Linking Multi-Disciplinary Assessment Information Toward Whole Child Service Coordination and Care

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NEW INITIATIVE: OPEEKA

Key Topics Covered



- System of Care Technologically Actualized
- Data Interoperability
- Shared Data
- ▶ AB 2083 Removing technology barriers
- Health Equity





Kate Cordell, PhD, MPH

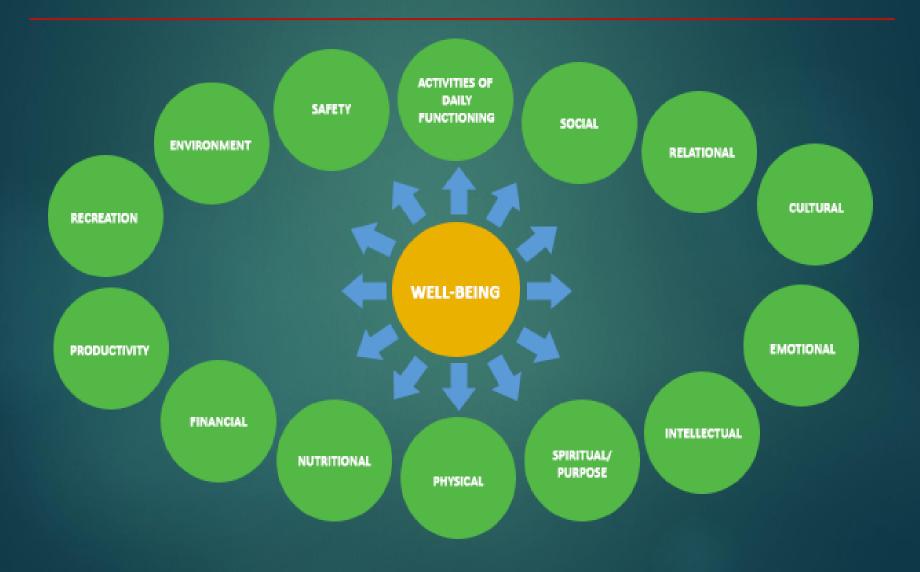
- Managing Director, Mental Health Data Alliance
- Co-Founder, Opeeka
- Assistant Professor, University of Kentucky,
 Center for Innovation in Population Health (IPH)

Goals:

- Improve the use of information to support person-centered care
- Evaluate when individuals and families improve during care
- Identify what works for whom
- Develop a movement for Success-Focused Artificial Intelligence (SF-AI)
- Remove institutional biased decision processes from care

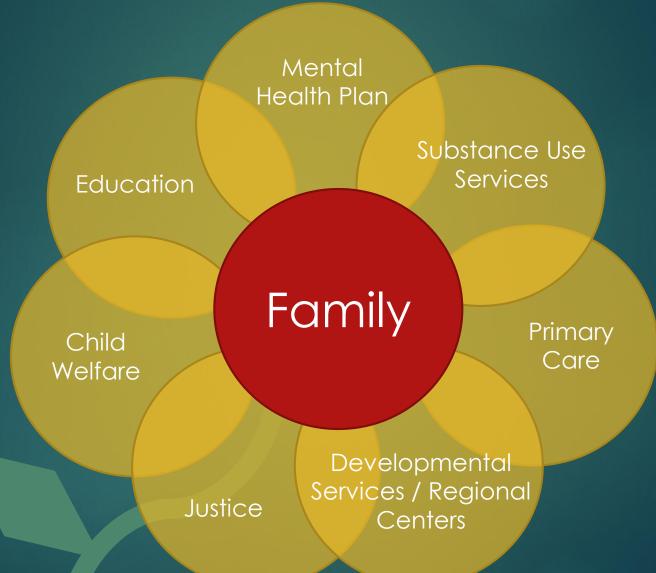


What is the Whole Child?



System of Care







System of Care

A spectrum of effective, community-based services and supports for children and youth with or at risk for mental health or other challenges and their families, that is **organized into a coordinated network with a supportive infrastructure**, builds meaningful partnerships with families and youth, and addresses their cultural and linguistic needs, in order to help them to function better at home, in school, in the community, and throughout life.

Stroul, B. a, & Blau, G. M. (2010). Defining the system of care concept and philosophy: to update or not to update? Evaluation and Program Planning, 33(1), 59–62. doi:10.1016/j.evalprogplan.2009.06.003 (Page 61)

A systems of care for children's mental health necessitates **collaboration** between at least six formal service-providing agencies/sectors: education, specialty mental health, substance abuse, child welfare, juvenile justice, and medical healthcare.

Kazak, A. E., Hoagwood, K., Weisz, J. R., Hood, K., Kratochwill, T. R., Vargas, L. a, & Banez, G. a. (2010). A meta-systems approach to evidence-based practice for children and adolescents. *The American Psychologist*, 65(2), 85–97. doi:10.1037/a0017784

A systems of care approach is dependent on establishing a shared set of responsibilities, expectations and goals between all six sectors.

Hodges, S., Ferreira, K., & Israel, N. (2012). "If We're Going to Change Things, It Has to Be Systemic:" Systems Change in Children's Mental Health. *American Journal of Community Psychology*, 49(3-4), 526–537. doi:10.1007/s10464-012-9491-0

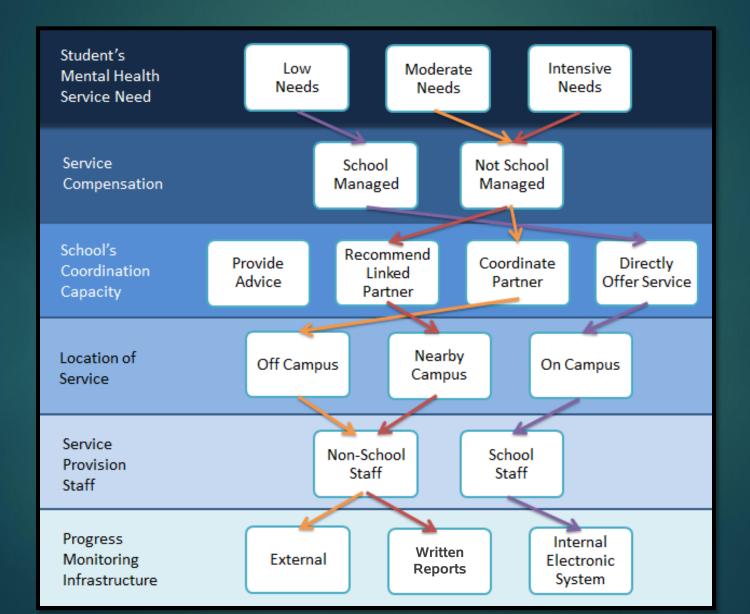
School-Family-Community Partnership



reparatory Activities	Output Tiers	Intervention Outputs	Short Term Outcomes	Goals
Train school staff on new programs at schools Establish systems guides at each school Partner community-based agency for school-site and home supports	Universal Intervention: Standard assessment process Links to Learning Lift-Line (Phone) Selective Intervention: School-family-community partnership: CTC intervention led by systems guide Targeted Intervention: School-based wraparound	Identify children in need early and often Assess children and family strengths and needs Engage and empower families Encourage partnership-led communication Establish shared GRIP Identify school-accessed service map for low, mod, high mental health needs Assess community strengths and needs Improve availability of community resources Connect families and resources & remove barriers to access Support development at home, in school and in community Family-driven care coordinated between systems of care Mitigate fragmentation for multi-system users	Children and families have increase access to mental health promotion services Children and families have increase access to mental health prevention services Children and families have increased access to mental health treatment services Children and families have increased access to mental health treatment services	Promote positive youth development Prevent mental distress and disorder Assist recovery from mental illness





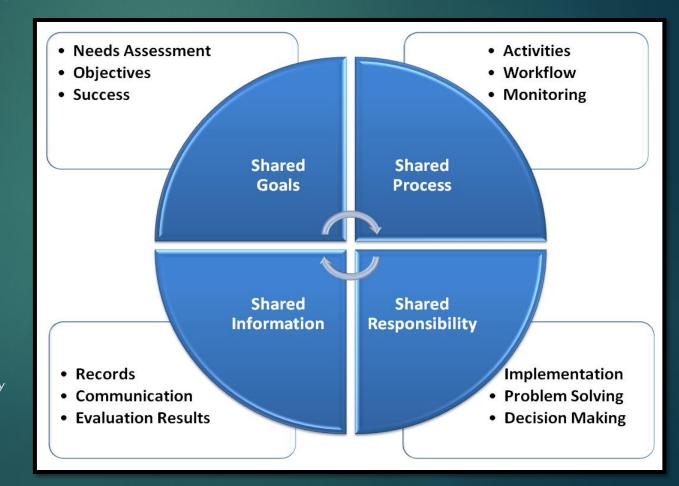


Shared GRIP

- G Goals
- **R** Responsibility
- I Information
- P Process







Cordell, K.D. 2014. School-Family-Community Partnerships for Youth Mental Health, Social Welfare Intervention, Family-based Interventions. School of Social Welfare, University of California, Berkeley. (Page 37).

System of Care



Education

Mental Health Plan

Substance Use Services

Child Welfare

Justice

Developmental Services / Regional Centers

Primary Care



Family



Thought Experiment

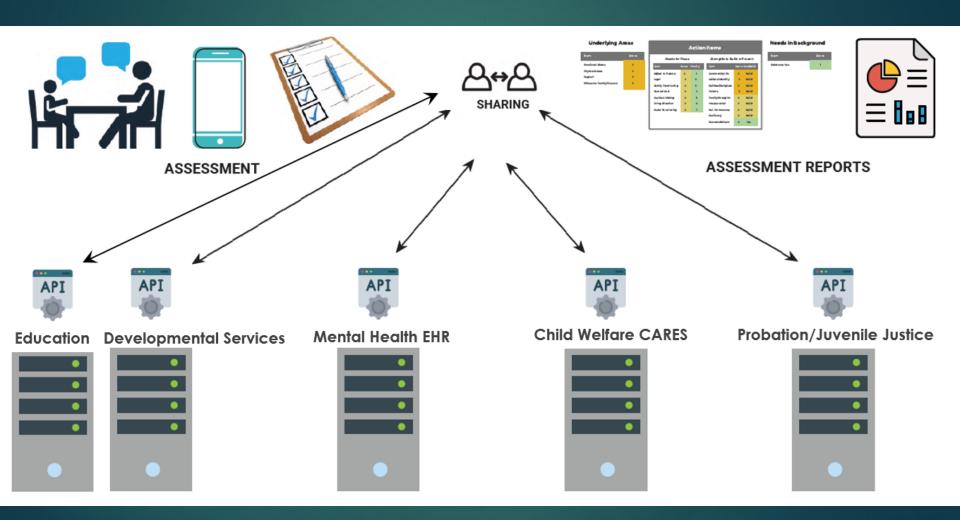
What would a perfect world with shared **GRIP** look like?

- How do we create shared goals?
- How do we effectively share responsibility?
- How do we share information?
- How can we create complimentary processes?



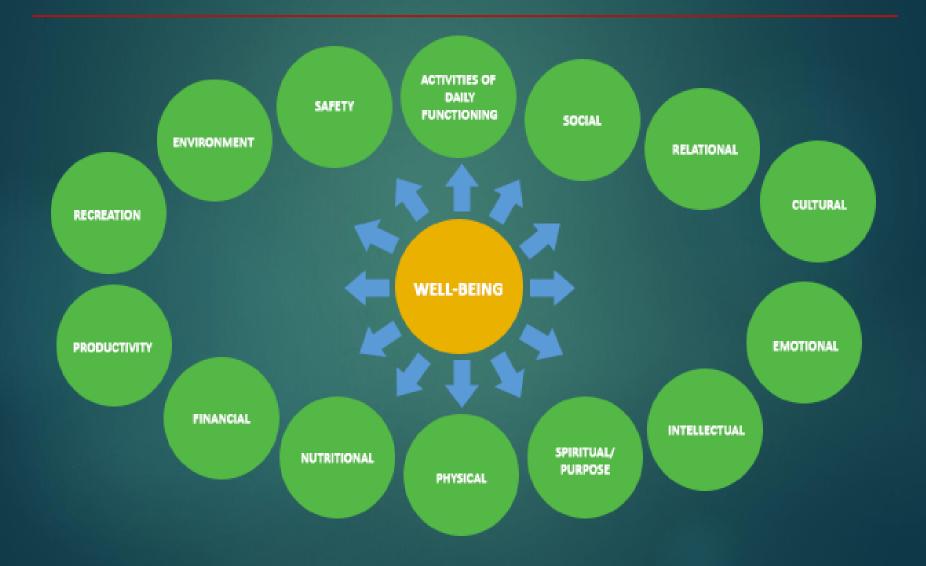
What if we Shared Assessments?







The Whole Child







- Assessment: "the evaluation or estimation of the nature, quality, or ability of someone or something"
- Used by Schools, Child Welfare, Juvenile Justice,
 Developmental Services, Mental Health, Behavioral Health,
 Primary Care
- Surveys, questionnaires and assessments are the only approved means for measuring behavioral health outcomes

England, M. J., Butler, A. S., & Gonzalez, M. L. (2015). Psychosocial Interventions for Mental and Substance Use Disorders. A Framework for Establishing Evidence-Based Standards. (Institute of Medicine, Ed.). Washington: The National Academies Press.





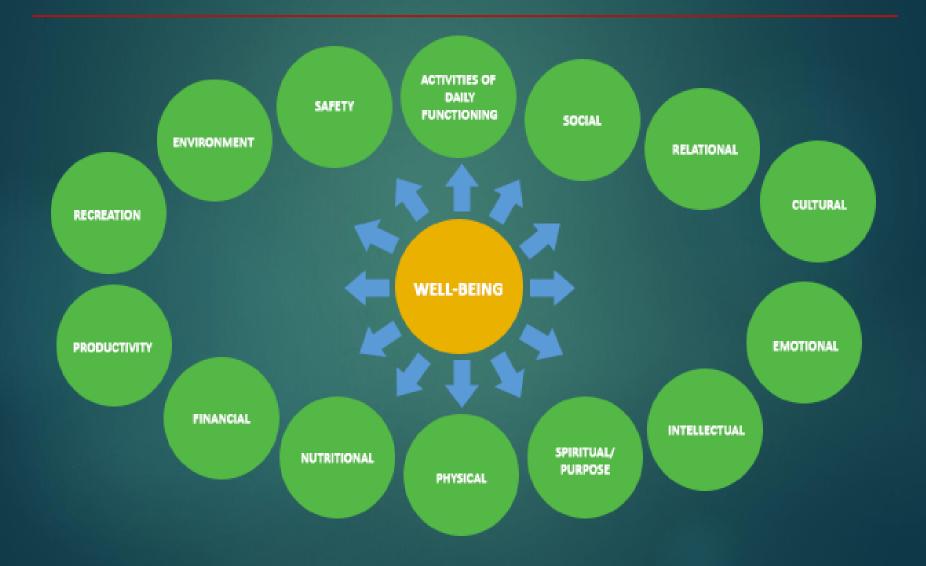
- Screening
- Referral
- Placement and Level of Care Determination
- Staffing Match (e.g., matching person to staff by language, needs, training/skill)
- Goal Setting
- Safety Planning
- Action Planning
- Service Selection
- Treatment Planning
- Progress Tracking
- Outcomes Management
- Program Completion Decisions
- Transition Planning
- Program Evaluation
 - Fidelity
 - Effectiveness

	INTEGRATED PRACTICE—CHILD AND A	OLESCENT NEE	
	Marco White	DOB: 1/1/2	005 Gender: Male Race/Ethnicity: White/Latin
Caregiver(s):		Form Status:	☐ Initial ☐ Reassessment ☐ Discharge
	Betty White	Case Name:	
		Case Number:	
Assessor:		Date of Assessi	ment (dd/mm/yyyy)
	Alternative appropriate to the second	•	
BEH	AVIORAL/EMOTIONAL NEEDS DOMAIN		CULTURAL FACTORS DOMAIN
0 = no evidence	1 = history or suspicion; monit		o evidence 1=history or suspicion; monitor
2 = interferes w action needs	ith functioning; 3 = disabling, dangerous; imm ed or intensive action needed		nterferes with functioning; 3-disabling, dangerous; immediate or intensive action needed
action meed	0 1 2	3	0 1 2 3
1. Psychosis (T	hought Disorder)		anguage
2. Impulsivity/		▼ 30. T	Fraditions and Rituals
3. Depression		31.0	Cultural Stress
. Anxiety		X _	
Oppositiona			STRENGTHS DOMAIN
Conduct			enterpiece strength 1 = Useful strength
Substance U	» X 🗂 🗖	2 = 16	dentified strength 3 = No evidence
Anger Contr			0 1 2 3
. Adjustment	to Trauma		Family Strengths
			nterpersonal
	LIFE FUNCTIONING DOMAIN		falents and Interests
0=no evidence	1=history or suspicion; monit	or	Spiritual/Religious
2=interferes wit action neede			Cultural Identity
The state of the s	0 1 2		Community Life
10. Family Fur	ctioning		Natural Supports
11. Living Situ			Resiliency
12. Social Fund			
	ental/Intellectual		
14. Decision N			Youth has no known caregiver. Skip Caregiver Resources
School Bel			and Needs Domain.
16. School Ach			The state of the s
17. School Att			CAREGIVER RESOURCES AND NEEDS
18. Medical/P			Caregiver Name:
19. Sexual Dev	reiopment 🔲 💢 📙	HI III	Relationship: o evidence; this could be a strength
20. Sleep	X	0=n	o evidence; this could be a strength
		1 = h	istory or suspicion; monitor, may be an opportunity to build sterferes with functioning; action needed
0=no evidence	RISK BEHAVIORS 1=history or suspicion: monit	3 = d	isabling, dangerous; immediate or intensive action needed
2=interferes wit		diate	0 1 2 3
action neede	d or intensive action needed	41a.	Supervision
	0 1 2		Involvement with Care
Suicide Ris			Knowledge
	lal Self-Injurious Behavior		Social Resources
	-Harm (Recklessness)		Residential Stability Medical/Physical
23. Other Self-			Mental Health
23. Other Self- 24. Danger to			
23. Other Self- 24. Danger to 25. Runaway			
23. Other Self- 24. Danger to 25. Runaway 26. Sexual Agg	ression	48a.	Substance Use
23. Other Self- 24. Danger to 25. Runaway	ression	48a. 49a.	





The Whole Child



Project Goals



- 1. Collect all types of assessments in the same way
- 2. Store assessment data in standardized electronically accessible formats
- 3. Convert responses into meaningful information to support a shared process (P)

- Provide continuous progress tracking over time (R)
- 2. Support any definition of success & provide real-time outcomes (G)
- 3. Share data across the system of care (I)

- Automate evaluation and continuous quality improvement (CQI)
- Ascertain what works for whom
- 3. Identify and remove institutionally biased decision processes





Not another Electronic Record System

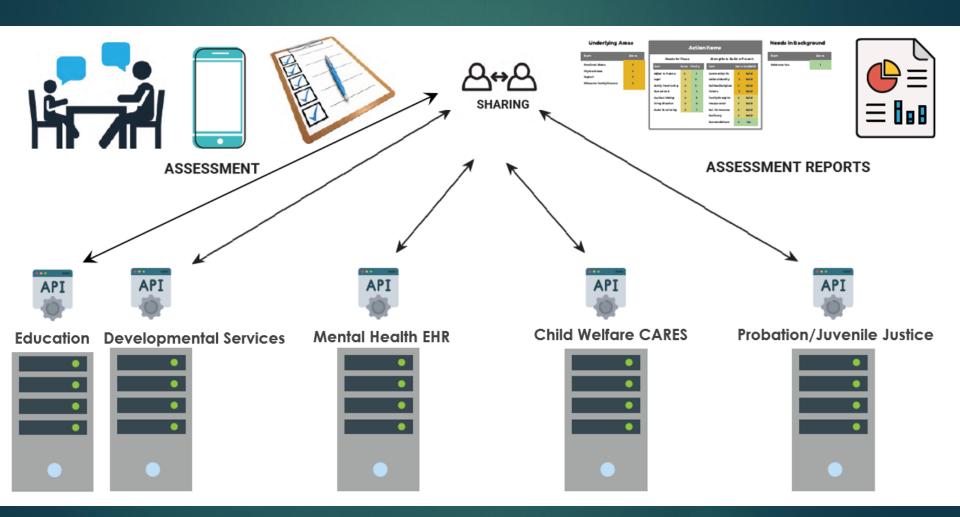
- Specifically designed for a single entity process (not a shared process)
- Oriented toward achieving system's goals (not a person's goals)
- Tend to be rigid toward rules, doesn't adapt or grow as processes mature

Not Survey Monkey (or the like)

- Support questions and answers
- One time (no change over time by individual)
- Responses can be scored for a sample, but that is it
 - Single question analysis
 - ▶ Little coordinated processing or visualization of information
 - Can't apply individual level screening rules or algorithms
- No infrastructure for sharing
- Not secure

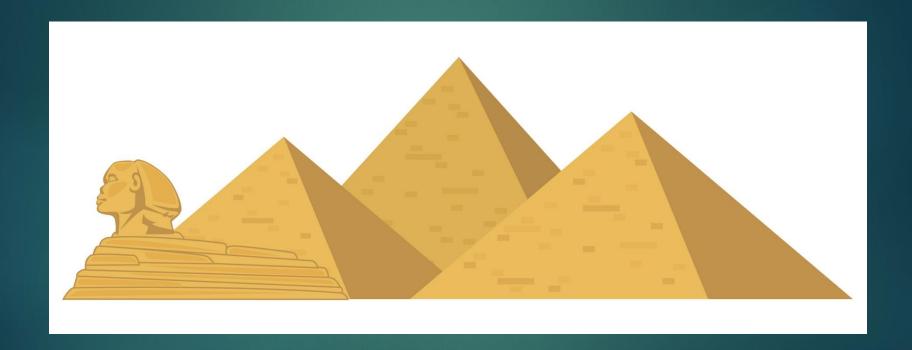
Shared GRIP Via Shared Assessments





Who will build it?







1. Collect all types of assessments in the same way

Standardized Question Handling System

Needs Can Be Reduced

2. Strengths Can Be Built

3. Traumatic Experiences Not Modifiable / Preventable

4. Past Behaviors Not Modifiable

5. Support Needs Can Be Reduced

Support Resources Can Be Built

7. Goals Achievable

3. Satisfaction Can Be Improved

P. Preferences Can Vary Over Time

10. Circumstances Can Vary Over Time

Needs Vs. Strengths



Gather all of the assessments you plan to use and categorize each question.

Read each question. Is worded in a way that it is asking about a need or is it worded to ask about a strength?

- In the past week, how many times did you feel so angry that you exploded?
 - Need: Anger Control
- In the past week, how many times when something went wrong were you able to calm yourself down so that you did not explode?
 - Strength: Frustration Management



2. Store assessment data in standardized electronically accessible formats

Standard Relational Data System Across Any Type of Assessment

- Easily add new assessment types in 30 minutes
- Share assessments in standardized format
- Easily connect to analytical engines for processing
- Completed assessments immediately generate visualizations which inform care in real time





3. Response Handling System

Systematize customizable thresholds for taking action on a response (or a combination of responses...)

Category	Item Name	Property	Start Date	End Date	Min Default	Min Threshold	Min Option	Max Default	Max Threshold	Max Option	Alt Default	Alt Option
TSS	Dissociation	Exposure	Jun 15, 2009	Mar 31, 2009	None	0		Underlying	2	~	Underlying	~
TSS	Affective a	Exposure	Jun 15, 2009	Mar 31, 2009	None	0		Underlying	2	~	Underlying	~
STR	Family	Strength	Jun 15, 2009	Mar 31, 2009	Use	1		Build	2	~	Build	~
STR	Interperson	Strength	Jun 15, 2009	Mar 31, 2009	Use	1		Build	2	~	Build	~
STR	Educationa	Strength	Jun 15, 2009	Mar 31, 2009	Use	1		None	0	~	Build	~
STR	Vocational	Strength	Jun 15, 2009	Mar 31, 2009	Use	1		None	0	~	Build	~
STR	Coping and	Strength	Jun 15, 2009	Mar 31, 2009	Use	1		Build	2	~	Build	~
STR	Optimism	Strength	Jun 15, 2009	Mar 31, 2009	Use	1		Build	2	~	Build	~
STR	Talent/Inter	Strength	Jun 15, 2009	Mar 31, 2009	Use	1		Build	2	~	Build	~
STR	Spiritual/Re	Strength	Jun 15, 2009	Mar 31, 2009	Use	1		Build	2	~	Build	~
STR	Community	Strength	Jun 15, 2009	Mar 31, 2009	Use	1		Build	2	~	Build	~
STR	Relationshi	Strength	Jun 15, 2009	Mar 31, 2009	Use	1		Build	2	~	Build	~
STR	Resilience	Strength	Jun 15, 2009	Mar 31, 2009	Use	1		Build	2	~	Build	~
LDF	Family	Need	Jun 15, 2009	Mar 31, 2009	None	0		Focus	2	~	Background	~
LDF	Living Situa	Need	Jun 15, 2009	Mar 31, 2009	None	0		Focus	2	~	Background	~
LDF	Social Func	Need	Jun 15, 2009	Mar 31, 2009	None	0		Focus	2	~	Background	~
LDF	Developme	Need	Jun 15, 2009	Mar 31, 2009	None	0		Focus	2	~	Background	~



4. Convert Responses into Meaningful Information

Story Maps

Underlying							
Item	Score						
TRM Emotional Abuse	3						
TRM Witness Family Violence	3						
TRM Physical Abuse	2						
TRM Sexual Abuse	3						

TARGETED ACTIONABLE OUTCOME								
Targeted N	leeds		Useful					
Item	Score	Priority	Item					
BEN Affect Dysregulation	2	1	STR Family					
BEN Depression	2	2	STR Optimism					
LFD Caregiver Relationship	2	3	STR Well-Being					
BEN Adjustment to Trauma	2	4	STR Community I					
LFD Living Situation	2	5	STR Interpersona					
LFD Recreational	2	6	STR Resiliency					
LFD Family	2	7	STR Resourcefulr					
			STR Educational					

Item	Score	Use/Build
STR Family	2	Build
STR Optimism	2	Build
STR Well-Being	1	Build
STR Community Life	1	Use
STR Interpersonal	1	Use
STR Resiliency	1	Use
STR Resourcefulneess	1	Use
STR Educational	0	Use
STR Spiritual Religious	0	Use

Background Needs							
Item	Score						
RSK Suicide Risk	1						
RSK Self-Injurious Behavior	1						
BEN Anxiety	1						
BEN Anger Control	1						
BEN Somatization	1						
LFD Social Functioning	1						
LFD Medical/Physical	1						
LFD Sleep	1						
CUL Cultural Stress	1						
LFD School Achievement	1						

Note: No person's story could ever be captured in a single or multiple assessments or a map.

Family Reports



Name: Delgado, William

ID: 467617

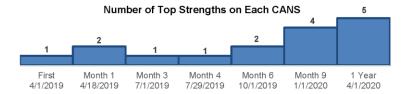
Child/Youth CANS Strengths Report

This report shows a young person's CANS strengths. Strengths are helpful qualities for a young person. The CANS has nine strengths described in the table below. As seen in the key below, top strengths are rated as a 0 or 1. Strengths building are rated as 2. Strengths not identified are rated as 3. Some strengths may not apply or may not be present at first. Strengths may change over time as circumstances change.

Date of Report: 4/13/2020

Report Period: 4/1/2019 – 4/1/2020

This section shows that William has 5 top strengths. In the graph below, each bar represents a date when a CANS assessment was completed to show Williams progress over time.



Latest Progress

Strength	Previous 1/1/20	Latest 4/1/20	Description
Family Strengths		V	The presence of a sense of family as well as love and communication among family members.
Interpersonal			The ability to make and maintain long-standing relationships.
Educational Setting			The level of support the child/youth receives from the school.
Talents/ Interests		V	The hobbies, skills, artistic interests, and talents that are positive ways to spend time, and give pleasure and meaning.
Spiritual Religious			Receiving comfort and support from religious or spiritual involvement.
Cultural Identity	•	•	A sense of belonging to a specific cultural group.
Community Life	*	•	This reflects a connection to people, places, or organized groups in the community.
Natural Supports	•	•	These are unpaid helpers (coaches, teachers) who provide support to the youth and family.
Resiliency	*	*	The ability to recognize personal strengths and use them in times of stress & in managing daily life. The ability to bounce back when bad things happen.

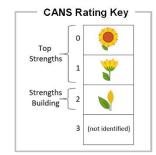
Top Strengths!



William has 5 top strengths on 4/1/2020. Celebrate the stars above!

Strengths Building



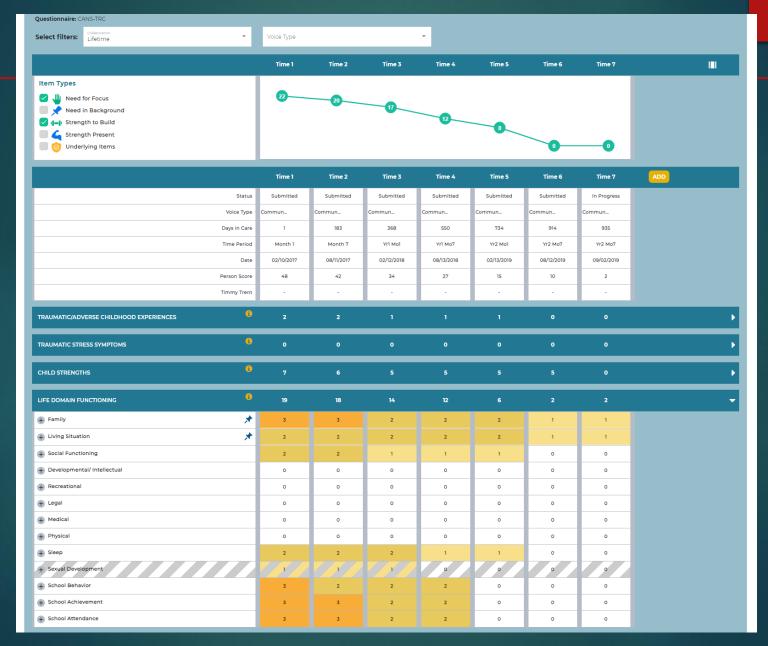


William's Notes

These notes are specific to William. They describe the progress that William has made in building strengths over time.

Monitoring Change Over Time

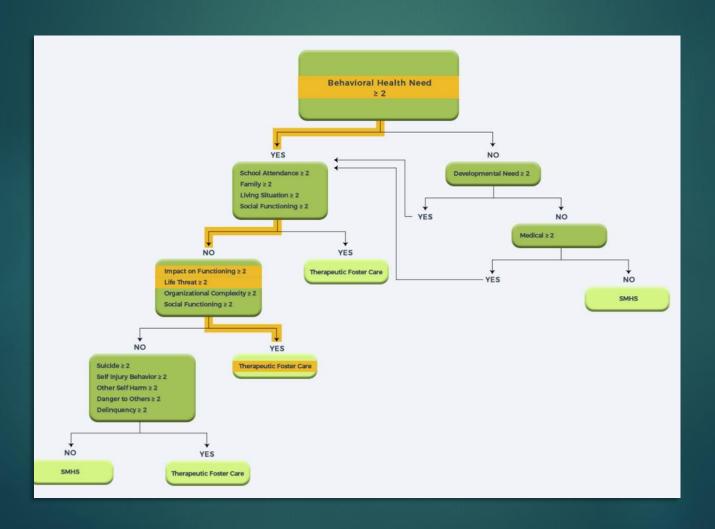






5. Level of Care/Placement

Automate Decision Algorithms or Assessment Score Threshold





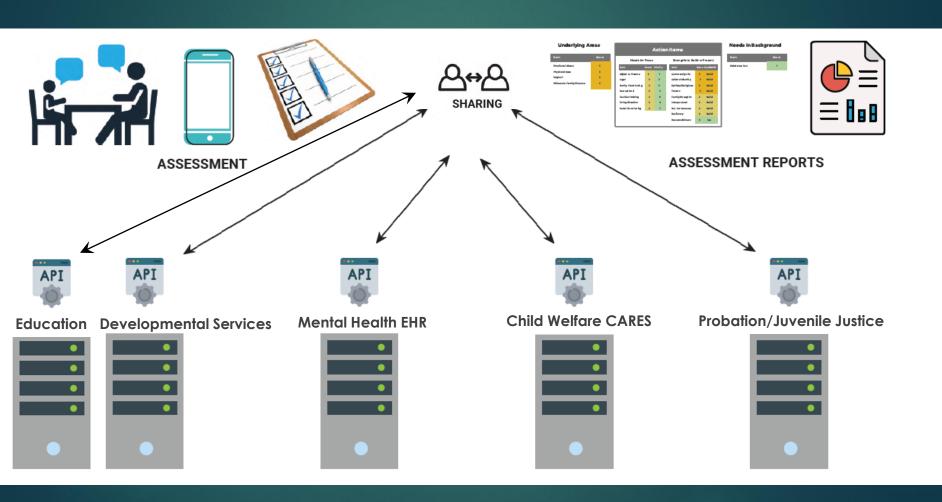
6. Automatic Alerts to Step Up or Step Down Care/Placement

Determination recommendation made in real-time as soon as assessment is complete.

Rule Name Step Down Care		Rule Level Level of Care		•
Question Depression	▼	Operator <=	Value 1	
		Join By AND		
Question Anxiety	▼	Operator <=	Value 1	
		Join By AND		
Question Sleep	▼	Operator <=	Value 1	
		Join By AND		
Question Adjustment to Trauma	▼	Operator <=	Value	

7. Assessment & Outcome Sharing





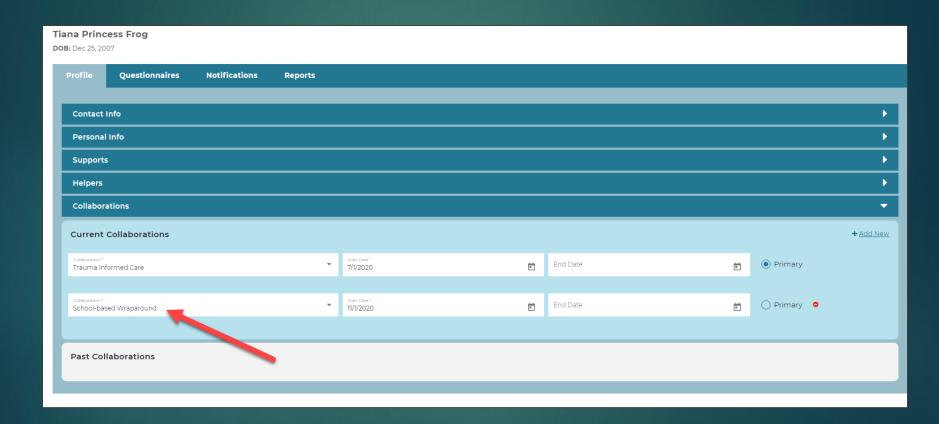


A. Set Up Collaborations for Sharing & Associate shared Assessment Types

Helpers	Agencies	Colla	borations	٩	Options	Role	es	Admin					
Name* School-based Wrag	paround			Abbreviatio SBW	n *					Agency* agency1			~
Start Date * 1/1/2010			Ė	End Da	te				Ė	Category* Educational Sup	port Services		Ť
Community Based	Programs		*	Code									
This collaboration i	is assigned to children/y ogram will be shared wi	outh in the sc	hool-based wrapar	round pro	gram for ABC Ed Provider and Juve	lucation. All	children/yout	h assessments					
provided in this pro	9,011 1111 00 3110100 111	an econity run	my services, meno			erme sustice							
									11				
Lead* Alex Ferro Paul		-	Start Date • 10/1/2020			⋵	End Date			Ė	Type* wraparound		Ť
Alex Perro Paul			10/1/2020								+ Add Type		
+ Add Lead											3.1		
Assigned Questionnaire	Ţ	Start Date			End Date								
CANS		1/1/2010		Ē	End Date		=						
Assigned Questionnaire		Start Date											
Wraparound	Fidelity Index	1/1/2010			End Date		Ė	•					
+ Add Questions	naire												

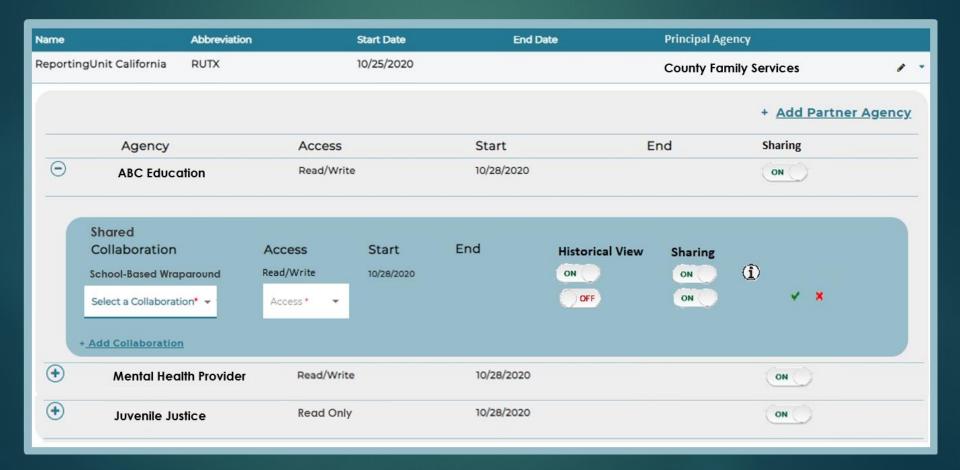


B. Enroll People in Collaboration





C. Assign Collaborations to Reporting Unit containing Partner Agencies





8. Assessment Shared in Real-Time

Partner agency staff can help complete assessments.

Questions marked as confidential are not shared.

CHILD BEHAVIORAL/EMOTIONAL NEEDS	6	13	15	20	20
+ Psychosis	4	0	0	3	3
Attention/ Concentration	4	2	2	2	2
+ Impulsivity	4	2	2	2	2
+ Depression	4	2	2	2	2
+ Anxiety	4	2	2	2	2
Oppositional Behavior	*	2	2	2	2
+ Conduct		0	0	0	0
 Substance Abuse 	4	0	1	2	2

Item Description: Substance Abuse

These symptoms include use of alcohol and illegal drugs, the misuse of prescription medications and the inhalation of any substance for recreational purposes. This rating is consistent with DSM-IV Substance-related Disorders.

Item Dating

- (-) = No answer (-)
- 0 (0) = This rating is for a child who has no substance use difficulties at the present time. If the person is in\nrecovery for greater than 1 year, they should be coded here, although this is unlikely for a child or adolescent. (0)
- 1 (1) = This rating is for a child with mild substance use problems that might occasionally present problems nfor the person (intoxication, loss of money, reduced school performance, parental concern). This rating would be used for someone early in recovery (less than 1 year) who is currently abstinent for at least n30 days. (1)
- 2 (2) = This rating is for a child with a moderate substance abuse problem that impairs his/her ability to\nfunction, but does not preclude functioning in an unstructured setting while participating in treatment. (2)
- 3 (3) = This rating is for a child with a severe substance dependence condition that consistently impairs\nhis/her ability to function. Substance abuse problems may present significant complications to the coordination of care for the individual. A substance-exposed infant who demonstrates symptoms of substance dependence would also be rated here. (3)

Mark as Confidential:

Yes No

Notes

Aunt Imagene is concerned Alice has substance use issues. Found the house liquor cabinet had missing bottles. Alice states she has not taken any thing from the cabinet. Aunt Imagen has reverted to locking the cabinet.

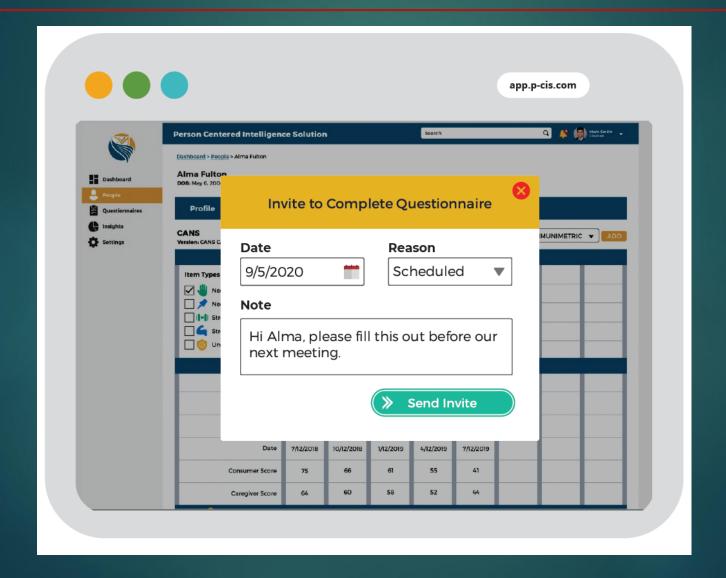
Created on 10/26/2020 by The Wizard Of Oz

At the hospital, blood results found high levels of hallucinogenic substances. No clear indication on what substance was just yet.

Created on 10/26/2020 by The Wizard Of Oz



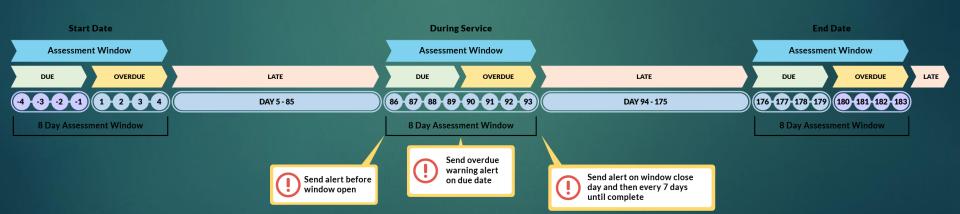
9. Capture Youth Voice





10. Support Data Quality

- Coordinate schedules of assessments between systems
- Reminders to avoid missing assessments
- Intelligence to learn when assessments don't look right





11. Promote Health Equity across Assessments & Outcomes

> J Anxiety Disord. 2015 Apr;31:38-42. doi: 10.1016/j.janxdis.2015.01.005. Epub 2015 Feb 7.

Cultural-based biases of the GAD-7

Holly A Parkerson ¹, Michel A Thibodeau ¹, Charles P Brandt ², Michael J Zvolensky ², Gordon J G Asmundson ³

Affiliations + expand

PMID: 25725310 DOI: 10.1016/j.janxdis.2015.01.005

Abstract

The GAD-7 is a popular measure of generalized anxiety disorder (GAD) symptoms that has been used across many cultural groups. Existing evidence demonstrates that the prevalence of GAD varies across self-identified ethnic/cultural groups, a phenomenon that some researchers attribute to cross-cultural measurement error rather than to actual differences in rates of GAD. Nonetheless, the effect of culture on factor structure and response patterns to the GAD-7 have not been examined and could result over- or under-estimated GAD-7 scores across different cultural groups. The current investigation assessed the factor structure of the GAD-7 in White/Caucasian, Hispanic, and Black/African American undergraduates and tested for cultural-based biases. A modified one-factor model exhibited good fit across subsamples. Results revealed that Black/African American participants with high GAD symptoms scored lower on the GAD-7 than other participants with similar GAD symptoms. Results highlight the need for culturally sensitive GAD screening tools.



12. Immediate Real-Time Insights

Because all assessment data is in standard format and we have typified questions – we can connect directly to analytical engines

- Automate evaluation and continuous quality improvement (CQI)
- Ascertain what works for whom
- Identify and remove institutionally biased decision processes
- As soon as an assessment is completed, its data points added to the system's repository for learning what works for whom



All data captured from any type of assessment funnels directly into intelligent dashboards with filters which drill into insights for specific populations. The dashboards continuously learn about an agency, program, supervisor and staff's service population, updating insights based on who is served and what works for whom.





Success-Focused Insights

- When and for whom do we achieve success?
- What care did we provide?
- Who are we serving well?
- Where can we improve?

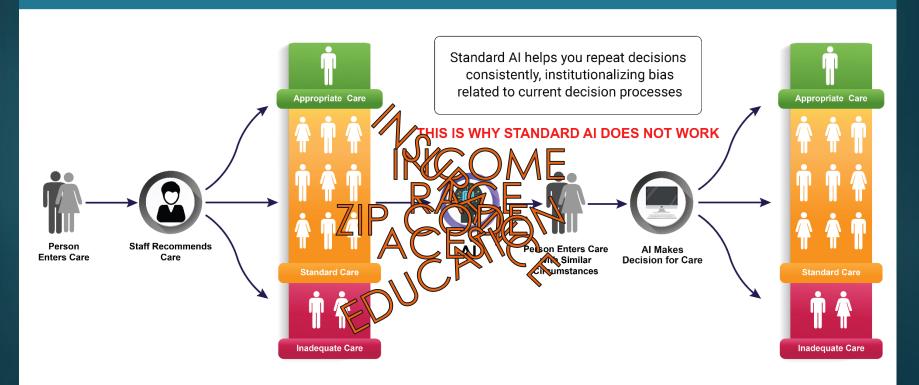
Don't predict who will fail.
Visualize who could succeed.





Standard automation institutionalizes care decisions

Artificial Intelligence (AI) Learns and Models How You Make Decisions

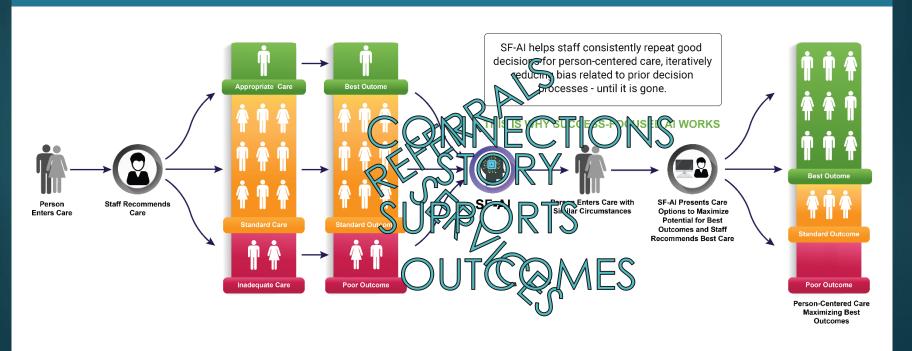






Success-Focused Intelligence improves care decisions

Success Focused Artificial Intelligence (SF-AI) Learns and Models How You Make Good Decisions



Patterns and Priorities of Success

Success

Patterns and Priorities of Success

Not Success

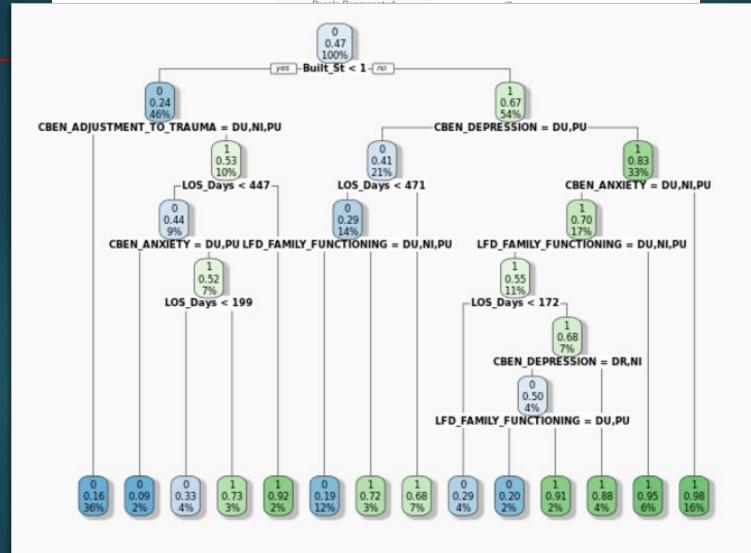
Patterns and Priorities of Success

Not Success

Patterns and Priorities of Success

Not Succ

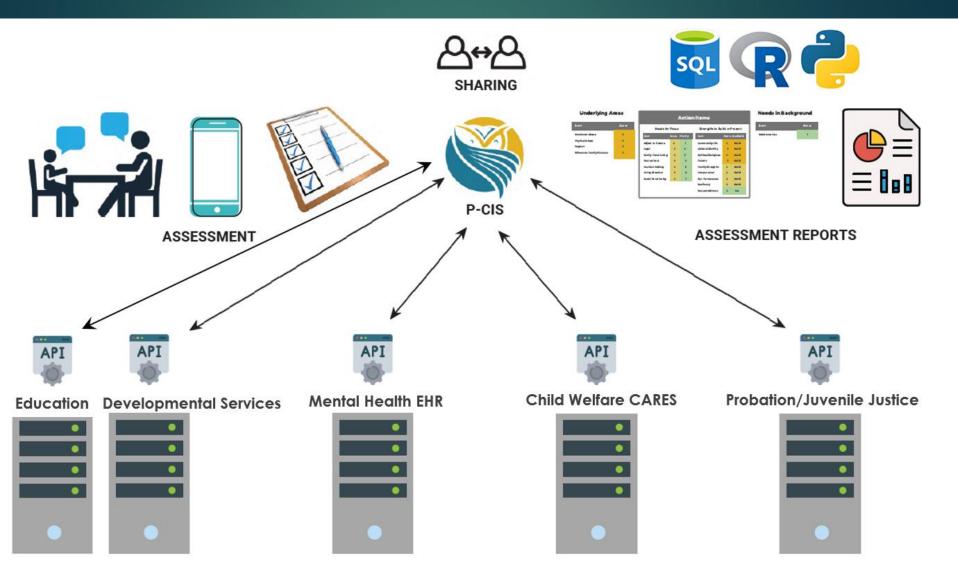




,						
RESULTS	ACCURACY					
Specificity	84.7%					
Sensitivity	83.9%					

We're Ready. Let's Begin Collaborating Across the System of Care <u>Today</u>.







Discussion/Conclusions

- Whole child care considers whole child well-being
- Person & process measures are captured through assessments
- Assessments capture needs, strengths, exposures, past behaviors, support needs, support resources, circumstances, preferences, opinions & goals
- Sharing select assessments across agencies can support shared GRIP
- ► Tracking changes in assessment responses over time → outcomes
- Each entity can create their own definition of success but share common goals
- When we begin to look across system levels, we will begin to learn our own system's strengths and areas for growth
- We can identify and remove institutionalized bias in decision processes
- Over time, as the system uses information intelligently, we will learn what works for whom in support of person-centered care
- Let's start today

Linking Multi-Disciplinary Assessment Information Toward Whole Child Service Coordination and Care

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