



# High Fidelity

Implementing Intervention Practices Effectively with Consumers

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## Our Purpose

- Describe Levels (layers) of fidelity throughout the KIPBS training system
- Discuss features of the KIPBS training system, highlighting the Mentor Observation system
- Share a real world application of intervention fidelity measurement and a multi-component intervention fidelity checklist.



## What is Fidelity?

### Definition of Fidelity

**The degree to which the program or practice is implemented 'as intended' by the program developers and/or researchers...**

***SO THAT* it is more likely that comparable outcomes will be more consistently achieved.**

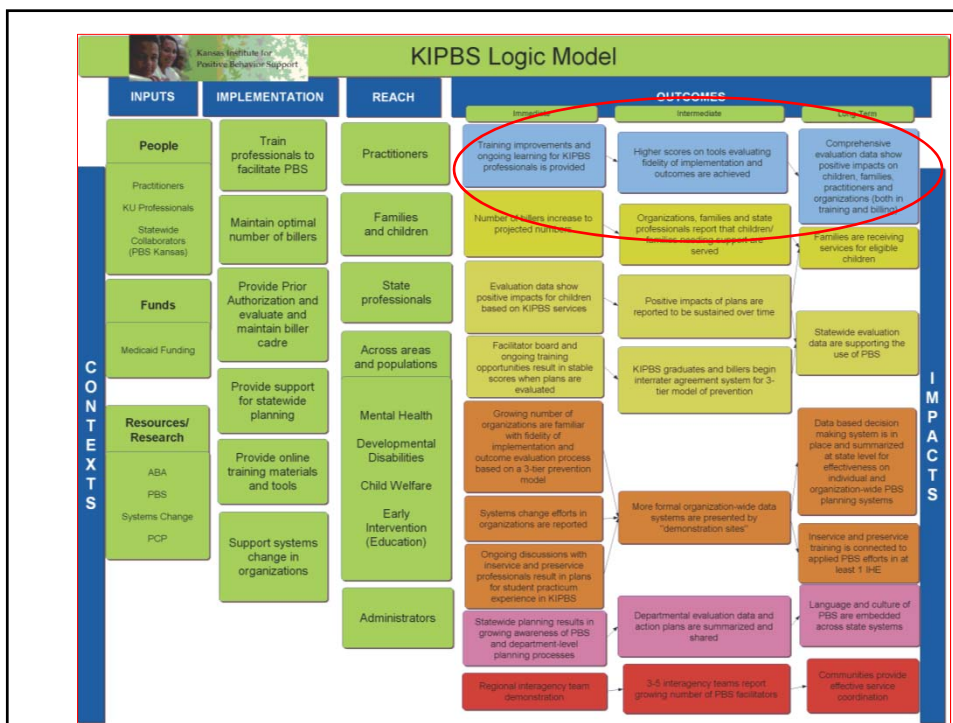
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# Why does it matter?

**Higher Fidelity is correlated with better outcomes across a wide range of programs and practices-**

- **Adult Mental Health**
- **Medicine**
- **Children’s Services**
- **Wraparound**
- **Education –SWPBS**
- **School-Based MH Prevention Programs-PATHS**

Fixsen, D. L., Naoom, S. F., Blase, K. A., Friedman, R. M. & Wallace, F. (2005). *Implementation Research: A Synthesis of the Literature*. Tampa, FL: University of South Florida, Louis de la Parte Florida Mental Health Institute, The National Implementation Research Network (FMHI Publication #231).



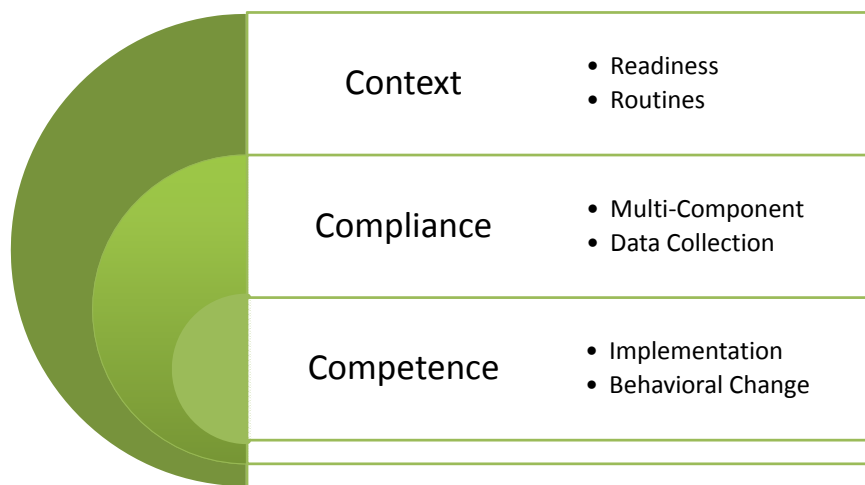
## Measuring Outcomes

Training improvements and ongoing learning for KIPBS professionals

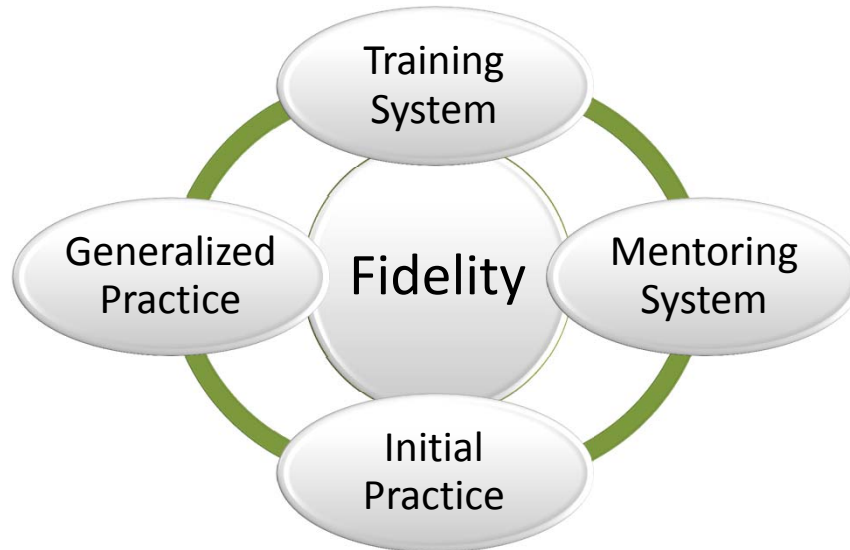
Higher scores on tools evaluating fidelity of implementation and outcomes

Comprehensive evaluation data show positive impact on children, families, practitioners and organizations (both in training & billing)

## Fidelity



## Measuring Fidelity Across Systems



### KIPBS Training System

- Initiated by state Medicaid Director in 2001
- Training & Certification process for Kansas professionals
- 10 On-line Research-Based Modules
- Field-Based Activities with Instructor and small class (3-6)
- 2 Case Studies with Mentoring
- [www.kipbs.org](http://www.kipbs.org) or [www.kipbsmodules.org](http://www.kipbsmodules.org)

## Fidelity Across Training System

Component	Activities	Evaluation
On-line Modules	On-line Submissions	<ul style="list-style-type: none"> <li>• ≥80% Performance on Reflections and Assessments</li> </ul>
On-site Classes	Field-Based Activities	<ul style="list-style-type: none"> <li>• Product Completion</li> <li>• Instructor Observation</li> </ul>
Mentoring	1 <sup>st</sup> Case Study	<ul style="list-style-type: none"> <li>• ≥ 80% on PC-PBS Checklist (68-item)</li> <li>• Satisfactory performance on all Mentor Observations (N=4)</li> </ul>
Coaching	2 <sup>nd</sup> Case Study	<ul style="list-style-type: none"> <li>• ≥ 80% score on portfolio</li> <li>• PC-PBS Checklist (45-item)</li> </ul>
“Real World” Coaching	First billed case	<ul style="list-style-type: none"> <li>• ≥ 80% score on portfolio</li> <li>• PC-PBS Checklist (45-item)</li> </ul>

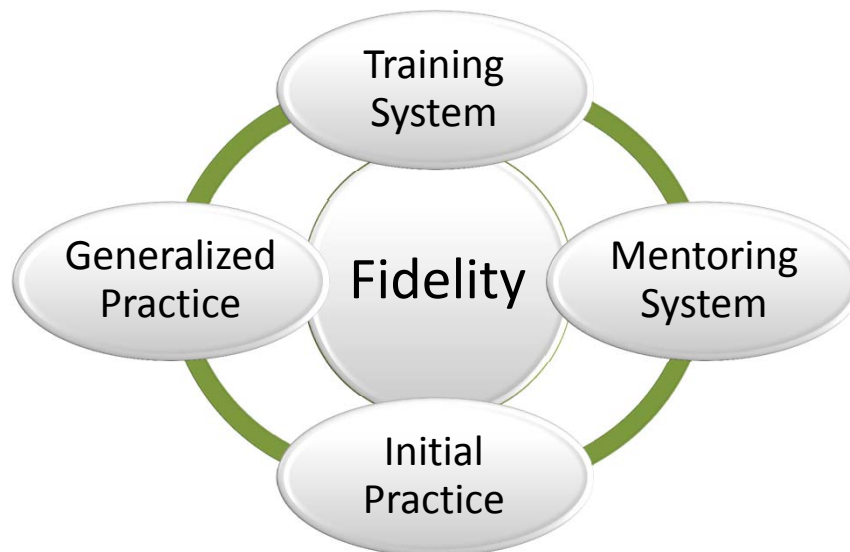
## 1<sup>st</sup> Case Study Evaluation

- Written plan scored with PC-PBS Checklist
- Coaching & feedback provided to reach criteria
- Criteria
  - 80% or above overall score on PC-PBS Checklist
  - 80-80-80 on Part 1, Part 2 & Parts 3-4
  - Meets all 5 Critical Features
- Mentor Observations required—must “pass” all seven observations; 4 on-site, 3 paperwork/process review
  - On site: person centered planning meeting facilitation, data collection and reliability; intervention training meeting; and fidelity of implementation.

## 2<sup>nd</sup> Case Study Evaluation

- Scored with 45-item PC-PBS Checklist
  - 80% or above
  - same other requirements as 1<sup>st</sup> case study
- Submitted & assessed as portfolio
- Mentoring available but not required if all mentor observations were passed with case study one.

## Measuring Fidelity Across Systems



## KIPBS Mentoring Process

- Involves onsite and offsite observations to assess fidelity
  - Person-Centered Planning
  - Data collection reliability
  - Intervention Training
  - Intervention Fidelity
- Feedback session after observation
- Four observations **MUST** be completed on first case study (more if needed)

## The Power of Coaching

Percent of Staff Demonstrating Mastery and Application  
(from Joyce & Showers, 2002)

Training Steps	Knowledge Mastery	Skill Mastery	On-the-Job Application
Theory	20-30%	10%	2-5%
Plus Demonstration	30-50%	10-30%	5-10%
Plus Practice & Feedback	50-70%	40-70%	10-15%
Plus Coaching	90%	90%	80-90%

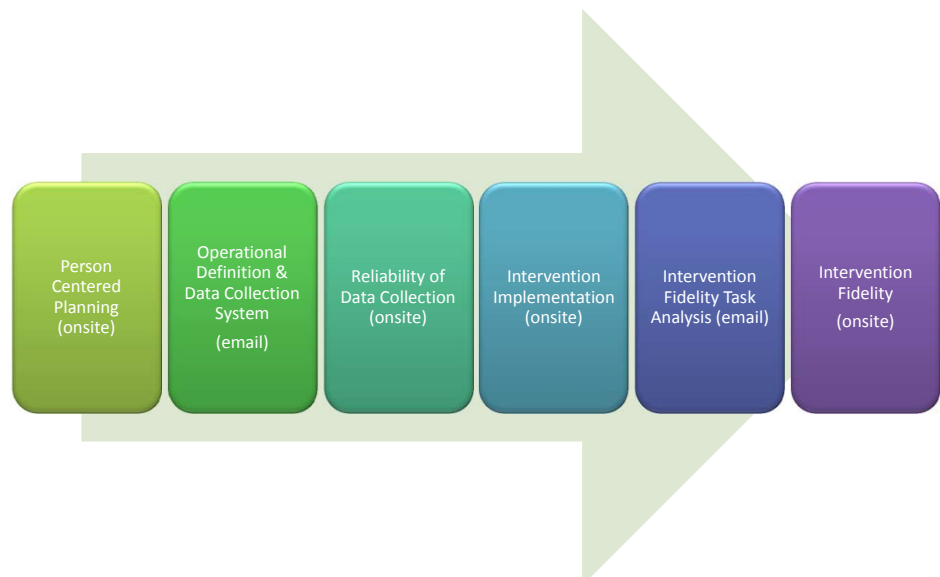
## Mentor Observation Checklist Example

Fidelity	Activity Performed?	Criteria met?
The student explains to the implementer what fidelity is (what he/she will be doing)	Y N N/A	Y N
The student is prepared: Has an Approved task analysis of each procedure to be implemented	Y N N/A	
The student observes the implementer <u>unobtrusively</u> in the natural environment and collects data on the implementer's performance of procedures using the Approved task analysis	Y N N/A	
The student does not provide assistance or feedback during the observation time (unless there is a crisis situation, and his/her assistance is needed)	Y N N/A	
If the opportunity for implementation of a particular positive procedure did not take place during the observation time (such as teaching a particular skill), the student asks the implementer to set up the occasion for that procedure to take place, so that he/she can observe it	Y N N/A	
After the observation, the student calculates the percentage of procedure fidelity for each procedure	Y N N/A	
The student gives constructive feedback to the implementer (praises appropriate implementation and effort, and discusses some things to work on)	Y N N/A	
If fidelity of a procedure is very low, the student brainstorms with the implementer as to what may be the problem, and either conducts additional training of that procedure (model/practice) or plans on revising the procedure	Y N N/A	

## Additional Mentoring Components

- Instructor/Mentor Meetings
  - 6 per year
  - Student status, module edits, training system, etc
- Google Gradebook
  - Gradebooks shared by all Instructors/Mentor and staff
  - Mentor observation fidelity checklist
- Continuing support
  - Varying degrees of support needed by students

## Order of Mentor Fidelity Observations



## Fidelity Across Mentoring System

Component	Activities	Evaluation
Person-centered Planning	Case Study PCP Meeting	<ul style="list-style-type: none"> <li>100% of items on PCP Mentor Observation vList</li> </ul>
Function-Based Assessment	Operational Definition & Data Collection Tool Data Reliability	<ul style="list-style-type: none"> <li>Instructor Approval</li> <li>100 % on Data Reliability Mentor Observation vList</li> </ul>
Intervention Training	Mentor Observation	<ul style="list-style-type: none"> <li>100% of items on Mentor Observation vList</li> </ul>
Intervention Fidelity	Mentor Observation	<ul style="list-style-type: none"> <li>100% of items on Mentor Observation vList</li> </ul>

## Emerging Proficiency/ Initial Practice

- 1<sup>st</sup> Prior Authorized/Billed Case Mandatory Checklist requirements (general + special/provisional, if restrictions are placed on new Facilitator) + case scored for Impact
- Mentoring new Facilitators during their first PA/billed plans (why, when, how)
- Portfolio assessment evaluation process
- Nat'l Advisory Board recommendations for measuring intervention fidelity



## **Mandatory 1<sup>st</sup> PA Checklist**

© 2008 Freeman, et al.

## First Billed Case

- Final opportunity for coaching and mentorship
- Facilitators submit portfolio in “chunks” for review and to identify the need for further mentoring
- Additional mentoring observations can be requested by KIPBS

23

### Excerpts from Mandatory 1<sup>st</sup> PA Checklist

Consumer's Name:		
Date Completed	KIPBS Sign off	Activity
		<b>Contact KIPBS Evaluation Coordinator to discuss timeline for evaluation</b>
		<b>Schedule an initial meeting with caretakers</b> <ul style="list-style-type: none"> <li>○ Introduce yourself, state why you are there, and describe the process</li> <li>○ Obtain informed consent to videotape</li> <li>○ Find out what their major concerns are with respect to the individual</li> <li>○ Obtain previous plans, if there were any</li> </ul> <p>* If the individual spends a significant amount of the time in a different setting (e.g. school, work), schedule a meeting with the people in that setting and obtain the same information</p>
		<b>Schedule and conduct meetings and observations</b> Conduct enough meetings and observations for you to assess and get to know the individual, his/her environment, and his/her team

**Schedule and conduct PCP interviews with caretakers and team members**

Conduct the necessary interviews to obtain information for the PCP meeting. Information gathered should include the individual's history (medical and behavioral), strengths, preferred lifestyle, and possible challenges

**Schedule the PCP meeting**

**Contact the KIPBS Evaluation Coordinator to schedule observation and evaluation of PCP meeting [Onsite Evaluation Observation or alternative]**

**Contact the KIPBS staff person/Instructor-Mentor who will be doing your onsite evaluation observation, to discuss arrangements & details**

Prepare for PCP meeting (*selected steps excerpted*)

- Some goals will involve environmental-type of changes, while other goals will involve behavioral-type of changes (to avoid the negative focus, you may approach the issue by discussing appropriate behaviors to increase or skills to teach).
- Since environmental-type of changes will likely impact the behavioral issues, it is a wise idea not to make these changes until functional assessment activities and baseline measures on the target behaviors are gathered. However, in the meantime, the team can work towards these goals by gathering information and resources so that once baseline measures are completed, preferred lifestyle interventions can be started.

Conduct PCP meeting [[Onsite Evaluation Observation or pre-arranged alternative](#)]. At the end of the meeting (or at the next meeting where all team members are present) [distribute/conduct the PCP Satisfaction Survey](#)

Schedule and conduct Functional Assessment Interviews with caretakers and team members. Obtain information about behavioral issues.

Establish what the major behavioral issues may be.

Examine the Functional Assessment Interviews, as well as any other information you may have obtained from discussions, previous plans, records reviews, and observations, to establish what the major behavioral issues may be and what you should focus on and observe for in your assessment

**Prepare any additional Miscellaneous materials (section 6), as needed/ as appropriate, for your Portfolio.**

**Contact KIPBS Evaluation Coordinator to arrange timeline for submitting your first PA case portfolio and evaluating it, using the shortened version of the PC-PBS Checklist.** Portfolio must score 80% or higher on shortened (45 item) checklist with all “yes” responses to the five Critical Features in order for KIPBS Facilitator to be approved for additional PA cases.

**From this point on, you should:**

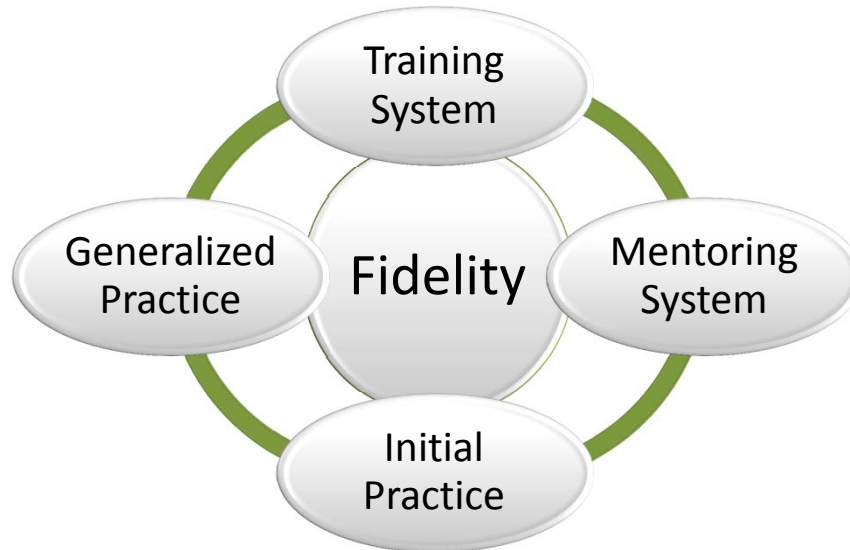
- **Obtain data collected from caretakers on a regular basis, and closely monitor behaviors**
- **Conduct fidelity and reliability observations periodically**
- **Hold regular follow-up meetings to go over data and discuss the status of behaviors and goals with caretakers**
  - oIf an intervention does not seem to have the intended effect and enough time has been allowed for change, discuss modifying or changing the intervention strategy
  - oIf PCP goals are not being met, problem-solve the issues
  - oAs PCP goals are met, update the plan accordingly
  - oAs behavioral goals are met, modify the procedures gradually to get closer and closer to the “regular” environment (i.e. gradually fade prompts, gradually thin reinforcement)
  - oPlan for sustainability and major changes
  - o**Distribute/conduct the Quality of Life survey** at regular intervals

## Considerations for Future Fidelity Measures

### Fidelity Measurement – Next Wave

- Good measures of contextual fit?
- Ensuring that family/teacher training “sticks”?
- How to train Behavior Consultant to adapt/adjust interventions based on fidelity data?
- What are critical decision points for consultants?  
Is it always about only examining your data?!

## Measuring Fidelity Across Systems



### Emerging Proficiency – Initial Practice

- Prior Authorization for 1<sup>st</sup> Billed Plans
- Mandatory Checklist requirements
- Mentoring available for new PBS Facilitators
- Portfolio assessment evaluation process



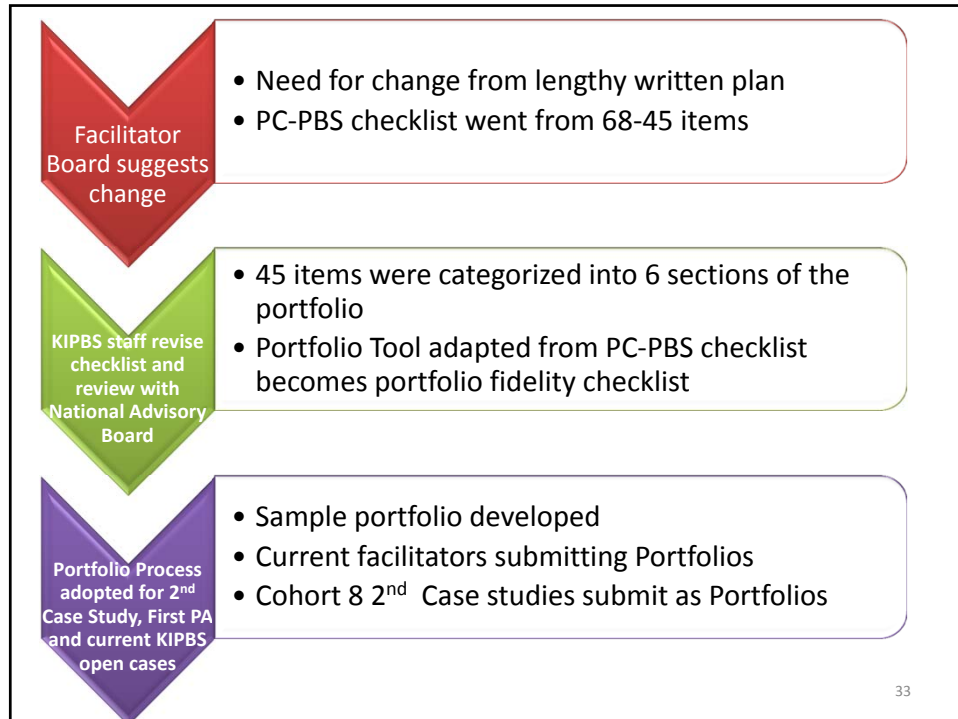
## Portfolio & Assessment Tool



Contents, Guidelines & Rating

### The Evolution of a Portfolio

- Need for change from written plan to more functional format
- Checklist went from 68 items to 45 items
- 45 items were organized into 6 categories
- 6 Categories became “sections” of Portfolio
- Portfolio Assessment Tool adapted from PC-PBS checklist that would serve as portfolio fidelity checklist
- Draft example of hard copy portfolio created from written plan
- Portfolio Committee- Amanda Little, Peter Griggs & Kelcey Schmitz



## Portfolio vs. Written Plan

- Portfolio is an organized file of the documentation gathered/created throughout the PBS process
- Pieces of the portfolio can be easily shared as needed without the entire written plan
- Should be less time consuming than written plan.
- Can be organized in a three ring binder, accordion folder or even on a CD or flash drive
- Facilitators could have an option of either completing the portfolio or written plan since both are evaluated with the same checklist items

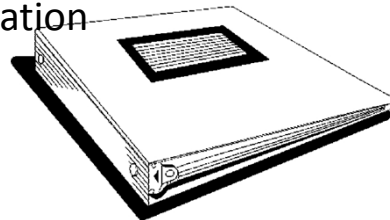
## Portfolio Assessment Tool is Multi-Functional

1. Section Contents
2. Item locator
3. Self Assessment Checklist
4. Plan Evaluator Checklist
5. Self Assessment Score Sheet
6. Plan Evaluator Score sheet
7. Reliability

35

## Portfolio Sections

- Section 1: Intake/Referral
- Section 2: Assessment
- Section 3: Person Centered Planning
- Section 4: Interventions/Supports
- Section 5: Data (raw/graphed)
- Section 6: PBS Plan Evaluation



36

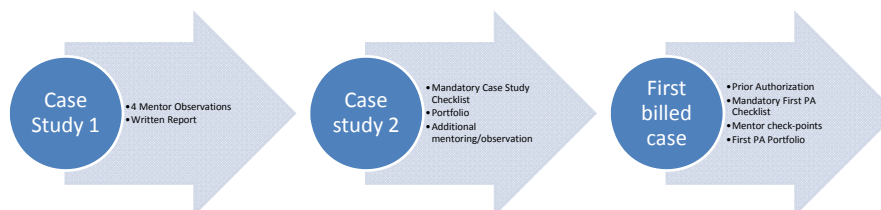
## P.A.T. Score Sheet

- Self Assessment- first Submission
  - Self Assessment Re-submission after feedback *(if needed)*
- Plan Rater: first Submission
  - Plan Rater: Re-submission after feedback *(if needed)*
- Reliability- first Submission
  - Reliability Re-Submission *(if needed)*

\*Sections scored include Critical Features, Section 1, Section 2, Section 3, Section 4, Section 5 and Section 6

37

## Mentoring Timeline

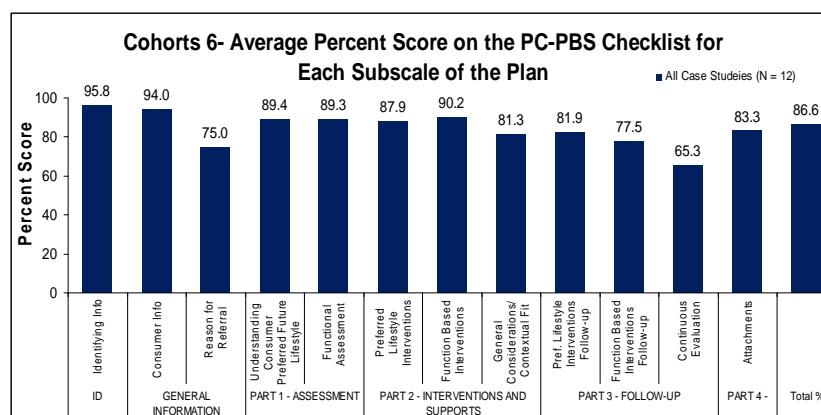


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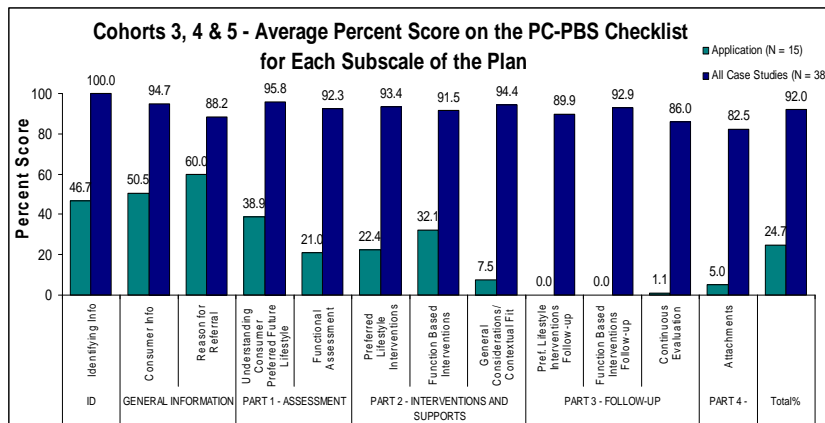
## Fidelity Across Initial Practice

Component	Activities	Evaluation
Prior Authorization	1 <sup>st</sup> Billed Plan	<ul style="list-style-type: none"> <li>Scored w/ PC-PBS Checklist (45 item)</li> <li>Scored for Impact</li> </ul>
New Facilitator Support	Coaching/Mentoring	<ul style="list-style-type: none"> <li>Mandatory 1<sup>st</sup> PA/Billed Plan Checklist</li> </ul>
Systems Change	Agency/Admin support	<ul style="list-style-type: none"> <li>Agency-level evaluation and billing system</li> </ul>

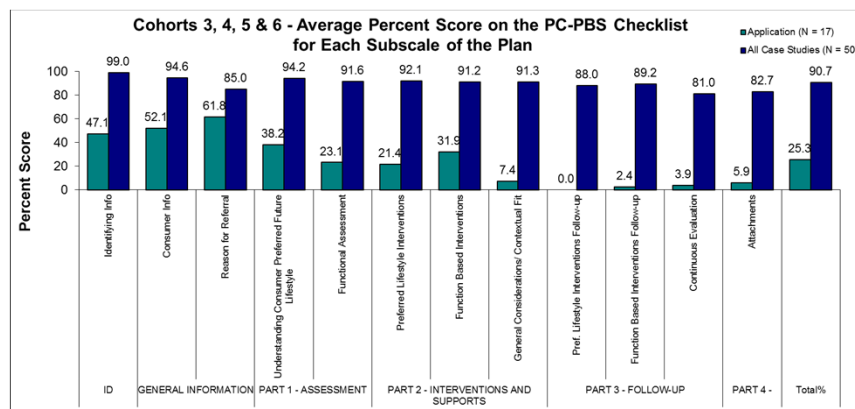
## Recent Case Studies: Training Cohort 6 Fidelity of Written Plans

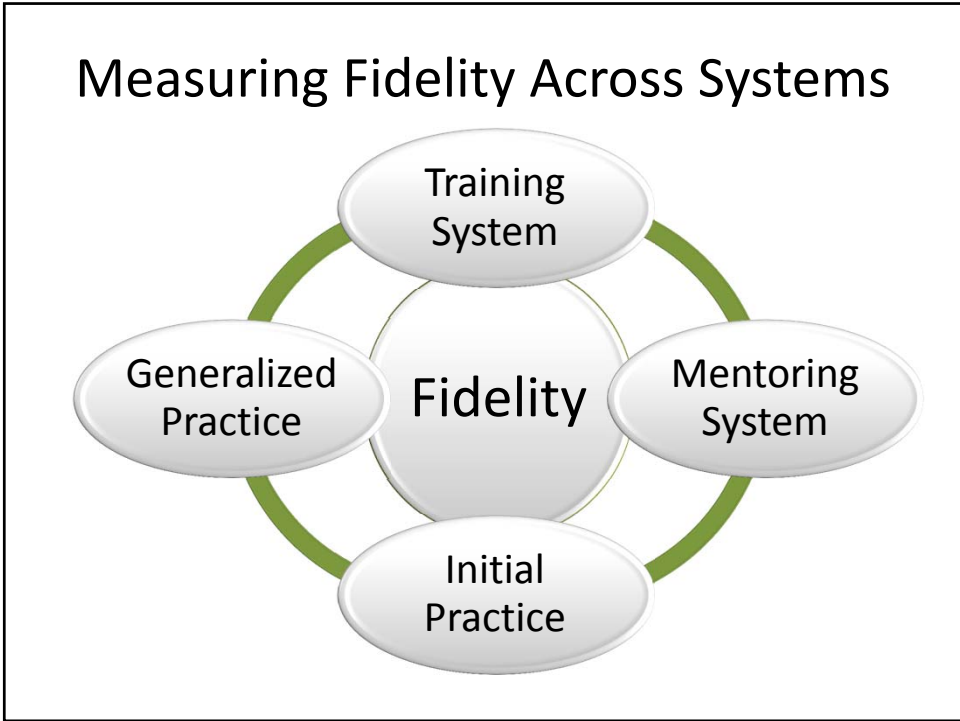


## Previous Case Studies: Cohorts 3-5 Fidelity of Written Plans



## Four Years of Case Studies: Fidelity of Written PC-PBS Plans

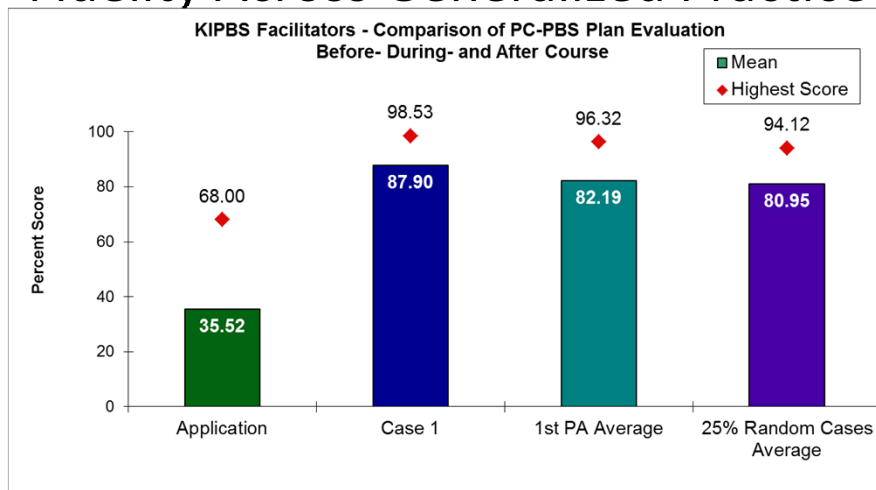




## Fidelity Across Generalized Practice

Component	Activities	Evaluation
Facilitator Board	On-going professional development and evaluation team	<ul style="list-style-type: none"> <li>Attendance at meetings</li> <li>Reliable raters</li> </ul>
Sustained Proficiency	Evaluating Billed Plans	<ul style="list-style-type: none"> <li>25% Random Sample (annual evaluation)</li> </ul>
Systems Change	PBS-Kansas Involvement	<ul style="list-style-type: none"> <li>100% of items on Mentor Observation vList</li> </ul>

## Fidelity Across Generalized Practice



## Fidelity in Practice

- Student Facilitators develop fidelity checklists and submit them to instructors/mentors for approval, prior to use in case study
- Students report fidelity of intervention data for case study plans --3 times/opportunities per plan
- Intervention fidelity is evaluated by KIPBS Mentor Observations using prior-approved Fidelity Checklist

## Annie's Story

- Annie is a three-year-old diagnosed with autism spectrum disorder.
- She loves playing on the computer, listening to music, and swimming.
- She has many strengths, identified at her PCP meeting:
  - Adorable
  - Smart
  - Good memory
  - Happy
  - Strong-willed
  - Energetic

## Annie's Story

- Annie's family has difficulty taking her into the community due to her exhibiting challenging behaviors, being "impatient", running away or grabbing items that aren't hers. She has difficulty waiting in line.
- Further interviews and initial observations conducted

## What are Routines?

- Routines are daily, habitual activities that occur
- Routines allow teaching to occur within familiar activities and following simple and multi-step instructions
- Patterns and routines are part of bigger routines
- When we are out of our routines we may become irritable and crave our normal routines again
- Routines may be problematic if we can not vary from them—e.g. some children with autism
- Bedtime routines, for example those involving a bath, book, and “getting tucked in”, provide children with security
- Help children be more independent and manage their behavior

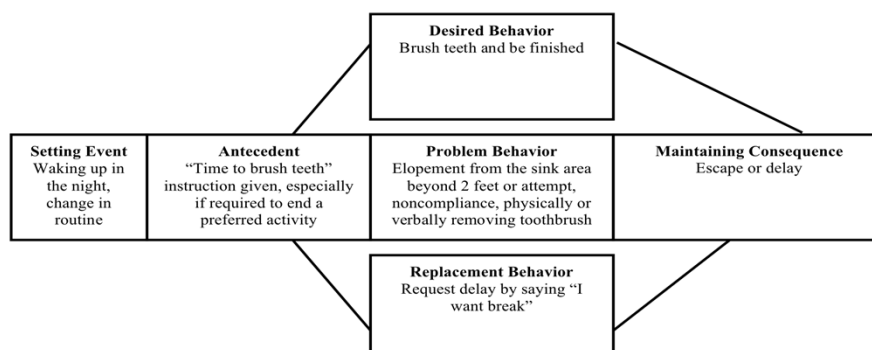
## Routines

Routine #	Annie's Routine	Start	End	Setting	Challenging behavior
1	Brushing Teeth	“Time to brush teeth.”	Put toothbrush away/termination by parent, “all done”.	Community Pre-school	Elopement, Noncompliance
2	Transition to car	“Let's go get the girls”	In car seat	Home	Noncompliance, delaying
3	Grocery Shopping	Entering the grocery store	Out the from store door	Community	Elopement, Noncompliance
4	Leaving Toys “R’ Us	“time to go”	Out the front store door	Community	Elopement, noncompliance, crying

## Brushing Teeth Routine

- Baseline—brushing teeth routine (5 minutes)
- Start: Instruction to brush teeth (e.g., “Time to brush teeth”)
- End: routine ends after spitting and/or putting toothbrush away or mom saying “all done”
- Challenging behavior definitions:
  - Elopement—leaving the sink area beyond 2 feet or attempt stopped by mom or not being in the bathroom unless it is a choice
  - noncompliance—not following an instruction within 2 seconds of it being given, taking toothbrush out of mouth for at least 2 seconds which may include saying “no” or turning her head
  - Delaying—not engaging in the behavior as instructed or implied (e.g., steps of the brushing teeth routine) for at least 2 seconds. This includes engaging in or asking for other items or activities, engaging in conversation, etc.)

## Annie’s Competing Behavior Diagram





## Annie's Intervention Planning Toothbrushing Routine


Setting Event Interventions	Antecedent Interventions	Teaching Interventions	Consequence Interventions
<p>Have a consistent bedtime and wake time.</p> <p>Have a consistent bedtime routine each day, which includes brushing teeth earlier in the evening (i.e., not right before bed, but before movie time).</p>	<p>Remove stool from bathroom so it is not in front of the sink.</p> <p>Have the toothbrush in the bathroom before giving the instruction.</p> <p>Allow her to use the toothbrush she uses.</p> <p>Engage in brushing teeth in between activities she is engaged in.</p> <p>Read the social script to Annie and discuss the expectations.</p> <p>Set the visual timer.</p> <p>Close the bathroom door once she enters.</p> <p>Point to the steps on the schedule when she is to complete them.</p> <p>Count to 10 while brushing her teeth.</p>	<p>Prompt Annie to say, "I want break" as soon as she removes the toothbrush from her mouth.</p> <p>Talk with Annie about brushing teeth at other times and the benefits.</p>	<p>If Annie says, "I want break" she is given 5 seconds without having to brush her teeth.</p> <p>Praise Annie for brushing her teeth.</p> <p>If she engages in challenging behavior, do not let her escape totally and redirect her back to brushing her teeth.</p> <p>Annie gets a hug from mom when she is done.</p> <p>Annie gets to pick a prize out of the treasure bag (i.e., small toy) if she finishes brushing her teeth and there is still red on the visual timer (i.e., time has not expired).</p>


Adapted from O'Neill, R. E., Horner, R. H., Albin, R. W., Sprague, J. R., Storey, K., & Newton, J. S. (1997). *Functional assessment and program development for problem behavior*.

### Brushing Your Teeth



It is important to  our teeth. First, we



put  on our . Then, we

. Mom will count from 1 to 10.

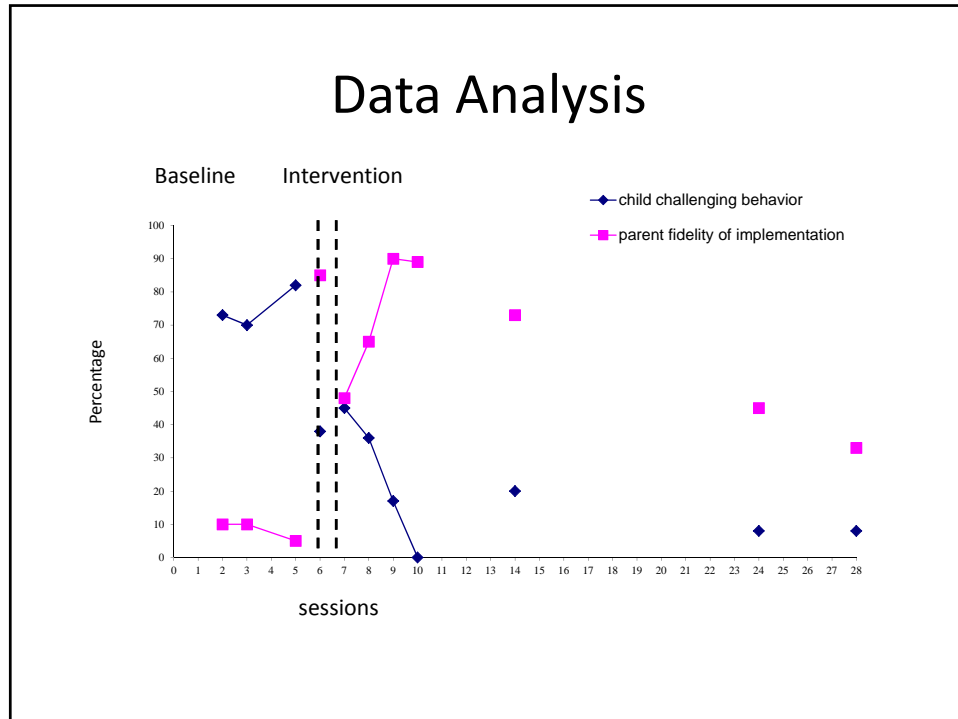
After she says 10, I am ! If I want

to stop, I can say "I want break". If I stay

at the  and get  before the

 goes off, I can go to the  for a

prize and get a hug from mom!



## Next wave of fidelity measures...

- Do we have effective ways to assess contextual fit?
- How to ensure family/teacher training “sticks”?
- How do we train facilitators to adapt/adjust interventions or provide additional training based on fidelity data?
- What are the critical decision points for facilitators?

## For more information

- [www.kipbs.org](http://www.kipbs.org)
- [www.kipbsmodules.org](http://www.kipbsmodules.org)

## References

- Fixsen, D.L., Naoom, S.F., Blasé, K.A., Friedman, R.M., and Wallace, F. (2005). *Implementation research: A synthesis of the literature*. Retrieved from the National Implementation Research Network website: [http://www.fpg.unc.edu/~nirn/resources/publications/Monograph/pdf/Monograph\\_full.pdf](http://www.fpg.unc.edu/~nirn/resources/publications/Monograph/pdf/Monograph_full.pdf)
- O'Neill, R. E., Horner, R. H., Albin, R. W., Sprague, J. R., Storey, K., & Newton, J. S. (1997). *Functional assessment and program development for problem behavior: A practical handbook (2nd ed.)*. Pacific Grove, CA: Brooks/Cole.