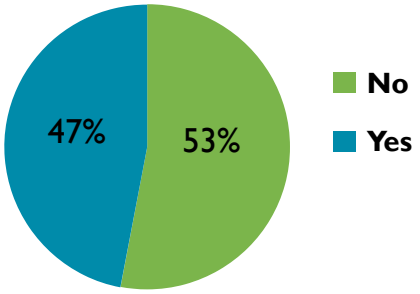
Table 9: Type of Practice

Type of Practice	Frequency	Percent
In-Home Therapy	2	5.9
Medical Setting	4	11.8
Mental Health Center	12	35.3
Private Group Practice	5	14.7

Approximately one-half of the BHS indicated that they used evidence-based screenings on enrollment.

Table/Chart 10: Evidence-based Screening

Screenings	Frequency	Percent
No	18	52.9
Yes	16	47.1
Total	*34*	*100.0*



The Table below lists the types of evidence-based screening that the BHS reported using.

Table 11: Types of Evidence-based Screenings

Screening Tools	Frequency
Vanderbilt	3
PHQ-9	3
Child Behavioral Checklist	3
BECK Depression Inventory	2
SDQ	1
A-COPE	1
BERS-2	1
TESI-Light	1
Eye stressor Checklist	1
CES-DC	1
TSCYS	1
DECA	1
ASQ-SE	1
Pediatric Symptom Check List	1
Scared	1
ORS/CORS	1

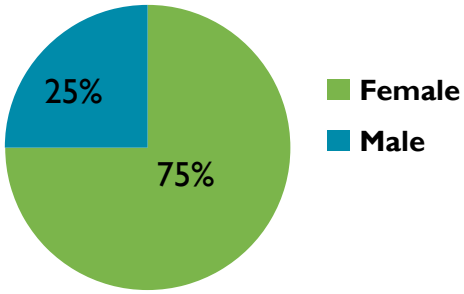
Enrolled Prescribers

One hundred and thirteen **(112) prescribers** representing **52 cited practices** (16 did not indicate their practice) enrolled in C-PACK from mid-December 2013 through June 2015. The majority of the prescribers are female (Z-Score= 7.48: p<.001).

Table 12: Prescriber Gender

Gender	Frequency	Percent
Female*	84	75.0
Male	28	25.0
Total	*112*	*100.0*

**p<.001*

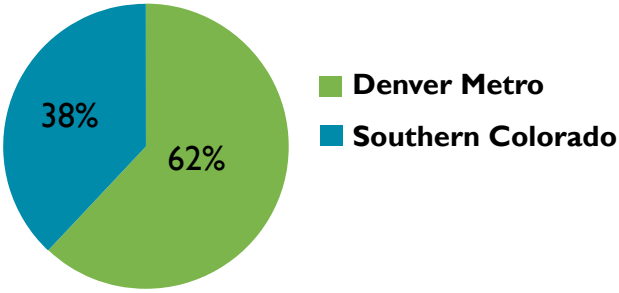


Significantly more prescribers were enrolled from the Denver Metro region (Z-Score= 3.47;p=.001).

Table/Chart 13: Prescriber Region

Region	Frequency	Percent
Denver Metro*	69	61.6
Southern Colorado	43	38.4
Total	*112*	*100.0*

**p=.001*

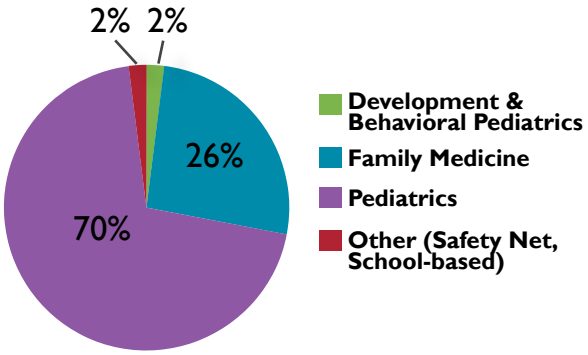


The PCPs indicated that they represented more pediatric practices than family medicine or other settings (X^2 =31.08, difference =-46%, p<.001; (X^2 = 31.08, difference = 70%, p<.001).

Table/Chart 14: Prescriber Specialty

Specialty	Frequency	Percent
Development & Behavioral Pediatrics	2	1.8
Family Medicine	29	25.9
Pediatrics*	79	70.5
Other (Safety Net, School-based)	2	1.8
Total	*112*	*100.0*

**p<.001*



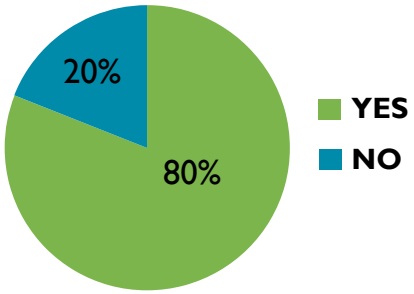
The average years in practice was 14.5 (SD=10.99). The distribution was skewed (0.691 SE: 0.23) with greater values in the lower year range (Mode =1). **Thus, prescribers overall were somewhat new to practice.**

Prescribers indicated that they were using evidence-based screening prior to joining C-PACK (Z-Score= 8.98; p<.001).

Table/Chart 15: Prescriber Use of Evidence-based Screening

Screening	Frequency	Percent	Valid Percent
YES*	87	77.7	80.6
NO	21	18.8	19.4
Total	108	96.4	100.0
Missing	4	3.6	
Total	*112*	*100.0*	

**p<.001*



The tools used at baseline are outlinled in the table below.

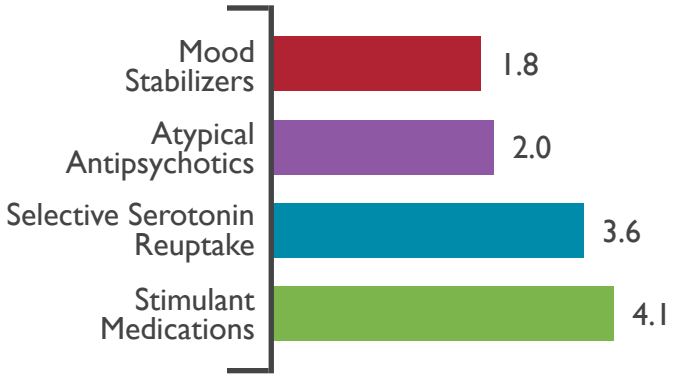
Table 16: Evidence-based Screening Tools Used

Screening Tools	Frequency
Vanderbilt	72
PHQ-9	51
Scared	19
Teen Screen	7
ASQ	6
Connors	4
MCHAT	4
Child Behavioral Checklist	3
Modified Aggression Scale	2
CRAFFT	2
ORS/CORS	2
NCBRF	1
Ages & Stages	1
Child Symptom by Checkmate	1
Wender ADHD	1
Columbia DISC Depression Scale	1
PEDS Screen	1
GAD7	1
Kutcher 6-item Depression	1

Prescribers were asked about their comfort in prescribing psychotropic medications. Comfort was measured on a scale of five (1 to 5: "Uncomfortable" to "Comfortable"). The prescribers indicated most comfort with stimulants and SSRs and least with antipsychotics and mood stabilizers.

Table/Chart 17: Comfort with Psychotropic Medications

Medications (N=107)	Mean
Stimulant Medications (e.g. Methylphenidate)	4.1
Selective Serotonin Reuptake (e.g. Fluoxetine)	3.6
Atypical Antipsychotics (e.g. Risperidone)	2.0
Mood Stabilizers (e.g. Valproic Acid or Lithium)	1.8

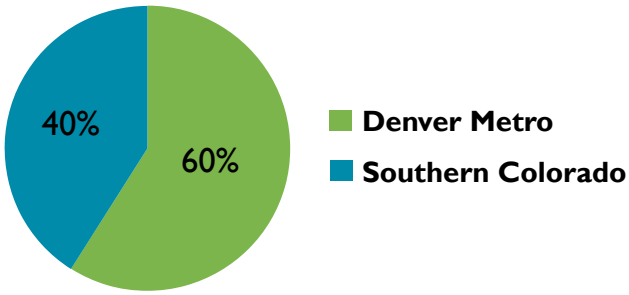


Call Center Calls

A total of 1,489 calls were made to the Call Center from December 2013 through November 2015. There were significantly more calls generated from the Denver Metro Region (Z-Score= 10.15; p<.001), analysis did not show a significant difference in types.

Table/Chart 18: Calls by Region

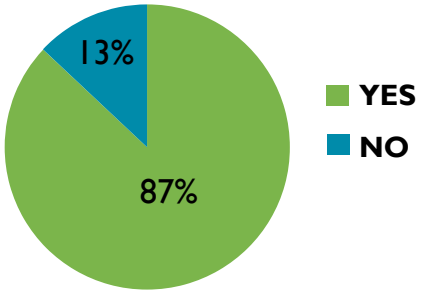
Region	Frequency	Percent
Denver Metro	883	59.3
Southern Colorado	606	40.7
Total	*1,489*	*100.0*



The majority of these calls were for unique cases.

Table/Chart 19: Unique Cases

Unique Cases	Frequency	Percent
YES	1,365	87.2
NO	124	12.8
Total	*1,489*	*100.0*



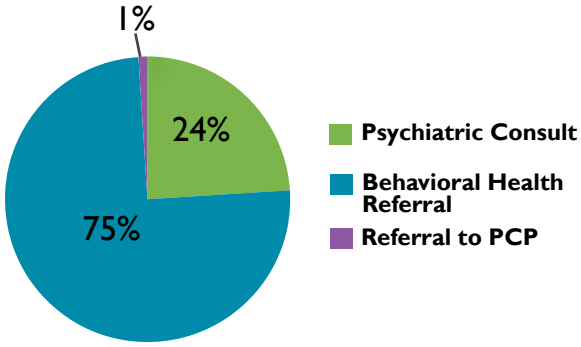
The remaining Call Center data analyses examine unique cases (N=1,364).

Table 20 shows significantly more calls for behavioral health referral (care coordination/management) than for psychiatric consultation (Z-Score= -26.62; p<.001).

Table/Chart 20: Call Request

Call Request	Frequency	Percent
Psychiatric Consult	330	24.0
Behavioral Health Referral*	1,022	75.1
Referral to PCP	12	0.9
Total	*1,364*	*100.0*

**p<.001*



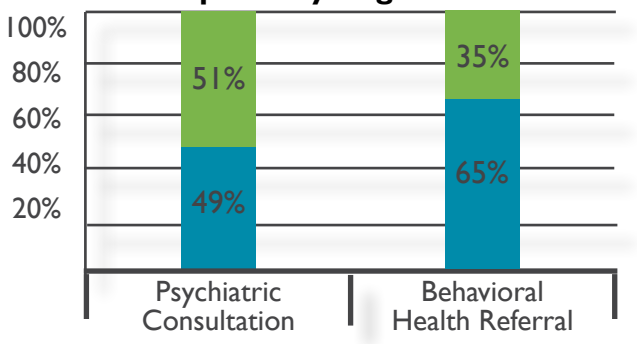
A significant difference between regions was also seen. *Denver Metro region had significantly more calls for BH referral and Southern Colorado for more calls psychiatric consults.*

Call Type		Region		Total
		Denver Metro	Southern Colorado	
Psychiatric Consultations	Count	164	166*	330
	Expected Count	190.9	139.1	330.0
	% within Call Type	49.7%	50.3%	100.0%
	% within Region	20.8%	28.9%	24.2%
	% of Total	12.0%	12.2%	24.2%
Behavioral Health Referrals	Count	625*	397	1,022
	Expected Count	591.2	430.8	1,022.0
	% within Call Type	61.2%	38.8%	100.0%
	% within Region	79.2%	69.0%	74.9%
	% of Total	45.8%	29.1%	74.9%
Referral to PCP	Count	0	12*	12
	Expectec Count	6.9	5.1	12.0
	% within Call Type	0.0%	100.0%	100.0%
	% within Region	0.0%	2.1%	0.9%
	% of Total	0.0%	0.9%	0.9%
Total	Count	789	575	1,364
	Expected Count	789.0	575.0	1,364.0
	% within Call Type	57.8%	42.2%	100.0%
	% with Region	100.0%	100.0%	100.0%
	% of Total	57.8%	42.2%	100.0%

**Both within and between regions there were significant differences when comparing Psychiatric Consultations and Behavioral Health Referrals. Southern Colorado had significantly more psychiatric consultations than behavioral health referrals (Z-Score = -13.63) p<.001), and the Denver Metro region had significantly more behavioral health referrals then psychiatric consultations (Z-Score -23.21 p.001).*

Interesting the requests for a PCP referral came from Southern Colorado. When reviewing the call notes, requests were for a PCP who was comfortable in prescribing and managing common behavioral health issues. Most of these requests came from a psychiatrist and the children and youth would be new to the PCP. Southern Colorado is also more rural/frontier where convenient access to psychiatry is scarce.

Chart 21: Requests by Region

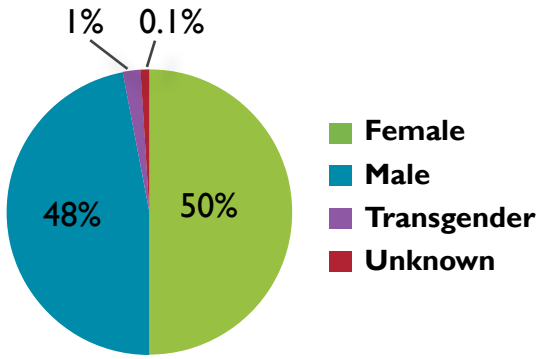


Call Center Patients

Patient gender was approximately split between female and male.

Table/Chart 22: Patient Gender

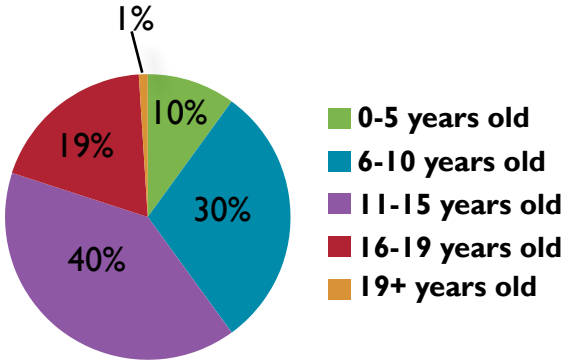
Patient Gender	Frequency	Percent
Female	682	50.0
Male	665	48.8
Transgender	2	0.1
Unknown	15	1.1
Total	*847*	*100.0*



The majority of patients were between ages 11-15; patients' ages 6-10 were the next largest group. *Males significantly comprised the younger age ranges (=<10) while females mostly comprised the older age ranges (11-19+: p<.05).*

Table/Chart 23: Patient Age

Patient Age	Frequency	Percent
0-5 years old	134	9.8
6-10 years old	408	30.0
11-15 years old	549	40.4
16-19 years old	263	19.4
19+ years old	5	0.4
Total	1,359	100.0
Missing	5	
Total	*1,364*	



The top five call issues as shown in the table below included: Depression, Anxiety, ADHD, Disruptive Disorder, and Aggression.

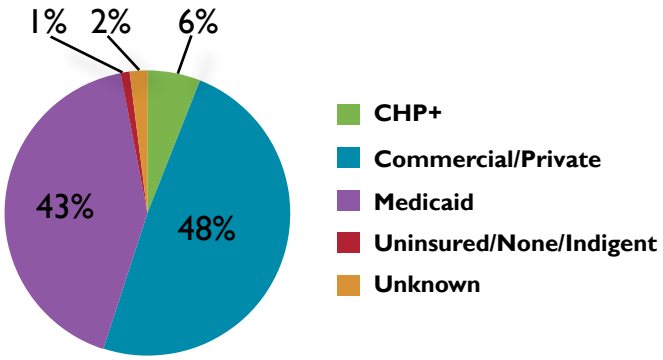
Table 24: Presenting Issues

Presenting Issues	Frequency	Percent	Valid Percent
Depression	321	23.5	23.6
Anxiety	316	23.2	23.3
ADHD	251	18.4	18.5
Disruptive Behavior/ ODD	160	11.7	11.8
Aggression	74	5.4	5.4
Autism/ASD	50	3.7	3.7
Mood Disorder	36	2.6	2.7
Parent/Child Interaction	31	2.3	2.3
Trauma	22	1.6	1.6
Bipolar	18	1.3	1.3
N/A	13	1.0	1.0
Self-injurious Behaviors	10	0.7	0.7
Suicide Risk	10	0.7	0.7
Eating Disorder	9	0.7	0.7
Psychosis/Emerging Psychotic Symptoms	8	0.6	0.6
PTSD	7	0.5	0.5
Comorbid Disorders	6	0.4	0.4
Medication Side Effects	5	0.4	0.4
Personality Disorder	5	0.4	0.4
Substance Use	4	0.3	0.3
Gender Identiy Issues	1	0.1	0.1
Sexual Addiction/Porn	1	0.1	0.1
Total	1,358	99.6	100.0
Missing	6	0.4	
Total	*1,364*	*100.0*	

Medicaid/CHP+ covered over one-half of the patients, and 43 percent were covered by private insurance.

Table/Chart 25: Patient Insurance Status

Patient Insurance	Frequency	Percent
CHP+	85	6.2
Commercial/Private	660	48.4
Medicaid	578	42.4
Uninsured/None/ Indigent	18	1.3
Unknown	23	1.6
Total	*1,364*	*100.0*



Recruitment Process Facilitators/Challenges

All key informant interviewees were asked about the recruitment process – what worked and what were challenges. The majority of participants spoke to the **use of benefits** in the C-PACK program as a proven recruitment strategy. Benefits were described as:

- **Need** - meeting a gap
  - *Many needs were met by this program. We saw a way to serve a particular population – children in a general age group and safety net folks. (*Staff)
- **Resources** - especially for rural/frontier areas
  - *Behavioral health integrated care can have all sorts of resources, but others do not.*
  - *Consultation helps the primary care practice. What seemed to help in recruitment was explaining what they do and the benefits of enrollment. They did a great job at that. The staff knows their stuff. They are experienced which provides trust.* (Advisory Group)
- **Training**
  - *Docs were interested in training. Training was needed and they were hungry for it.* (Staff)
  - *I joined because I was not trained in mental health and I wanted to learn more techniques to address rising mental health needs in pediatric primary care.* (Prescriber)

Specific **outreach practices** mentioned in the interviews as being very helpful were:

- Sustained effort in relationship building
- Use of relationships already established
- Use of personal contact, especially prescriber to prescriber
- Emphasis on topic and need
- Use of the benefits of participation through one-on-one contact, flyers, and letters
- Scheduling of several no cost trainings
- Following through - doing what is promised

Certain recruitment practices, however, **hindered** enrollment.

- Not considering commitment of prescriber time, especially for the after training calls
- Offering only a few trainings
- Not offering local trainings
- Offering a week long training for BHS which was felt too long
- Setting a too high recruitment target of safety net prescribers
- Using the mental health center connections first to make contact, as some mental health centers do not have good relationships within the community they serve

EFFECTIVENESS

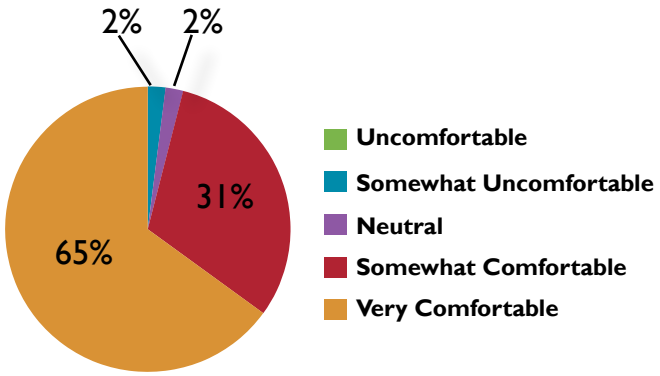
A total of 59 prescribers completed 6-month post enrollment surveys. All had attended the C-PACK trainings.

Use of Evidence-based Screening Tools

One of C-PACK's objectives was to increase the use of and comfort with evidenced-based screening tools among prescribers. At 6 months post-enrollment, 98 percent of the prescribers were using tools compared to 81 percent (a 17 percent increase). The following table indicates prescribers' comfort level using these tools. Significantly more prescribers indicated that they were "Somewhat" to "Very Comfortable" with their use ($p<.001$).

Table/Chart 26: Prescriber Comfort with Use of Tools

Comfort Level (N=59)	Frequency	Percent	Valid Percent
Uncomfortable	0	0.0	0.0
Somewhat Uncomfortable	1	1.7	1.7
Neutral	1	1.7	1.7
Somewhat Comfortable	18	30.5	31.0
Very Comfortable	38	64.4	65.5
Total	58	98.3	100.0
Missing	1	1.7	
Total	*59*	*100*	



When asked if the frequency of their **use of screening tools changed** since participating in C-PACK, **92 percent** of the prescribers said yes with:

- 89 percent screening more patients
- 87 percent using more tools
- 41 percent screening the patient more often
- 35 percent using a different tool

C-PACK Satisfaction

The post survey asked the prescribers to indicate the level at which they disagreed or agreed with certain statements on a five point scale (1 to 5) to measure satisfaction. All statements were rated as "Somewhat Agree" to "Agree). Examples of comments are italicized in the table on the next page.

Table 27: Prescriber Satisfaction with C-PACK

Statement (N=59)	Mean
My use of C-Pack's behavioral health specialists has increased since I enrolled. ○ *I feel more comfortable so need less help.* ○ *This has been a great resource – especially when we have a patient that isn't a good match with our in-house counselor or if she has a conflict of interest (i.e. is already treating a family member) or when we need services like substance abuse treatment. I have an uninsured patient population that has greatly benefited from these resources.*	3.8
I am satisfied with my collaborations with C-PACK's behavioral health specialists over the last six months. ○ *I am so happy to have access to a psychiatrist to discuss management of my patient's psychiatric issues.* ○ *Still not receiving notes from behavioral health consultants.*	4.4
The support provided to me by C-PACK has increased access to behavioral health services for children and adolescents over the last six months. ○ *The increase in my ability to help patients with psychiatric disorders is dramatic.*	4.3
I am satisfied with my current use of psychotropic medication to treat behavioral health disorders/symptoms in children. ○ *Feel like I am more comfortable with med use.*	4.2
I have adequate access to C-PACK's behavioral health specialists over the last six months. ○ *Excellent service and response time.*	4.6
I am confident in my ability in treating behavioral health issues in children since my C-PACK participation. ○ *I will continue to want to have access to C-PACK consultants for medication and management advice, but my confidence is much increased.* ○ *Thank you. This was truly an empowering opportunity for all of us.*	4.3

The prescribers rated their overall satisfaction with a mean of 4.5 on a 1 to 5 scale indicating great satisfaction with the C-PACK model. Prescriber comments included:

- *I am so fortunate to be a part of it.*
- *I regard the C-PACK training to be one of the most helpful CE learning programs in years.*
- *Complicated patients in need of counseling outside of what I am able to offer in a 15 minute visit is still incredibly difficult to obtain in any kind of timely fashion. Access to counseling services for uninsured is virtually impossible to obtain.*
- *Psychiatrist never returned call, other providers with similar experiences.*

Information Dissemination

Ninety-five percent of the prescribers indicated that they have **shared the knowledge** they have gained through C-PACK with other prescribers in their practice. They have shared (in order of frequency of comment):

- Use and interpretation of screening tools
- Information about the phone access and/or referral process
- How to choose medications
- How to treat certain issues
- Put together office trainings and/or assessment/treatment notebook

When asked if they would **recommend C-PACK to their colleagues, 98 percent** said that they would.

- *Has really increased my comfort level with straightforward depression and anxiety and med management for those issues.* (Prescriber)
- *Already have referred another practice in town to the program.* (Prescriber)

Usefulness of C-PACK Components

The usefulness of the individual C-PACK components was rated on a five-point scale of "Not Useful at All" to "Very Useful" (1 to 5). Means below were calculated on the prescribers' endorsements only if they used the components. All components were rated to be "somewhat" to "very useful." The components are listed by descending mean score in the table below.

Table 28: Usefulness of C-PACK Components

C-PACK Components	Mean
Classroom training by the REACH Institue	4.8
Curbside consultations with C-PACK child psychiatrists	4.5
Care coordination	4.4
Site visits from child psychiatrists	4.3
Site visits from care coordinators	4.3
C-PACK/CCHAP training on behavioral health assessment tools & coding/ billing	4.3
Case presentations via conference calls (CME calls)	4.2
Site visits that included behavioral health specialists	4.0
Reminders to use C-PACK Call Center	4.0
Website resources	3.0

C-PACK's Effect on Practice

The following table shows "yes" endorsements to statements of how C-PACK has affected prescribers' behavior in the six months after enrolling.

Table 29: Practice Effects

Prescriber Pratice (N=59)	Percent
Am more comfortable addressing psychiatric /behavioral health issues in-house	88%
Using care coordination with more patients to address complex issues	68%
Collaborating more with behavioral health specialists	64.4%
Referring less to outside psychiatrists for assessment/medication management	50.9%
Collaborating more with psychiatrists	37.3%
Referring more children to behavioral health specialists	32.2%

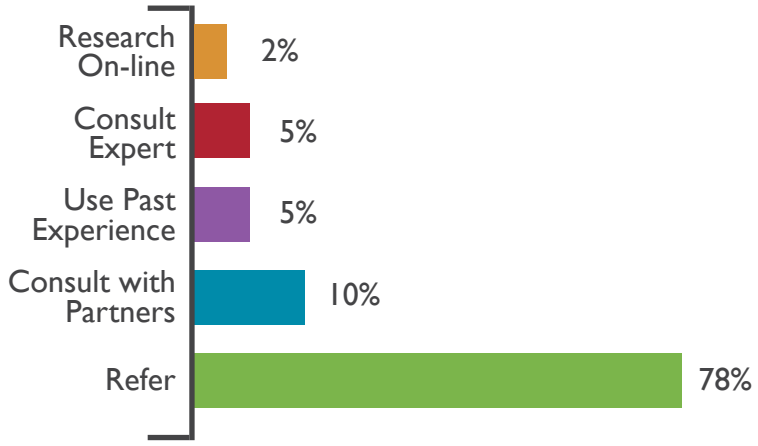
Eighty-five percent of the prescribers indicated patients with whom they used the **C-PACK psychiatric consult process** would have been **referred out** for psychiatric assessment or treatment prior to their participation in C-PACK. An average of 70 percent of the patients would have been referred out to a psychiatrist. When asked about the behavioral health referrals or case coordination the prescribers on average thought that only **50 percent of their patients had access to behavioral health services** prior to C-PACK.

Survey qualitative data was gathered about how the prescriber would address a complex child/youth case *prior* to participating in C-PACK. Five themes emerged.

Table/Chart 30: Prior Practice

Prior Practice (N=89)	Percent
Refer*	78%
Consult with Partners	10%
Use Past Experience	5%
Consult Expert	5%
Research On-line	2%

*$p<.05$



Knowledge & Comfort Change

The pre/post analyzes of changes in knowledge and comfort levels in assessing/ diagnosing disorders/symptoms and treating them were done. The question was measured on a four-point scale (0 to 3: ex. "Not at All" to "Great Deal"). The following tables show **significant positive gains** in all questions assessed. The statistical program excluded cases on a test-by-test basis determined by missing data.

Table 31: Knowledge of Assessing/Diagnosing

Knowledge of Assessing & Diagnosing Disorder or Symptoms	N	Pre Mean	Post Mean	Difference	Significance
ADHD	41	2.0	2.6	+0.6	p=.000*
Anxiety Disorders	40	1.3	2.2	+0.9	p=.000*
Major Depressive Disorder	41	1.3	2.2	+0.9	p=.000*
Bipolar Disorder	41	0.8	1.3	+0.5	p=.000*
Conduct Disorder	41	1.0	1.5	+0.5	p=.000*
Autism/Autistic Spectrum	41	1.4	1.7	+0.3	p=.014*
Suicide Risk	38	1.6	2.2	+0.6	p=.000*
Aggression	36	1.1	1.7	+0.6	p=.001*
Comorbid Disorders	38	0.9	1.5	+0.6	p=.000*
Substance Abuse Disorders	38	1.3	1.7	+0.4	p=.002*

**Two tailed paired t-test (0.95CI)*

While still showing a very significant change, the lowest positive change was with knowledge of assessing and diagnosing Autism/Autistic Spectrum. This indicates that in future training more emphasis should be placed on this topic.

Table 32: Comfort in Assessing/Diagnosing

Knowledge of Assessing & Diagnosing Disorder or Symptoms	N	Pre Mean	Post Mean	Difference	Significance
ADHD	38	1.9	2.6	+0.7	p=.000*
Anxiety Disorders	38	1.2	2.1	+0.9	p=.000*
Major Depressive Disorder	38	1.2	2.2	+1.0	p=.000*
Bipolar Disorder	38	0.6	1.3	+0.7	p=.000*
Conduct Disorder	38	0.7	1.4	+0.7	p=.000*
Autism/Autistic Spectrum	36	1.1	1.5	+0.4	p=.000*
Suicide Risk	36	1.2	2.0	+0.8	p=.000*
Aggression	37	0.7	1.6	+0.9	p=.000*
Comorbid Disorders	37	0.6	1.4	+0.8	p=.000*
Substance Abuse Disorders	38	1.0	1.7	+0.7	p=.000*

**Two tailed paired t-test (.95 CI)*

Again, while still very significant change was made, the prescribers felt slightly less comfort in assessing and diagnosing Bipolar, Conduct, and Comorbid Disorders.

Table 33: Knowledge of Treating

Knowledge of Assessing & Diagnosing Disorder or Symptoms	N	Pre Mean	Post Mean	Difference	Significance
ADHD	38	2.0	2.6	+0.6	p=.000*
Anxiety Disorders	38	1.2	2.2	+1.0	p=.002*
Major Depressive Disorder	38	1.3	2.2	+0.9	p=.000*
Bipolar Disorder	38	0.7	1.3	+0.5	p=.001*
Conduct Disorder	38	0.7	1.4	+0.7	p=.000*
Autism/Autistic Spectrum	38	1.1	1.6	+0.5	p=.000*
Suicide Risk	38	1.1	1.8	+0.7	p=.001*
Aggression	38	0.7	1.6	+0.9	p=.000*
Comorbid Disorders	38	0.7	1.4	+0.7	p=.000*
Substance Abuse Disorders	38	0.8	1.3	+0.5	p=.044*

**Two tailed paired t-test (.95 CI)*

Prescribers had very significant changes in their knowledge of treating the disorders listed in the above table. Substance Abuse, Bipolar, Comorbid, Aggression, and Conduct were ranked lowest for pre/post knowledge in treating. Thus, when planning training on treatment of disorders most commonly seen in children, special emphases should be placed in these areas.

Table 34: Prescriber Comfort in Treating

Knowledge of Assessing & Diagnosing Disorder or Symptoms	N	Pre Mean	Post Mean	Difference	Significance
ADHD	38	1.8	2.6	+0.8	p=.000*
Anxiety Disorders	38	1.1	2.1	+1.0	p=.009*
Major Depressive Disorder	38	1.1	2.1	+1.0	p=.003*
Bipolar Disorder	38	0.5	1.1	+0.6	p=.000*
Conduct Disorder	38	0.5	1.2	+0.7	p=.000*
Autism/Autistic Spectrum	38	1.0	1.5	+0.5	p=.001*
Suicide Risk	38	1.0	1.6	+0.6	p=.004*
Aggression	37	0.5	1.4	+0.8	p=.001*
Comorbid Disorders	38	0.6	1.4	+0.6	p=.000*
Substance Abuse Disorders	38	0.6	1.3	+0.7	p=.000*

**Two tailed paired t-test (.95 CI)*

The table above shows the prescribers' comfort in treating specific disorders or symptoms. Prescribers' level of comfort in treating Bipolar, Conduct, Aggression, Comorbid, and Substance Abuse Disorders did not change significantly despite an increase in knowledge. The above tables reflect the difficulty in assessing and treating "complicated disorders" (i.e., Bipolar and Comorbid) and "behavioral disorders" (i.e., Conduct, Aggression, and Substance Abuse). In the PCP setting, PCPs faced with "complicated disorders" are greatly helped by psychiatric consultation, while cases with more "behavioral disorders" benefit from C-PACK's case management and referral to BHS.

Result of Psychiatric Consult

When analyzing 318 psychiatric consultation calls (N=330 – 12 missing data), **76 percent** of the children/youth for whom the prescribers called about remained with the prescriber with no follow-up necessary. **Seventeen percent** warranted a referral to the psychiatrist and 16 percent include a referral to BHS. Please note in the table below that a disposition of a call was not mutually exclusive of the categories.

Table/Chart 35: Result of Psychiatric Consult

Dispositions of Cases Seeking Psychiatric Consult	Frequency	Percent
Remain with PCP	244	76.2
Refer to Psychiatry	54	17.0
Refer to Behavioral Health	51	16.0

Prescriber Recommendation to Other Prescribers

A question was asked of prescribers in the key informant interviews if they would or would not recommend the C-PACK program to other prescribers. All prescriber interviewees said that they would recommend C-PACK for its support. These two example quotes explain why they would refer another prescriber to C-PACK.

- *In an ideal world I would have time to follow-up with all my patients to make sure they go to their appointments. But I don't. Having [care coordinator] there gives me peace of mind.* (Prescriber)
- *[The Care coordinator] has worked with all three of our clinics and got Dr. [psychiatrist] to come to all three locations in one day. He sat down and was flexible, gave a great presentation, and [care coordinator] facilitated that. With all the logistics on both ends - she was extremely easy to work with. She's always easy to engage and talk to; accessible, profession, easy to communicate with. She truly understands psychiatry.* (Prescriber)

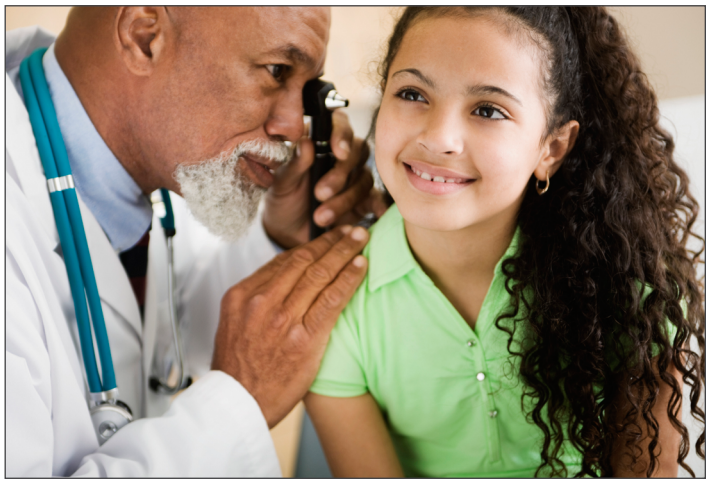
Prescribers' Thoughts on C-PACK's Effectiveness

What prescribers found effective is listed below in order of frequency of mention.

- Building confidence in prescribers in starting treatment – offering behavioral health care and prescribing medications
    - *The best part of the program is that it reached out to primary care doctors. Usually patients land in their office first, and behavioral health is not well taught in school/residency.* (Prescriber)
- Having a referral/care coordinator
    - *I have patients that have a need but I have 15 minutes with them before I move on to the next patient. So it's nice to have a place you can call and hand it off and you have faith that they'll take it from there.* (Prescriber)
- Accessing services through an organization that accepts patient insurance status
- Curb-side consultation
- Training
- Call Center

Others mentioned the components of C-PACK: **psychiatrist connection and care coordination as being very effective**. Some cited more broad accomplishments such as **improving access** and **providing better patient care**.

- *Avoiding the 2 to 3 month wait for patients to see a psychiatrist before starting treatment.* (Prescriber)
- *I think C-PACK really encourages you to get to the bottom of the issues before medicating. I didn't feel pushed to over use medications or under-utilize them. They talked a lot about appropriateness and I appreciated that.* (Prescribers)
- *I guess since C-PACK is making it more comfortable for doctors to prescribe it could increase the usage. But we are prescribing the medications that the patient really needs, as opposed to potentially prescribing the wrong medications.* (Prescribers)



Qualitative Findings on Prescribers' Comfort and Confidence Through C-PACK Participation

Prescribers confirmed the quantitative findings that C-PACK increased their comfort and confidence levels in treating behavioral health issues.

- *I am confident now doing low-level treatment and only make referrals for those who really need it; I now have more appropriate referral patterns.* (Prescriber)
- *Our doctors have more confidence in treating these children; it's changing the face of primary care. Five of our doctors went through the fellowship; all 5 said it was the best trainings they've ever had. Dr. [staff psychiatrist] has come and conducted face-to-face consults and that has been so critical for our doctors; to make that shift in their mind that they can have confidence in prescribing medication.* (Prescriber)

C-PACK's Effect on Patient Care

When asked how participating in C-PACK has affected their patient care prescribers described several themes.

- Increased comfort
  - *It gives me somebody to fall back on, which is great. I don't feel like I'm alone in the dark anymore. It's nice to have another person to talk to, to say, 'I've never dealt with this before what labs do I draw?* (Prescriber)
- Increased confidence
  - *I feel more confident in dealing with behavioral health concerns, in using the correct screening tools, and starting medications. I feel better informed about the tools and resources available.* (Prescriber)
  - *I'm a lot more willing to challenge what someone's diagnosis has been in that [anxiety and depression] realm. I question now where the diagnosis came from and how long they've had it.* (Prescriber)
- Aided patient navigation of mental health services
  - *It saves me time as well. I used to look up therapists before but now [Care Coordinator] does it.* (Prescriber)
- Increased screening and detection of problems

- *We are picking up low-grade problems with kids that can be addressed with counseling and therapy instead of meds. I would much rather catch a kid in the beginning of their depression then have them end up in the ER.* (Prescriber)

- Broadened view point
    - *The whole lens in which we have viewed our integrated care has changed and C-PACK has been a factor in that. Our patient care is more effective because we are looking at the whole person not just the medical piece. Mental health affects physical health; you can't just focus on only one.* (Prescriber)

The prescriber interviewees also spoke to how their participation has affected other providers' care in their practice.

- Trained providers now a resource for other providers
- Increased use of screening tools
    - *…standardization of tools across the practice is how the program has affected my practice. We have a lot of part time employees and our patients don't always see the same provider, so if the same scales are used it's easy to pick up a chart and determine what has been done and where the patient scores.*

Prescribers Thoughts on How Participating Affects Costs

Most of prescriber interviewees felt that participating in the program lowers **patient** costs.

- *Families might have tight budgets, so paying for a psychologist and a psychiatrist really adds up to these families. When we can manage the easier, more straightforward cases ourselves, we can free up the psychiatrist time so that they only see the kids that need to be seen. Patients also don't have to travel to Denver or Colorado Springs to receive services.* (Prescriber)

A few spoke to how handling problems in-house helps reduce costs for both families and practices.

- *C-PACK helps with our costs because the families need the services and we value our patients. C-PACK has helped with that; having a psychiatrist come and talk to our doctors, we wouldn't have been able to pay for that outside of C-PACK offering it. We would have missed out on all these services without C-PACK. C-PACK has truly increased the confidence of our providers to deal with mental and behavioral health issues.* (Prescriber)

BEHAVIORAL HEALTH SPECIALISTS

Twenty-two (22) BHS completed 12-month post enrollment surveys. All attended the C-PACK training.

Use of Evidence-based Screening Tools

Eighty-three percent of the BHS indicated use of tools compared to 47 percent on enrollment (a 35 percent increase). Fifty-six percent said that their use of these tools has changed. Eighty percent indicated increased utilization while 70 percent do more frequent screenings.

BHS Relationship With Prescribers

BHS post surveys asked BHS providers how C-PACK affected their relationships with the prescribers.

Table 40: BHS Satisfaction

Statement (N=18)	Mean
I currently support prescribers (PCPs) in handling behavioral health issues in children and adolescents. ○ *I send PCPs a letter stating the mental health issue their patient is working on.* ○ *None have reached out to me.*	4.3
I am currently satisfied with my supporting relationship with PCPs. ○ *Would like to do more.*	4.2
My supporting a PCP will increase access to behavioral health services for children and adolescents. ○ *Working as a team brings greater support to the client and family.* ○ *I think they need to utilize me more; when I reach out to them I often cannot reach them after several attempts, or maybe just their nurses.*	4.4
I am satisfied with current psychotropic medication use. ○ *My C-PACK clients typically do not come to me on medication. I often get clients that their PCP has told them there was not a medical origin for the issue and to seek Play Therapy.* ○ *PCPs are still reluctant to prescribe antidepressants.* ○ *I do have some concerns of the use of these medications with children, especially long term.*	4.1
I have adequate access to a C-PACK prescriber when my patient needs one. ○ *I do not know of a C-PACK trained prescriber in our town.* ○ *I think this will increase over time. I have made contact on one occasion.*	3.8
I am confident in my skills in aiding prescribers in treating behavioral health issues in children.	4.9

BHS Satisfaction

BHS indicated that they were "Somewhat" to "Very Satisfied" 89 percent of the time with C-PACK participation.

Ninety-four percent of the BHS indicated that they would recommend C-PACK to their colleagues. BHS providers were also asked if prescribers supported their practice in anyway. Eighty-three percent said that the prescribers did. The vast majority were referring to referrals from prescribers when asked about support.

BHS Comfort

BHS were asked pre/post questions on their comfort in treating the specific mental health disorders. While scores improved from pre to post, Depression, Bipolar, Autism Disorders were statistically significant. These particular disorders are complex to treat, thus one assumes that the training provided increased comfort in caring for patients who suffer from them.

Table 41: BHS Comfort in Treating

Comfort in Treating Disorder or Symptoms	N	Pre Mean	Post Mean	Difference	Significance
ADHD	12	2.3	2.4	+0.1	*p*=.34
Anxiety Disorders	12	2.6	2.8	+0.2	*p*=.08
Major Depressive Disorder	12	2.5	2.9	+0.4	*p*=.02*
Bipolar Disorder	12	1.5	2.0	+0.5	*p*=.05*
Conduct Disorder	12	2.1	2.4	+0.3	*p*=.17
Autism/Autistic Spectrum	12	0.9	1.3	+0.4	*p*=.02*
Suicide Risk	11	2.6	2.8	+0.2	*p*=.10
Aggression	12	2.3	2.5	+0.2	*p*=.34
Comorbid Disorders	12	1.1	2.4	+0.3	*p*=.17

** Significant p=<.05;Two tailed paired t-test (.95 CI)*

Key Stakeholder's Perceptions of Effectiveness in Reaching Children Most in Need

Advisory Group (AG) and staff interviews included questions on perceived effectiveness. First, a question was posed as to their thoughts about C-PACK's effectiveness in reaching children most in need of behavioral health services.

Advisory group members and staff spoke to how effective C-PACK is in addressing **need**.

- *We targeted Medicaid population, and we had good partners. We found that need is not only about poverty and/or access. Private insurance has just as hard a time getting access. There is a huge need even for those who can pay the bill.* (AG)
- *I think it has been pretty darn effective. Of those seeing a prescriber, the test pilot was good. Surprised us on how many practices got connected with therapy – case coordination. My experience as a consultant [psychiatrist] shows me that the prescribers have been all over themselves with gratitude for the help. I walk away feeling like a hero. If I had a patient that needed let's say birth control I won't know what to do but ask for a consult from them. This is nice for behavioral health in general has not usually been appreciated.* (Staff)
- *I am hearing the story after the situation and the docs are finding C-PACK incredibly helpful. It allows providers to practice at the top of their practice. Prior to C-PACK, PCPs lived on the edge. C-PACK helps to define the ledge and provides assurances and help to make it all happen.* (AG)
- *Very effective, pediatricians are on the frontline for kids. Intervene at early time. Doctors do early identification. They see them through their lifetime.* (Staff)

Others described C-PACK's effectiveness in addressing **access.**

- *C-PACK serves most in need because for one reason or another access is an issue. This is an easy comfortable resource for the docs, easy for patient.* (AG)
- *If we help one more person or child it's a success. It increases access.* (Staff)

Influence on Under or Over Utilization of Medications

The vast majority of those interviewed spoke to how C-PACK addresses **more appropriate** use of medications rather than under or over utilization.

- *Don't know what the results will be but I see it as a huge plus. We see kids on cocktails. The PCPs don't know or understand these cocktails. People are guessing. We provide someone who can guide on appropriate use and dosage.* (AG)
- *Because PCPs are so cautious in prescribing, the collaborative nature of consultation is a good check and balance for not over prescribing and monitoring what is prescribed. We are looking at evaluating prescribing guidelines but do not want strict protocols.* (Staff)

C-PACK's Influence on the Cost of Care

All qualitative interviewees were asked how C-PACK might be impacting the cost of care. Several themes emerged from the interviews.

- **Lowers provider/health care** costs through early intervention and less referral
    - *The cost saving are in the saved hospital costs and long-range health. We increase costs now through screening and treatment but in the long term the costs are saved. Behavioral health has impact on overall health.* (AG)
    - *Through care coordination alone we divert care from the ER and hospitalization. I know this is anecdotal but we have made a huge difference. We don't have the necessary infrastructure to collect the necessary data to show this yet.* (Staff)

ADOPTION/IMPLEMENTATION

C-PACK Expansion

All interviewees were asked their thoughts on the feasibility of C-PACK expanding to other primary care practices. All agreed that the C-PACK program as designed **could easily be expanded** to other practices, especially for rural, adult, and family practices.

- *In some regions [of the State] the program would be celebrated. In some places there is no specialty access. Psychiatry is at the top of the list of specialties where access is lacking.* (AG)
- *Urban docs have more access to behavioral health resources, but in, let's say La Junta, "tag you are it." There are no resources, not even for a tank of gas.* (AG)
- *I think it can be feasible. Our project has only been around for two years. But we only go going for really 1 ½ years and still have a great track record. We needed one more year for the "slam dunk."* (Staff)
- *C-PACK could be helpful for adult and family practices. It would take some of the caseload off the psychiatrists.* (Prescriber)

However, the following expansion **challenges** were identified:

- Need for funding
- Finding the right model size for the need
- Need to adjust for certain more rural/frontier areas of the State
- Need for more staffing, especially in care coordination/management/referral
- Need to shorten the educational component
- Need for in-state instructors
- Need for strategic planning
- Need for stronger centralized infrastructure and coordination
- Need for the time to building relationships and trust, especially in more rural areas
- Need for "dedicated" psychiatrists since now their C-PACK roles are just a small part of their work

Prescribers were asked what **changes** would have to be made so C-PACK can be adopted by other typical practices. Themes that emerged included:

- Follow-up to patient therapy appointments
- More individual training for specific care settings and follow-up training to address questions/ situations that have come up
- More staffing for care coordination/management

Satisfaction with the Current C-PACK Model

All interviewees were very satisfied with the current model. Many were even strong advocates in not changing the model. One prescriber summed her/his feelings as: I love it! I dread it ending. Another said: My participation has increased my confidence in treating and diagnosing patients.

However, one offered specific improvements to the training.

- *I like the model but I felt like the noon conference calls were unwieldy and hard to attend. Some presenters were strong and some were poor. [Presenter] was inappropriate at times and not always helpful. I didn't like his approach. I appreciated the pharmacology instruction and the evidence-based pharmacology and fellowship program were good. I'd like to see the fellowship program beefed-up and become more efficient. I would keep the fellowship training as part of C-PACK. I liked the timing of it over the weekend; it's too hard to schedule out of the clinic for three days.* (Prescriber)

A psychiatrist staff consultant described the difficulty in responding to request for consults.

- *I like the model. However, the volume is low for consults. Four calls are the most I get a week. It then becomes hard to figure out the time needed to be there all the time just in case I am needed. It would be nice to have three or four psychiatrists to have different perspectives. When I call back they are so happy and thankful. The timing of the call back can be difficult. The prescribers don't seem to really want a call back in 30 minutes because by that time they are seeing patients. They like the call back when they are on break.* (Staff)

Staff member interviewees made the following suggestions for expanding the model:

- Streamline process, especially the Call Center
- Use technology options such as teleconsults for direct care
- Address the care continuum by including adults
- Have training in smaller pieces
- Provide bridge psychiatrists until patients access their own

Prescriber Use of C-PACK

Prescribers described how they were currently using C-PACK in their practice.

- Using screening tools
- Using medication management
- Using therapist referrals
- Using the increased comfort and knowledge to refer less

Prescriber Dissemination of Knowledge within Practice

C-PACK was interested in how the enrolled prescriber participation was also reaching other non-enrolled prescribers within their practice. Three themes emerged in how prescribers are disseminating their gained experience to others.

- Standardization of screening tools
- Trained prescriber used as resource
- Encourage untrained prescribers to use the Call Center

Reasons for Prescriber Use of Call Center

Prescribers were asked why they most often use the Call Center. Several expected reasons were cited.

- For referrals/patient navigation or care coordination
- For psychiatric consults for complex or very young cases
- For medication management
- For children on Medicaid who cannot wait months to see a psychiatrist; call to get them started on medication

Quality of Linkages

Inquiry was made of the prescribers as to their satisfaction on the quality of the connection made with the BHS. Over a third of the prescribers were **satisfied.**

- *The psychiatrists were nice, helpful, and I walked away with a tangible plan.* (Prescriber)

Themes of being **not satisfied** include:

- No follow-up as to patient once referred to therapy
- Local trainings not carried out
- Additional care recommendations that were not provided locally

Liked Best

The prescribers liked best the training (17 mentions), psych consults (12), care coordination (7), and all components (8). Other areas mentioned were the openness and quality of staff and consultants, ease of access, improved access for Medicaid patients, and the practice suggestions.

Liked Least

C-PACK components that prescribers liked least about the model are listed below in order of frequency of mention.

- Training
  - Time commitment
  - Too many conference calls
  - Role playing
  - Bias toward psychopharmacology
  - Bias toward diagnosing ADHD
- Not receiving information on behavioral health therapy outcomes
- Not having patient access to Autism behavioral health therapy for those on Medicaid
- Just getting list of therapists
- Too many surveys

C-PACK's Accomplishments

All were asked what C-PACK has been able to accomplish so far. The Advisory Group interviews described several themes.

- Raising awareness, expertise through support – opening the door
- Filling a need
- Normalizing this part of healthcare
  - *Clinics are using the system. We are now starting to understand who accesses us. We got the community interested. We are startling to normalize this part of healthcare.* (AG)

- Improving access
- Integrating care
- Helping prescribers comfort level in addressing behavioral health care issues

Staff echoed these themes.

- *We are bringing mental perspective to primary care. Biggest impact has been to the doctors… Care coordination has been huge. Doctors have never in our region been able to make connections to behavioral health… C-PACK is making a dent; we have more to work on but making that dent.* (Staff)
- *On the practical level, we have been able to meet our metrics. On a wider level, we have met a behavioral health specialty need with a low cost alternative. We have also gained name recognition within the State.* (Staff)
- *Most doctors feel that they need to refer. Now, they can call someone to connect and handle the behavioral health issues. They can manage what they always managed, now just more comfortable with it.* (Staff)

Facilitators of Accomplishments

When asked what helped C-PACK to achieve these accomplishments, all groups mentioned the staff.

- *We have a very good staff and a good model.* (AG)
- *Good program management lent to things going pretty quickly. We have a very collaborative group.* (Staff)
- *[Care Coordinator] is friendly, easy to work with, passionate. One is not reluctant to pick up the phone and call her. She's knowledgeable [Project Coordinator]and is very professional and skilled.* (Prescriber)

Other facilitators mentioned included:

- Staff availability
- Ability to network
- Relationship building
- C-PACK structure
- Low tech solution
- Buy-in from partners
- Partners' geographic coverage
- C-PACK's neutrality in the fields of pediatric and behavioral health
    - *C-PACK was neutral in the fields of pediatrics and behavioral health. This was on fast track. We became the leader who was neutral/organized and met a need.* (Staff)
- Data – collecting, aggregating, reporting for refinement of model

C-PACK's Challenges

All interviewees were asked to comment on C-PACK's challenges. Both the Advisory Group members and staff's first response was their concern for **sustainability.**

- *Our biggest challenge is how to fund it. It currently is not a "fee for service" but a consultation. We have to look at new payment models. We started with a pilot – smaller sites which now we want to broaden. We just have to figure out how to pay for it.* (AG)
- *Who is going to fund it? For doctors its integrated care. Who is going to step up and make it happen in an ongoing way?* (Staff)

Volume of service was also addressed.

- *We need the RCCOs to join forces. They have better capacity where they can provide more care coordination. Currently they do not have a behavioral health person embedded into the medical home. Kids get lost in the referral process. They need a warm hand off. For C-PACK to do this we need more people – care coordinators.* (AG)
- *At first we anticipated that the calls would be for psychiatric consultation but we are finding out the majority are for referrals. This is a huge workload for [Care Managers].* (Staff)

Another challenge cited was the need for a new **champion(s).**

- *One other challenge is public relations – champions. Get the word out.* (AG)
- *Lost key champion and we haven't replaced him yet. Lost the face of C-PACK.* (Staff)

The staff noted some other challenges specific to C-PACK's implementation.

- Integrating management
    - *CBHC brings a different mix, for they are heavily focused on the mental health side not on the physical health side. They are pushing integrating but coming too heavily with mental health and the advisory committee is heavily biased toward mental health and mental health recruiting.* (Staff)
- Need for dedicated psychiatrist
    - *We don't have a dedicated teleconsultant. The job is not primary to C-PACK. Thus, there is some trouble making the connections. This is has both pros and cons. We have different perspectives now, but if we have a dedicated psychiatrist we might have more consistency.* (Staff)
- Need for appropriate data to show cost effectiveness

Prescribers described challenges mostly from the point of view of their participation.

- Initial three day training
    - Too long
    - Too regional in approach (narrow spectrum), not great in terms of medical training
- Lunch hour calls not efficient or always educational
    - *I only found about 50 percent of the calls helpful and they were difficult to get to; they were potentially disruptive to the day. So have those calls less frequent and scheduled differently. Maybe focusing the doctors/consultants' presentations and have a pre/post-conference talk about what the actual diagnoses was. There was a lot of extra talk, so narrow down the questions and presentation scope.* (Prescriber)
- Follow-up from referral
    - *The people that ran C-PACK, they kind of assumed that therapy would happen and that's been really difficult.*

A few prescribers did speak to the some broader issues of:

- Continued funding
- Lack of pediatric psychiatrists and BHS, particularly in rural areas
- Difficulty in scheduling site visits
- Need for more staffing
- Need for follow-through
    - *C-PACK hasn't completely followed through with some of the promises they gave us. We were supposed to have a psychiatrist come out and give us trainings and that has fallen through. The patient navigation piece; they [C-PACK] underestimated the demand for that, so that's been tricky.* (Prescriber)

BHS mentioned as **challenges** the time needed for prescribers to call to get the referral and the need to streamline the C-PACK process. One BHS said

- *We live in a very small town – resources. Some of our children need to see a psychiatrist and can't afford to travel.* (BHS)

Lessons Learned

All groups of interviewees were asked what lessons were learned in participating in the C-PACK pilot. (See notes in the "Lessons Learned" summary)

The Advisory Group perspectives included reflections on the **model** and **sustainability at a broader level:**

- Need for broader funding base
- Need for good partners
- Partners can also be competitors
- Partner with local community development and local initiatives/Need for niche
- Need of data for value and marketing
- Need of more care coordination than consultation

Staff on the other hand spoke to **program specifics:**

- Relationships and trust are key
- Need for more consideration of the cost of training
- Need more budget resources for care coordination
- Need for flexibility in training
- Need for Project Coordinator to be on board from beginning
- Need to think through care coordination and its elements with boundaries
- Need for dedicated psychiatrists
- Importance of a data tracking system that is flexible and meets all partners' needs
- Need to include community mental health centers as territorial issues exist
- Need to think about including client outcomes early on in the planning of the model and then evaluation
- Need to help practices normalize C-PACK as part of practice

Prescribers suggested several **refinements**:

- Patient tracking to therapist appointments
- Training
    - Offer a refresher course
    - Fewer biweekly calls
    - Spread training schedule over time
- One-on-one help integrating C-PACK into practice
- Make the Call Center more user friendly and efficient
- Increase age categories to include young adults

"If Done Over" Changes

The Advisory Group and staff interviewees were asked what they would change if they were to "do it all over." Once again the Advisory Group participants spoke to the "**larger picture**":

- Widen funding base
- Apply for a longer grant period
- Rethink the use of the REACH Institute because of cost and sustainability
- Be set up from beginning to respond to the need for care coordination

Staff participants mentioned **program details**:

- Budget for care coordination and less for psychiatric consultation
- Involve more Colorado experts in training to provide State context
- Put in a more robust data collection system from beginning
- Plan more thoughtfully and strategically

Suggestions from Prescribers

The prescriber post-survey asked for suggestions for model improvement. Suggestions included:

- Streamlining the Call Center
- Streamlining the consult process
- Facilitate feedback from behavioral health referrals
- Include better outreach to practices, including group practice presentations
- Add services for adults
- Add non-English speaking therapists
- Add email option for psychiatric questions
- Improve continuity with original psychiatric consultant
- Training:
    - Add refresher courses
    - Fewer conference calls
    - Add pharmacology for bipolar disorder and assessing schizophrenia
    - Provide hard copy booklets of screening tools in one binder and include those for non-English speakers

MAINTENANCE

Importance of Continuation

All three groups were asked to rate the importance of continuing C-PACK beyond its current funding period on a scale from one to ten. The table below shows that all groups felt that it was very important to continue the project after the funding period.

Table 41: Importance of Continuation*

Interview Group	Average Rating	Range
Advisory Group	9.2	8 - 10
Staff	9.8	9 - 10
Prescribers	9.8	8 - 10

**No significant differences were found by group*

An overall theme of **need** emerged from all three groups.

- *We don't have anything to replace it with. If all practices were integrated we wouldn't need the program.* (AG)
- *Things would go on and be figured out if not funded. However, here is a centralized service that is very helpful. Valuable service that helps people out and helps in long run. Service is unusual and no one else is doing this.* (AG)
- *Serving a need that is not being met otherwise.* (Staff)

One staff member also mentioned **access** when they stated that *C-PACK has a great influence on access. It bridges patients to behavioral health services.*

Prescribers' ratings were influenced by the perception that their participation gave them a **resource** to improve their *confidence* and allow *better medication management.* They were also appreciative of the quick response and what they perceived as *quality help*. One prescriber spoke to a larger issue as seen in the State:

- *It's hard because I feel like it was a bandage that doesn't address the problem we have in Colorado around mental health, but it was step in the right direction.* (Prescriber)

The interviews included several prescribers from practices with integrated staff.

- *Without the addition of the imbedded behavioral health specialists in our clinic I would have rated it a 10. But having that has taken some of the burden off of C-PACK.* (Prescriber)

Charging for Resources

A question was also posed to the providers about their use of C-PACK if there were charges for the resources. The vast majority of prescribers felt if they or their organization was charged a **decrease in C-PACK use** would result. This decrease in use would be due to their practice budgets.

- *I use the [Call Center] calls for the Medicaid population and we would never get that money back. So the practice would have to eat that cost and it wouldn't be sustainable.* (Prescriber)
- *Our office is on a shoestring budget, so if charged we would not be able to utilize it as there are no extra resources in our office. I took the training because we didn't have to pay for it.* (Prescriber)

A prescriber also felt that if there was a charge that it could *hinder the* ***comradery*** *with the psychiatrists.*

Other Thoughts of Interviewees and Prescriber Post-Survey Participants

- *I hope that CPACK continues; it's made a world of difference for us. We just started utilizing it in a way that we should have been utilizing the program all along.* (Prescriber)
- *I have appreciated [Project Director's] national networking.* (Staff)
- *We have a really impressive team. We also have an important team at the table in the form of an Advisory Committee.* (AG)
- *I feel very fortunate that our practice heard about and is participating in this program. It has provided very needed resources in our population and greatly expanded my abilities to provide care for behavioral health issues – particularly anxiety and depression. I hope that the program continues and that we can continue to have access to training and resources that were provided this last six months.* (Prescriber)
- *Thanks for the opportunity to improve the lives of countless kids that have been underserved.* (Prescriber)
- *Love it. It was such a helpful presentation. It definitely helped boost my confidence in caring for the children in my practice.* (Prescriber)
- *The connection to prescribers is great. Working with the care coordinator is great. The CATIE training was a waste of my time. I did not get much out of it. I continue to use what I have always used to treat my clients. The training calls were not helpful. The training did not address the complex issues I have with clients. It was training in a vacuum. I would not recommend it to anyone.* (BHS)
- *Great tools and interaction with peers and higher level of professional support.* (BHS)
- *More communication with prescribers would be good and helpful.* (BHS)

EVALUATION DISCUSSION

Child and youth behavioral health problems are among the most common and disabling health conditions. They often co-occur with medical issues and can substantially worsen associated short- and long-term health outcomes. An integrated care approach in which primary care and behavioral health providers work together to address both medical and behavioral health needs not only could improve children and youth's quality of life but also improve access to behavioral healthcare due to the scarcity of specialty child/adolescent psychiatry and the distribution of BHS across the state of Colorado. Community Mental Health Centers offer services in all regions, but families don't know how best to access these services or find them unacceptable. Families who are covered by commercial insurance may need assistance in finding resources other than Community Mental Health Centers in their communities. The results of this final evaluation suggest C-PACK, an integrated behavioral and physical health care delivery model, is reaching and supporting both prescribers and patients. C-PACK focused on three components (training, psychiatric consultations, and care coordination) to provide mental health specialty support for enrolled primary care providers. While the evaluation results are many, the eight initial primary objectives of the C-PACK program are discussed.

1. Increased access to child psychiatric specialty consultation

Though not having access to individual client data, we know that 1364 unique cases of children or youth who the prescribers called about received specialty care through C-PACK's resources in a relatively short period of time (approximately 24 months). Twenty-five percent were for psychiatric consult. Seventy-six percent of those patients remained with the prescriber without further follow-up. We can presume then that a larger percentage of ALL their patients remained including those that they did not call about. The qualitative results tell us that C-PACK serves the most in need where access is an issue. Thus, one can assume even during this short period of time that C-PACK increases access to child psychiatric consultation. An appointment with a PCP is typically a family's first step in understanding the child's behavioral healthcare needs. Thus, it becomes critical for the PCP to understand and recognize how to respond. Prior to C-PACK, the PCP may or may not have had any idea of the issue and rarely knew how to intervene if recognized. Our results tell us that they often simply referred the child to a psychiatrist. Sometimes that referral was unsuccessful for a number of reasons including the lack of psychiatrists (especially in more rural areas) and/or available psychiatrists not taking on new patients and/or the costs to families for the referral. Now, through C-PACK, these same children are being screened for early intervention which research shows as critical[4] and receiving the appropriate level of treatment improving overall family and community well-being and health.

2. Increased identification of children with undiagnosed mental health conditions

Prescribers showed a 17 percent increase in the use of evidence-based screening tools, and these prescribers were significantly more comfortable in their use of those tools. Their knowledge in and comfort with assessing and diagnosing mental health conditions significantly increased since their participation. These findings suggest that this objective is not only being met but complicated and less complicated issues with children and youth are being identified for more appropriate use of medication, and in many cases, no medication at all as the issue is being addressed with counseling and therapy. This is a potential significant cost savings to communities overall by lessening burden on the educational system, judicial system, emergency system, child welfare systems, etc. and affecting, once again, overall population well-being and health.

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[4] *American Psychological Association (2003). Addressing Missed Opportunities for Early Childhood Mental Health Intervention: Current Knowledge & Policy Implications: Report of the Task Force on Early Mental Health Intervention.* https://www.apa.org/pi/families/resources/early-mental-health.pdf.

3. Increased number of children screened for mental health conditions

Children and youth are experts at masking their behavioral health needs. For example, depression is easily misdiagnosed as opposition deviant disorder, which dictates a very different treatment and systems' involvement approaches. When behavioral health issues are caught accurately and early, long term and short-term outcomes improve. At six months post enrollment, 98 percent of the prescribers were using screening tools compared to 81 percent at enrollment (17 percent increase). Ninety-six percent indicated that they were "somewhat" to "very comfortable" with their use. Eighty-nine percent screen more patients, 87 percent use more tools, and 41 percent screen the patient more often. C-PACK shows that increased numbers of children are being screened. As the PCPs become more comfortable with the use of screening tools and they see the benefit of that use, the use will continue to increase with all their patients not just those they may seek assistance with through C-PACK. In addition, consistent use by the enrolled provider also disseminates to other PCPS who are not enrolled further increasing the number of children and youth screened. In addition, the use of some of the evidence-based tools results in increased office revenue when providers can bill for their use.

4. Increased access to evidence-based medication and psychotherapy treatments

Prescribers typically "stumble" upon quality behavioral health care for referral resources. Results vary as a match is dependent on insurance status, provider specialties, availability, and cooperation. For example, one large practice group had C-PACK staff review their current referral list. This review resulted in an up-to-date referral system for the practice that eliminated referrals to providers who no longer work in their area, added C-PACK trained counselors and therapists, and updated fees, insurance acceptance information and contact information. This large PCP practice did not have the time to do this extensive review or really know what was currently available in their community. Referrals made without updated information lead to family and provider frustration.

C-PACK emphasizes training on and use of evidenced based tools, medication and treatments.. Case managers seek referral sources that match client needs. Twenty-five percent of the children/youth (1364) of whom the prescribers sought assistance were provided a psychiatric consult and 75 percent a referral to an evidence-based trained BHS. In addition, prescribers significantly improved their knowledge of and comfort in treating issues since participating. Prescribers on average felt that 50 percent of these patients prior to C-PACK had no access to BHS. Thus, C-PACK has increased access to evidence-based medication and psychotherapy treatments. C-PACK is one part of a multi-faceted solution in addressing limited access to behavioral health care.

5. Increased PCP confidence in their diagnostic and treatment skills

Eighty-eight percent of the prescribers cited that they are more comfortable addressing psychiatric/behavioral health issues in-house. There were significant increases in comfort levels in assessing/diagnosing and treatment of behavioral health issues. Additionally, the qualitative results support these quantitative findings by the prescriber acknowledgments of their increased confidence in assessing/diagnosing and treating their patients' behavioral health issues. Since participating, prescribers indicated a mean score of 4.3 out of a 5 for confidence in their ability in treating behavioral health issues. Therefore, we can safely assume C-PACK is boosting prescribers' confidence.

6. Increased access to specialty services in complex cases

Though 17 percent of cases still were referred to psychiatry, the vast majority stayed with the prescriber. One can assume less complex cases are still being handled by PCPs and the more complex cases are referred to psychiatry. This finding also triangulates with the knowledge and comfort level analyses between enrollment and follow-up survey which showed PCPs comfort level was less with the "complex" cases of bipolar and comorbid disorders. It is with these types of cases that C-PACK becomes most useful. It was

never expected that the prescribers would handle these types of patients alone, but rather that they would increase their access to appropriate psychiatrist consultation while expanding their capability to manage initial and less complicated behavioral health conditions. Practices are also seeing more of the Medicaid/CHP+ population. The referral process for this population is complex and often results in a denial thus frustrating prescribers. C-PACK care coordinators (who know the system and know what information is needed) help navigate the process for more positive results.

As prescribers become even more confident and comfortable not only in their own management of these issues but also in the use of the supporting psychiatrist consultant, the range of their care expands for their patients as well as others in their practice. Eighty-eight percent of the prescribers indicated in the follow-up survey that they are more comfortable in addressing these issues in-house; 68 percent use more care coordination; 64 percent collaborate more with BHS; and 51 percent are referring less to psychiatrists. Anecdotal information from the consulting psychiatrists is also telling in that as the use of C-PACK increases, they are seeing more requests for help for complex cases and less for simple diagnoses and medication advice. In addition, the data tells us that the C-PACK psychiatrists are asking for their own referrals to PCP enrolled C-PACK member for medical evaluation and/or ongoing behavioral health care that can be managed in a primary care setting. One percent of the calls to the Call Center were for PCP referrals. The enrolled PCPs are handling more uncomplicated cases now that C-PACK is in approximately their 24th month of operation. While the empowerment of prescribers was the main goal, a secondary effect has also been noticed. Case managers cited how families are also being empowered. They are teaching parents about parental rights, how to advocate for themselves, how to interact with the systems that the child may be involved with, and how to access appropriate care.

7. Increased appropriate use of psychiatric medications in primary care

Psychotropic drugs are valuable tools in treating many mental health disorders, but inappropriate prescribing can cause serious harm. Less or more medication depends on the audience and the expert. Medications are taken for the purpose of improving the emotional and behavioral health of a child or youth diagnosed with a mental health condition. There is evidence that psychotropics in particular are both over and under prescribed.[5] Overall, the use of medications in this age group has been increasing as evidence to support effectiveness when used appropriately has increased. A child who is temporarily difficult to manage or has a mood disturbance may benefit from introduction of medication with monitoring, with a goal to discontinue the medication when the issue subsides. Medications can also be under prescribed if a youth does not have access to an assessment and/or families are unable to follow-up with treatment for whatever reason, including obtaining and adhering to prescribed medications. Medications may also be over prescribed or under prescribed when prescribers have not had sufficient training in their use and/or are practicing in an underserved area where access to psychiatrists is extremely limited. Prescribers expressed that pressure to prescribe is often present from family or "systems," especially for youth that are very challenging or exhibiting dangerous behaviors.

Prescribing psychotropic medications for children and youth requires a competent prescriber with training and qualifications in their use. C-PACK supports PCPs by ensuring access to training, comprehensive evidence-based assessment tools, and psychiatric consultation. Generally, prescribers are conservative, thoughtful, and cautious of prescribing medications. Educating PCPs who prescribe the majority of medication about the best treatments available for common mental health disorders results in appropriate use. Enrolled prescribers indicated in our qualitative findings that C-PACK has helped them prescribe more appropriately. With psychiatric consult as a resource when needed, PCPs can introduce, adjust, or discontinue medications at the primary care level avoiding the time, cost, long distance travel, and potential delay of a separate psychiatric visit. Availability of psychiatric consult as a resource also helps to address service gaps due to a shortage of pediatric psychiatrists in most areas.

[5] *American Academy of Child & Adolescent Psychiatry (2012). A Guide for Community Child Serving Agencies on Psychotropic Medications for Children and Adolescents.* http://www.ct.gov/dcf/lib/dcf/behavorial_health_medicine/pdf/educational_booklet_5-7-2010.pdf

8. High provider satisfaction

An intervention program works if the target audience is satisfied with events and outcomes. In this case, prescribers rated their overall satisfaction of the C-PACK project 4.5 out of 5. Their range of satisfaction ratings of specific items was also high (3.8 to 4.6). The interview data included many statements of appreciation. In addition, coordinators have received numerous appreciative emails and phone calls. (See Stories starting on page on page 44) This appreciation and satisfaction speaks to a tremendous need that C-PACK is addressing. The "word has spread" and C-PACK has a wait list for enrollment. As one coordinators stated: The bar was set so low with so little help, C-PACK can only raise it.

The final evaluation results shown in the last section highlight that C-PACK has met its objectives. The original Evaluation Plan included additional questions in which answers were sought. The following RE-AIM table from the Evaluation Plan will be used to outline the results.

RE-AIM Element	Questions/Answers
REACH Percent and representativeness of prescribers	**Can C-PACK attract a large and representative percent of prescribers?** Fifty-two practices were enrolled from December 2013 through June of 2014. The majority was in urban/suburban setting, and were family medicine or pediatric practices. There were 112 prescribers who were mostly new female pediatricians. They used some type of evidence-based screening tools. More females are choosing a career in pediatric medicine. Thus, it is not surprising that more females were enrolled than males. New prescribers today, fresh from school, mostly have received some training on the importance of integrated care, especially those in primary care. Taking this into consideration, those enrolled might be considered representative of Colorado primary care prescribers. Ninety-five percent of the prescribers indicated that they have shared the knowledge that they have gained through C-PACK enrollment to other providers which expands the reach even further. They also indicated in qualitative data that they use their increased knowledge and comfort in assessing and treating patients with behavioral health issues in their care of other patients for which they do not call C-PACK for support. **Can the program reach children most in need and often not accessing behavioral health services?** The results show that half of the cases in which the prescriber sought assistance were covered by Medicaid/CHP+ or were uninsured. In addition, 42 percent of the calls originated in Southern Colorado which is considered mostly rural and where they have very limited access to appropriate behavioral health care. C-PACK reached children and youth who have need and/or are not accessing behavioral health care services.
EFFECTIVENESS Impact on key outcomes and unanticipated outcomes	**Does C-PACK produce robust effects and minimal negative effects for the participating prescribers?** Both robust positive quantitative and qualitative effects were seen in this evaluation, especially in prescribers' increase in knowledge and comfort in assessing/diagnosing and treating behavioral health disorders, their increased use of screening tools, 76 percent of the patients remaining with the PCP after psychiatric consultation, increased use of care coordination, collaborating more with psychiatrists and BHS, prescribers' satisfaction, and prescribers' perceived usefulness of C-PACK components.

RE-AIM Element	Questions/Answers
ADOPTION Percent and representativeness of practices/prescribers that participate	**Is C-PACK feasible for the majority of primary care practices and prescribers?** Results show that C-PACK proved extremely feasible for practices and prescribers. Qualitative findings showed that the need for such a model is there, and C-PACK is meeting that need. The model was believed by prescribers to be based on good principles of efficiency, professionalism, and support. **Can typical practices and prescribers adopt it?** Both quantitative results and qualitative themes uncovered great satisfaction in the model. Prescribers would like to see it expanded into other regions of the state. The required prescriber time in mandatory training was most often cited as challenging. All prescribers would recommend C-PACK to their colleagues. Ninety-five percent indicated that they have shared the knowledge that they have gained with other prescribers in their practice. Thus, others are already adopting C-PACK. **What are the lessons learned that could help other practices implement a program similar to C-PACK?** Advisory Group representatives spoke to the need for: 1) broader funding base; 2) good partners; 3) recognition that partners can also be competitors; 4) partnering with local development and initiatives; 5) collecting data for evaluation and marketing; and 6) anticipating more care coordination than consultation. Staff spoke to program specifics such as: 1) using and building key relationships; 2) considering flexibility and cost of training and structure; 3) realigning budget for more care coordination, 4) putting thought into care coordination structure; 5) needing staff including a dedicated psychiatrist to be on-board from beginning to take advantage of the full pilot period; 6) instituting a flexible data tracking system that will meet all project needs including programming and evaluation; 7) including community mental health centers to avoid any territorial issues; and 8) having an evaluation plan that is flexible to programmatic shifts. Prescribers suggested: 1) including patient tracking to therapist appointments with feedback; 2) improving training by spreading out the training schedule, offering refresher courses, and having fewer (mini-fellowship) conference calls; 3) including one-on-one help with integration at the practice level; 4) streamlining the Call Center to be more user-friendly and efficient; and 5) including adult patients.

RE-AIM Element	Questions/Answers
IMPLEMENTATION Process outcomes of rollout	**What did C-PACK accomplish?** C-PACK has implemented a pilot integrated care model in two regions of the state with positive outcomes. A total of 112 prescribers from 52 practices enrolled. A total of 1489 calls were made to the Call Center for 1364 unique cases from December 2013 through November 2015. C-PACK psychiatrists supported 25 percent of the calls and the BHS supported 75 percent. Qualitative findings reflect the following accomplishments: 1) filling a need with a basically low-tech approach; 2) starting the normalization of integration into practice; 3) improving access; and 4) increasing prescribers' knowledge, comfort, and confidence in assessing and treatment of patients with behavioral health issues. **Can C-PACK be consistently implemented across practice elements, different regions, different prescribers, different setting, etc.?** Results tell us that overall C-PACK can be consistently implemented across practices, regions, prescribers, and settings. However, the call requests have been significantly different between regions, with more calls for psychiatric consults from Southern Colorado and more calls for BHS referrals from the Denver Metro region. This may indicate that access to behavioral health counseling is limited in the Denver Metro region of the state and access to psychiatry limited in Southern Colorado.
MAINTENANCE Long-termer term effects such as sustainability	**Does C-PACK include principles to enhance long-term improvements in quality of care?** Evidenced-based principles guided the development of and are integrated within the C-PACK components. The qualitative prescriber interviewees felt that that their participation has improved the quality of and range of their care. **Can C-PACK be sustained over time if proving effective?** The final evaluation results show that C-PACK is effective. One of the challenges frequently noted during the stakeholder interviews was sustainability. However, with preliminary evaluation results, current staff have had conversations with numerous possible funders. At this point in time Value Options has elected to continue the program in some fashion after the current funding ends.

As mentioned previously, C-PACK has a reach of 174,500 patients. While we only report on a small number of call cases taken over a short period of 24 months, C-PACK's impact is much greater than what is reported. Ninety-five percent of the prescribers share information that they gained through C-PACK with their colleagues. We analyzed only data from cases that the enrolled prescribers called about. We do not know about the cases they did not call about or the cases of their colleagues. It is this unknown number that speaks to C-PACK's true reach and impact. To be able to address the overall quality of life for individuals with behavioral health issues, there must be a dedicated effort from early on in children and youth's lives to identify and treat emerging health conditions. Integrated care systems such as C-PACK are a critical part of that dedicated effort, and represent an approach to delivering care that is comprehensive and addresses the primary care, specialty care, and social support needs in a continuous and collaborative manner while addressing a severe gap in access.

POLICY IMPLICATIONS

Strategies to improve the integration of physical and behavioral health care are essential for children and youth with complex needs. Early intervention programs for children and youth with mental illness produce only positive outcomes for youth and are cost effective for our communities.[6] However, when left untreated these issues can lead to tragic and/or costly consequences such as school drop-out, risky behaviors that lead to long-term health and well-being impacts, involvement with the criminal justice system, and/or suicide. To ensure children transition into healthy, productive adults, early intervention programs identify, and effectively treat youth at the earliest stages. This concept of treating children early is not new nor is the fact that they are not getting the behavioral health services they need. Most children and youth with behavioral health issues are more likely to be seen in their primary care setting than in the specialty mental health system. In addition, children and youth who have a chronic medical condition have twice the likelihood of having a behavioral health issues. It appears that intervention must be placed in the primary care setting for early identification strategies and treatment in an integrated fashion. C-PACK offers a model of integrated care that has proven effective. The future of children's integrated care systems rests on both clinical and fiscal sustainability. Not only are effective integrated approaches needed, but also innovative payment models to cover the costs of care. The challenge for the federal, state and private payors will be to align financial/policy incentives to support clinical integration which evaluation and research demonstrates is effective in achieving positive outcomes.

Current payment structures do not adequately cover the costs to meet the integrated health care needs of children. Integrated care services are primarily grant funded and struggle to move forward towards financial sustainability through the generation of revenues. Additionally, there is no standardized data collection system within the state to effectively evaluate and manage outcomes, costs and quality of integrated services. Currently, it is difficult to evaluate cost offset across a continuum of care or assess outcomes and quality in a standardized way. This report has shown that C-PACK is effective for the pilot prescribers in Colorado who are currently treating children and youth who have behavioral health issues due to the shortage and inaccessibility of behavioral health services within the state.

To establish reimbursement mechanisms for C-PACK, consideration should be given to continued dialogue with the Colorado Department of Health Care Policy & Financing (Medicaid, CHP+, etc.) health plans, Medicaid Regional Care Collaborative Organizations (RCCOs), and private insurance companies. If this effort proves to be successful, the documentation of the process would have great policy impacts nationally.
Additionally, the C-PACK model potentially aligns with the Extension for Community Healthcare Outcomes (ECHO). Project ECHO links expert specialist teams at an academic hub with primary care clinicians in local communities. Primary care clinicians become part of a learning community, where they receive mentoring and feedback from specialists. Together, they manage patient cases so that patients get the care they need. ECHO has proven successful in New Mexico, and HCPF is exploring options to use this model in Colorado. Alignment of C-PACK and ECHO could lead to expanding reach and further opening opportunities for reimbursement.

Limitations

Despite its robust mixed methods approach this evaluation has some limitations. First, the length of the pilot was short -- not allowing long-term outcome assessment. Second, individual patient data was not available limiting our ability to assess patient outcomes. However, since the primary objective of the C-PACK project was to support prescribers, we were able to assess prescriber outcomes. Third, our prescriber stakeholder interviews included those that were identified by the care coordinator for each region and those that agreed to speak with the interviewers. Thus, some bias was undoubtedly introduced.

In spite of these limitations, this evaluation provides insight into a pilot model of care integration that is demonstrating promise in achieving desired outcomes. Early lessons gleaned from the implementation of C-PACK will not only be informative for further program refinement and expansion but also for broader future integration program planning.

[6] *American Academy of Child & Adolescent Psychiatry (2011). Cost Effectiveness of Prevention and Early Intervention. www.aacap.org.*

C-PACK STORIES

- One of the first patients I saw after my training was a 17-year old teenager who had been having panic attacks and a lot of anxiety, so much so that she wouldn't even go to school. She came in for heart palpitations – so more of a sick visit, but the anxiety issue came out during the visit. It turned into a huge long visit but then we started meeting together once a month and we established a therapist. The first medication we prescribed didn't work so she was missing her junior year by not going to school. C-PACK was able to give me advice on switching the meds and she's responded great! She's a successful senior and looking at Ivy League colleges for school next year. It's one of those stories where meds did help her; it was the one missing link she needed to better cope with her anxiety. Before I would have just referred her out and she would have had to wait months to see someone and probably miss even more school. I see her often to make sure she's on her meds and seeing the therapist. This case, with the help of C-PACK has allowed a connection with a patient that we don't often get in primary care settings.

- I've been managing a boy's anxiety and ADHD for 6 months. He was actually the first person I called C-PACK about. He was smoking a lot of marijuana and had a psychotic reaction so his parents brought him in. I called him in to C-PACK after screening him for anxiety. C-PACK recommended counseling and he's now a new child. He's a B student when he was getting Cs and Ds last year. He's not missing school, not smoking marijuana, he smiles and have life goals – he wants to be a music engineer.

- I was prescribing Risperdal (which I've never done before) for an autistic kid. So I called the psychiatrist and they helped me. It was so nice to have that backup. I called twice and talked to two different people. The second time I called they gave me reassurance.

- We had a family that the school and the clinic had worked with for three years trying to get them mental health. And now the family is having in home therapy and multiple supports which I have to attribute to the help of C-PACK's case manager. That, for us, was the huge piece we needed; patient navigation. And it really didn't work outside of a few instances for I think they [C-PACK] wasn't set up to do it because they were overwhelmed, I think.

- I had a patient that lived in Wray, CO and they drove three hours to Denver for ADHD medications. C-PACK let me know what services were available out in Wray so they didn't have to drive so far. Some of the services that are available through the county are hard to access but C-PACK can zero in on what is needed and available.

- I had a patient that I presented in the C-PACK phone calls. This patient lived in her bedroom. She didn't even eat with her family. She is completing high school online. They think she might have PTSD maybe, from an accident she had when she injured her face. They were able to get her an appropriate therapist and treatment, and now the patient is eating with her family and even went out to a restaurant. She is planning to go to college.