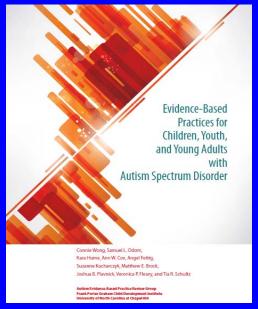


# What are Evidence-Based Practices (EBPs) for ASD?





# **Learning Outcomes**

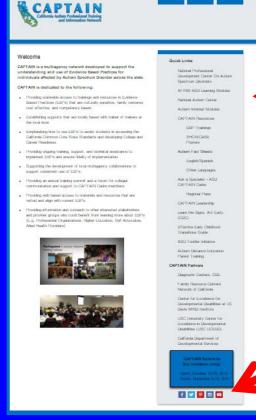
- Participant will be able to:
  - Name the two resources for Evidence-based Practices for ASD
  - Understand that CAPTAIN is the statewide implementation initiative for ASD
  - Know that the CAPTAIN website and its social media are the statewide "clearinghouse" for ASD resources
  - Articulate why EBPs need to implemented
  - Understand why fidelity of EBP implementation is critical
  - Name reliable ASD online EBP learning mod
  - Know that there is an online learning course about ASD available at no cost

# PRE-ASSESSMENT





CAPTAIN
Website
Hosted by
DCN!



Links to

ASD

Resources

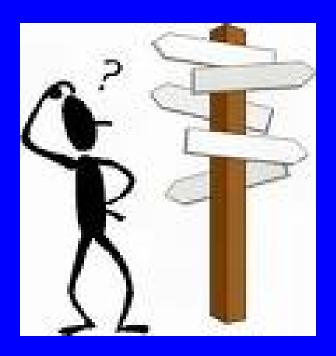
CAPTAIN
Social Media
Links

www.captain.ca.gov

autismebp@gmail.com

# How many results do you think you would get if you did a Google search for:

# "AUTISM TREATMENT"?







### AUTISM TREATMENT





All

News

Images

Books

Videos

More

Settings

Tools

About 49,700,000 results (0.54 seconds)

How Is Autism Treated? | What is Autism? | Autism Speaks

https://www.autismspeaks.org/what-autism/treatment \*

They are the Lovaas Model based on Applied Behavior Analysis (ABA) and the Early Start Denver Model.

# Results 49,700,000 for "AUTISM TREATMENT"!!!!! (November 27, 2016)

https://www.autismspeaks.org/family-services/tool-kits/100.../treatments-therapies 
Since the early 1960's, applied behavior analysis, or ABA, has been used by hundreds of therapists to teach communication, play, social, academic, self-care, work and community living skills, and to reduce problem behaviors in learners with autism.

Interventions and Treatment Options | Families and ... - Autism Speaks https://www.autismspeaks.org/family-services/tool...autism.../interventions-and-t \* "A treatment method or an educational method that will work for one child may .... ABA · Applied

Behavior Analysis · Cognitive Behavior Therapy · Interventions ...

## 2 Important ASD EBP Resources

National Professional Development Center (NPDC)

**National Autism Center (NAC)** 

- 1. 27 Evidence Based Practices Briefs
- 2. EBPs for Young Children

Released March 2014

1. National Standards Project Report-Phase NSP2

Released April 2015

http://autismpdc.fpg.unc.edu http://asdtoddler.fpg.unc.edu www.nationalautismcenter.org

## A History of Systematic Reviews of the Literature for Evidence Based Practices (EBPs)

- In 2009, 11 Established Treatments
  - Reviewed by National Standards Project from National Autism Center, Phase 1 (NSP1)
  - Included research for the years: 1957-2007



www.nationalautismcenter.org

## A History of Systematic Reviews of the Literature for Evidence Based Practices (EBPs)

- In 2010, 24 EBPs
  - National Professional Development Center (NPDC)
  - Included 10 years, 1997-2007
- In 2014, 27 EBPs
  - 2<sup>nd</sup> review by NPDC
  - Included 22 years, 1990-2011
    - 29,101 possible studies → 456 studies
    - RCT, quasi-experimental, single case design
  - Strength of evidence for assessment
  - Based on number, type of studies using each EBP

Evidence-Based
Practices for
Children, Youth,
and Young Adults
with
Autism Spectrum Disorder

Connect Way, Samuel L. Coom,
Race Hann, Ann W. Cen, Augul Feing,
Samuel Enderney, Martines E. Brook,
Johns & Firency, Vennuel E. Brook,
Johns & Firency, Vennuel Firency, and Tai K. Schulz

Anton Memory and Transfer American
John Province for The Transfer
John Pro

http://autismpdc.fpg.unc.edu/

# A History of Systematic Reviews of the Literature for Evidence Based Practices (EBPs) Findings and Conclusions: Phast? Phast?

- In 2015, 14 Established Interventions Under Age 22
   1 Established Intervention Age 22+
  - 2<sup>nd</sup> Review by National Standards Project, National Autism Center, Phase 2 (NSP2)
- Reviewed studies published in peer reviewed journals between 2007 and February of 2012
  - 351 articles (ages 0-22) and 27 articles (ages 22+)
  - included studies if the interventions could be implemented in or by school systems, early intervention, home, hospital, vocational. and/or community-based programs or in clinic settings

### www.nationalautismcenter.org

## 2 Important ASD EBP Resources

National Professional Development Center (NPDC)

**National Autism Center (NAC)** 

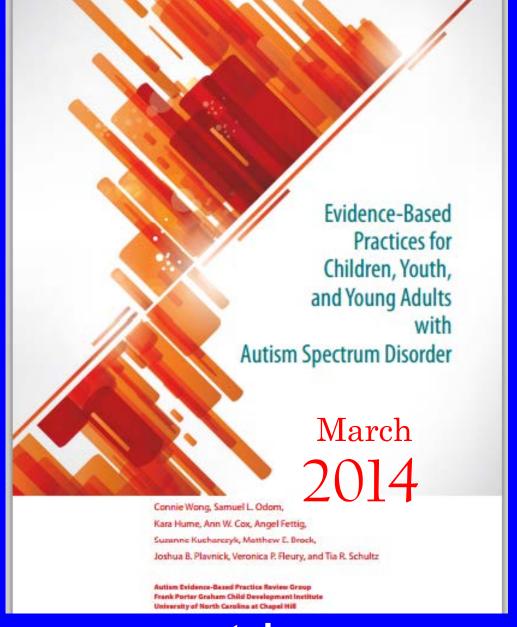
- 1. 27 Evidence Based Practices Briefs
- 2. AFIRM
- 3. EBPs for Young Children

Released March 2014

1. National Standards Project Report-Phase NSP2

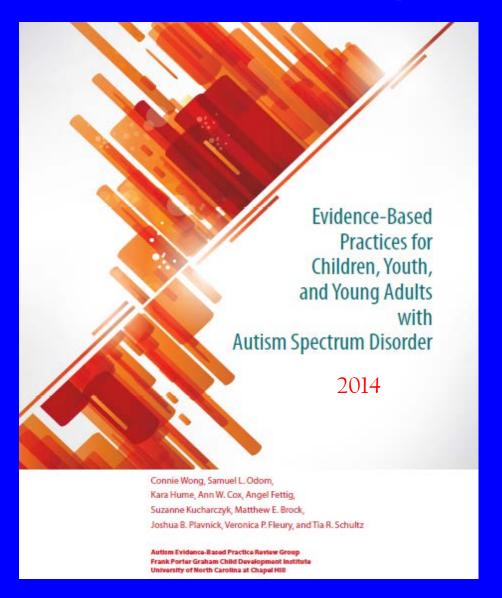
Released April 2015

http://autismpdc.fpg.unc.edu http://asdtoddler.fpg.unc.edu www.nationalautismcenter.org



www.captain.ca.gov http://autismpdc.fpg.unc.edu

# What's in this report?



# Definition of EBP (NPDC)



### NPDC definition of an EBP:

"Focused intervention practices that have substantial evidence for effectiveness in promoting positive outcomes for learners with ASD"

### NPDC Criteria for EBP



To be considered an EBP for individuals with ASD, efficacy must be established through peer-reviewed research in scientific journals using:

 At least two high quality experimental or quasi-experimental group design articles conducted by at least two different researchers or research groups

### OR

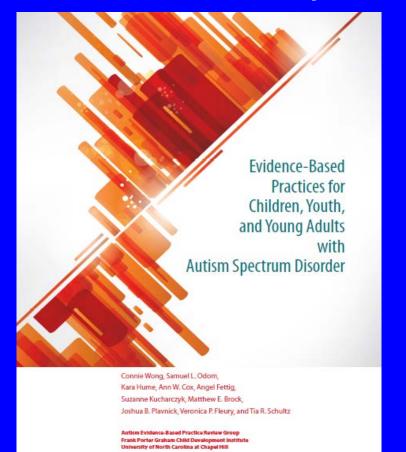
 At least five high quality single case design articles conducted by at least three different researchers or research groups having a total of at least 20 participants across studies

### OR

 A combination of at least one high quality experimental or quasiexperimental group design article and at least three high quality single case design articles conducted by at least two different research groups

## What are these 27 EBPs?

# The 27 EBPs are listed and defined in Table 7 of the report!



### 27 Evidence – Based Practices (2014)

**Antecedent-based interventions** 

Cognitive behavioral intervention\*

Differential reinforcement

Discrete trial training

**Exercise** 

**Extinction** 

**Functional behavior assessment** 

**Functional communication training** 

**Modeling** 

**Naturalistic interventions** 

Parent-implemented intervention

Peer-mediated

instruction/intervention

Picture Exchange Communication
System™

Pivotal response training

**Prompting** 

Reinforcement

Response interruption/redirection

Scripting

Self-management

Social narratives

Social skills training

Structured play groups

Task analysis

**Technology-aided** 

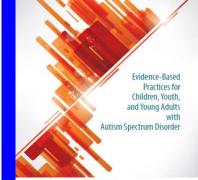
intervention/instruction

Time delay

Video modeling

Visual supports

Table 7. Working D	efinitions for EBPs		
		Empirica	l Support
Evidence-Based Practice	DEFINITIONS OF 27 EBPs Definition	Group (n)	Single Case (n)
Antecedent-based intervention (ABI)	Arrangement of events or circumstances that precede the occurrence of an interfering behavior and designed to lead to the reduction of the behavior.	0	32
Cognitive behavioral intervention (CBI)	Instruction on management or control of cognitive processes that lead to changes in overt behavior.	3	1
Differential reinforcement of Alternative, Incompatible, or Other Behavior (DRA/I/O)	Provision of positive/desirable consequences for behaviors or their absence that reduce the occurrence of an undesirable behavior. Reinforcement provided: a) when the learner is engaging in a specific desired behavior other than the inappropriate behavior (DRA), b) when the learner is engaging in a behavior that is physically impossible to do while exhibiting the inappropriate behavior (DRI), or c) when the learner is not engaging in the interfering behavior (DRO).	0	26
Discrete trial teaching (DTT)	Instructional process usually involving one teacher/service provider and one student/client and designed to teach appropriate behavior or skills. Instruction usually involves massed trials. Each trial consists of the teacher's instruction/presentation, the child's response, a carefully planned consequence, and a pause prior to presenting the next instruction.	0	13
Exercise (ECE)	Increase in physical exertion as a means of reducing problem behaviors or increasing appropriate behavior.	3	3
Extinction (EXT)	Withdrawal or removal of reinforcers of interfering behavior in order to reduce the occurrence of that behavior. Although sometimes used as a single intervention practice, extinction often occurs in combination with functional behavior assessment, functional communication training, and differential reinforcement.	0	11
Functional behavior assessment (FBA)	Systematic collection of information about an interfering behavior designed to identify functional contingencies that support the behavior. FBA consists of describing the interfering or problem behavior, identifying antecedent or consequent events that control the behavior, developing a hypothesis of the function of the behavior, and/or testing the hypothesis.	0	10
Functional communication training (FCT)	Replacement of interfering behavior that has a communication function with more appropri- ate communication that accomplishes the same function. FCT usually includes FBA, DRA, and/ or EX.	0	12
Modeling (MD)	Demonstration of a desired target behavior that results in imitation of the behavior by the learner and that leads to the acquisition of the imitated behavior. This EBP is often combined with other strategies such as prompting and reinforcement.	1	4
Naturalistic intervention (NI)	Intervention strategies that occur within the typical setting/activities/routines in which the learner participates. Teachers/service providers establish the learner's interest in a learning event through arrangement of the setting/activity/routine, provide necessary support for the learner to engage in the targeted behavior, elaborate on the behavior when it occurs, and/or arrange natural consequences for the targeted behavior or skills.	0	10
Parent-implemented intervention (PII)	Parents provide individualized intervention to their child to improve/increase a wide variety of skills and/or to reduce interfering behaviors. Parents learn to deliver interventions in their home and/or community through a structured parent training program.	8	12
Peer-mediated instruction and intervention (PMII)	Typically developing peers interact with and/or help children and youth with ASD to acquire new behavior, communication, and social skills by increasing social and learning opportunities within natural environments. Teachers/service providers systematically teach peers strategies for engaging children and youth with ASD in positive and extended social interactions in both teacher-directed and learner-initiated activities.	0	15



Connie Wong, Samuel L. Odom, Kara Hume, Ann W. Cox, Angel Fettig, Suzanne Kucharczyk, Matthew E. Brock, Joshua B. Plavnick, Veronica P. Fleury, and Tia R. Schultz

Autism Evidanca-Based Practice Review Group Frank Porter Graham Child Development Instit

		Empirical	Support
Evidence-Based Practice	DEFINITIONS OF 27 EBPs Definition	Group (n)	Single Case (n)
Picture Exchange Communication System (PECS)	Learners are initially taught to give a picture of a desired item to a communicative partner in exchange for the desired item. PECS consists of six phases which are: (1) "how" to communicate, (2) distance and persistence, (3) picture discrimination, (4) sentence structure, (5) responsive requesting, and (6) commenting.	2	4
Pivotal response training (PRT)	Pivotal learning variables (i.e., motivation, responding to multiple cues, self-management, and self-initiations) guide intervention practices that are implemented in settings that build on learner interests and initiative.	1	7
Prompting (PP)	Verbal, gestural, or physical assistance given to learners to assist them in acquiring or engag- ing in a targeted behavior or skill. Prompts are generally given by an adult or peer before or as a learner attempts to use a skill.	1	32
Reinforcement (R+)	An event, activity, or other circumstance occurring after a learner engages in a desired behavior that leads to the increased occurrence of the behavior in the future.	0	43
Response interruption/ redirection (RIR)	Introduction of a prompt, comment, or other distracters when an interfering behavior is occur- ring that is designed to divert the learner's attention away from the interfering behavior and results in its reduction.	0	10
Scripting (SC)	A verbal and/or written description about a specific skill or situation that serves as a model for the learner. Scripts are usually practiced repeatedly before the skill is used in the actual situation.	1	8
Self-management (SM)	Instruction focusing on learners discriminating between appropriate and inappropriate behaviors, accurately monitoring and recording their own behaviors, and rewarding themselves for behaving appropriately.	0	10
Social narratives (SN)	Narratives that describe social situations in some detail by highlighting relevant cues and offering examples of appropriate responding. Social narratives are individualized according to learner needs and typically are quite short, perhaps including pictures or other visual aids.	0	17
Social skills training (SST)	Group or individual instruction designed to teach learners with autism spectrum disorders (ASD) ways to appropriately interact with peers, adults, and other individuals. Most social skill meetings include instruction on basic concepts, role-playing or practice, and feedback to help learners with ASD acquire and practice communication, play, or social skills to promote positive interactions with peers.	7	8
Structured play group (SPG)	Small group activities characterized by their occurrences in a defined area and with a defined activity, the specific selection of typically developing peers to be in the group, a clear delineation of theme and roles by adult leading, prompting, or scaffolding as needed to support students' performance related to the goals of the activity.	2	2
Task analysis (TA)	A process in which an activity or behavior is divided into small, manageable steps in order to assess and teach the skill. Other practices, such as reinforcement, video modeling, or time delay, are often used to facilitate acquisition of the smaller steps.	0	8
Technology-aided instruction and intervention (TAII)	Instruction or interventions in which technology is the central feature supporting the acquisi- tion of a goal for the learner. Technology is defined as "any electronic item/ equipment/ application/or virtual network that is used intentionally to increase/maintain, and/or improve daily living, work/productivity, and recreation/leisure capabilities of adolescents with autism spectrum disorders" (Odom, Thompson, et al., 2013).	9	11



Consie Wong, Samuel L. Odom, Kara Hume, Ann W. Cox, Angel Fiettig, Suzanne Kucharczyk, Matthew E. Bock, Joshua B. Plawsick, Veronica P. Fleury, and Tia R. Schultz

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	<b>DEFINITIONS OF 27 EBPs</b>	Empirica	Support
Evidence-Based Practice	DET HATTIONS OF ZT EDES  Definition	Group (n)	Single Case (n)
Time delay (TD)	In a setting or activity in which a learner should engage in a behavior or skill, a brief delay occurs between the opportunity to use the skill and any additional instructions or prompts. The purpose of the time delay is to allow the learner to respond without having to receive a prompt and thus focuses on fading the use of prompts during instructional activities.	0	12
Video modeling (VM)	A visual model of the targeted behavior or skill (typically in the behavior, communication, play, or social domains), provided via video recording and display equipment to assist learning in or engaging in a desired behavior or skill.	1	31
Visual support (VS)	Any visual display that supports the learner engaging in a desired behavior or skills independent of prompts. Examples of visual supports include pictures, written words, objects within the environment, arrangement of the environment or visual boundaries, schedules, maps, labels, organization systems, and timelines.	0	18



# FACT SHEETS AVAILABLE FOR EACH OF THE 27 EBPs

Video Modeling Fact Sheet

### **Brief Description**

Video modeling (VM) is a method of instruction that uses video recording ment to provide a visual model of the targeted behavior or skill. The model learner, who then has an opportunity to perform the target behavior, either a later point in time. Types of video modeling include basic video modelin point-of-view video modeling, and video prompting. Basic video modeling and involves recording someone besides the learner engaging in the target self-modeling is used to record the learner displaying the target skill or beh editing to remove adult prompts. Point-of-view video modeling is when the skill is recorded from the perspective of what the learner will see when he response. Video prompting involves breaking the behavior into steps and recording each step with incorporated pauses during which the learner may view and then attempt a step before viewing and attempting subsequent steps. Video prompting can be implemented with other, self, or pointof-view models. Video modeling strategies have been used in isolation and also in conjunction with other intervention components such as prompting and reinforcement strategies.

VM meets evidence-based criteria with 1 group design and 31 single case design studies.

According to the evidence-based studies, this intervention has been effective for toddlers (0-2 years) to young adults (19-22) years with ASD.

VM can be used effectively to address social, communication, behavior, joint attention, play, cognitive, school-readiness, academic, motor, adaptive, and vocational skills.

### **Research Studies Poviding Evidence**

Akmanoglu, N., & Tekin-Iftar, E. (2011). Teaching children with autism how to respond to the lures of strangers. Autism, 15(2), 205-222. doi: 10.1177/1362361309352180

Allen, K. D., Wallace, D. P., Greene, D. J., Bowen, S. L., & Burke, R. V. (2010). Community-based vocational instruction using videotaped modeling for young adults with autism spectrum disorders performing in air-inflated mascots. Focus on Autism and Other Developmental Disabilities, 25(3), 186-192.

Evidence-Based Practices for Children, Youth, and Young Adults **Autism Spectrum Disorder** 

Suzanne Kucharczyk Matthew F. Brock Joshua B. Plavnick, Veronica P. Fleury, and Tia R. Schultz

**Definition of the** intervention

Age range of participants

Type of outcomes it has generated

 Citations for the specific articles that provide the evidence for the efficacy of the practice

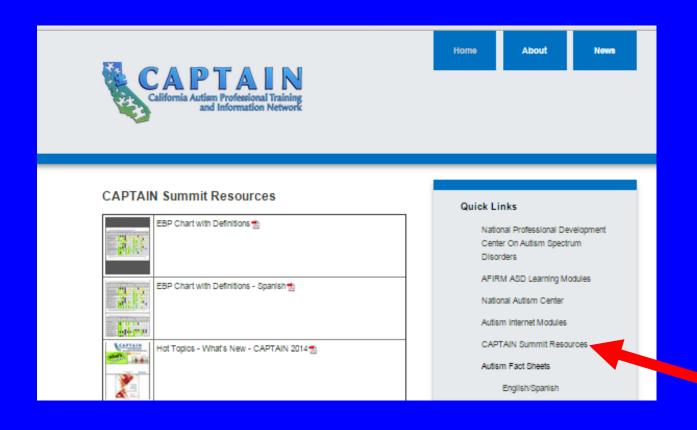
Evidence Based Practice and Abbreviated Definition	_	vide: Social	$\overline{}$	_	Dev	velo n.	_	nenta Beh.		J	Joint	t	_	ge (y Play	$\overline{}$	_	Cog.			choo		A	cad.	T	Мо	otor	T	Ada	apt.	T	V	oc.	T		ntal alth	
	0-5	6-14	15-22	0-5	6-14	15-22	0-5	6-14	15-22		6-14 Attn	2	5-0	6-14	15-22	0-5	6-14	15-22	0-5	6-14 eady	15-22	0-5	6-14	15-22	0-5	6-14	15-22	0-5	6-14	15-22	0-5	6-14	15-22		T	15-22
Antecedent Based Intervention (ABI): Arrangement of events preceding an interfering behavior to prevent or reduce occurrence																															$\prod$					
Cognitive Behavioral Intervention (CBI): Instruction on cognitive processes leading to changes in behavior																																				
Differential Reinforcement of Alternative, Incompatible, or Other Behavior (DRA/I/O): Consequences provided for desired behaviors that reduce the occurrence of interfering behaviors																																				
<b>Discrete Trial Teaching (DTT):</b> Instructional process of repeated trials, consisting of instruction, response, and consequence																																				
Exercise (ECE): Antecedent based physical exertion to reduce interfering behaviors or increase appropriate behaviors																																		$\prod$		
Extinction (EXT): Removal of existing reinforcement in order to reduce an interfering behavior										L'														$\perp$	$\perp$					$\perp$	$\perp$		$\perp$	$\perp$	$\perp$	
Functional Behavior Assessment (FBA): Systematic protocol designed to identify contingencies that maintain an interfering behavior																																				
Function Communication Training (FCT): Replacement of an interfering behavior with communication that accomplishes the same function																																				
Modeling (MD): Demonstration of a desired behavior that results in skill acquisition through learner imitation																																				
Naturalistic Intervention (NI): Intervention strategies that occur with the learner's typical settings and routines																																				
Parent-Implemented Intervention (PII): Parent delivered intervention learned through a structured parent training program																																				
Peer-Mediated Instruction and Intervention (PMII): Typically developing peers are taught strategies that increase social learning opportunities in natural environments																																				
Picture Exchange Communication System (PECS): Systematic 6 phase protocol teaching the exchange of pictures between communicative partners																																				

# www.captain.ca.gov

Evidence Based Practice and Abbreviated	Ev	vide	nce	e by l	De	vel	opr	nen	tal	Dor	ma	in a	and	l A	ge (	yea	ırs)																				
Definition	S	Socia	1	Cr	Comn	n.		Beh	ı.			int ttn.		J	Play			Cog		_	choo lead		A	cad.		Mo	otor		Ad	dapt.		'	Voc.		-	lental lealth	
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Social Skills Training (SST): Direct instruction on social skills with rehearsal and feedback to increase positive peer interaction.																																					
Structured Play Group (SPG): Adult lead small group activities that include typically developing peers and use prompting to support performance																																					
Task Analysis (TA): The process of breaking a skill into small steps that are systematically chained together	igsqcup'		<u> </u>							$\perp$																											
Technology-Aided Instruction and Intervention (TAII): Intervention using technology as a critical feature																																					
Time Delay (TD): Delaying a prompt during a practice opportunity in order to fade the use of prompts																																					
Video Modeling (VM): A video recording of a targeted skill that is viewed to assist in learning																																					
Visual Support (VS): Visual display that supports independent skill use.											$\int$																										

## www.captain.ca.gov

# 27 EBPs Matrix Available on the CAPTAIN Website English and Spanish! www.captain.ca.gov



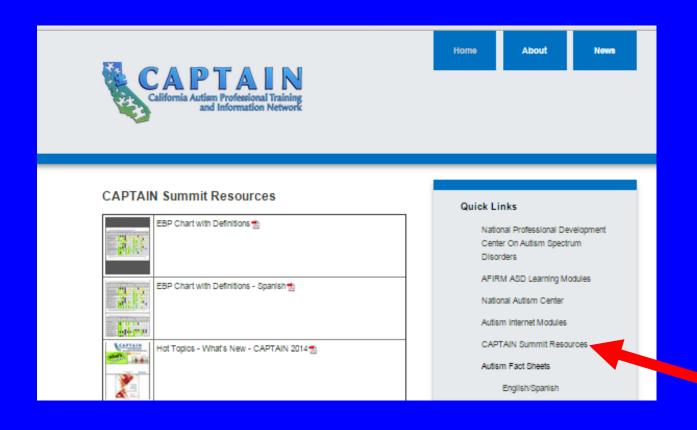


As you watch the video clips use the EBP Matrix as a reference and see if you can determine which EBPs were in place.

# What EBPs did you see?



# 27 EBPs Matrix Available on the CAPTAIN Website English and Spanish! www.captain.ca.gov



# How to Select an EBP http://afirm.fpg.unc.edu/selecting-ebp



Login | Sign Up

AFIRM Modules

Learn with AFIRM

Selecting EBPs

Selecting an EBP

Watch a Short Overview Video on the Selecting EBP Process

Before beginning any new practice or intervention with a learner, it is important to follow four general planning steps. The four-step process includes:

- · Identifying the behavior
- Defining the extent of the behavior (collecting baseline data)
- Establishing an observable and measurable goal or outcome
- Choosing an EBP

### Identify the behavior or skill

To help you select the best evidence-based practice to use with your student, it is important to identify the target behavior. The target behavior must be observable and clearly defined in the setting where it occurs. All team members should be able to identify the behavior (including its frequency and duration) based on the clarity of the definition of the behavior.

# Implementation Fidelity is Critical!

### What does this mean?



"Implementing an intervention in the same manner in which it was done in the evidence-based research"



# Implementation Fidelity is Critical!

## How implementation fidelity achieved:

- Use Briefs and Implementation Checklists for the EBP to capture fidelity of implementation
- 2. Refer to EBP Fact Sheets
- 3. Use self-learning modules on practices
- 4. Attend training on the practice
- 5. Access coaching on the EBP until fidelity is attained



# National Professional Development Center-ASD NPDC

http://autismpdc.fpg.unc.edu

Brief Packages For

Evidence Based Practices (EBPs)

### **Brief Package Ensures Fidelity and Consists of:**

- Overview of practice
- Evidence-base for practice
- Steps for implementation
- Implementation Checklist
- Data Collection Forms



HOME

ABOUT NPDC

EVIDENCE-BASED PRACTICES

NPDC MODEL

RESOURCES



Since 2007, the National Professional Development Center on Autism Spectrum Disorder (NPDC) has worked to develop free professional resources for teachers, therapists, and technical assistance providers who work with individuals with ASD. Resources include detailed information on how to plan, implement, and monitor specific evidence-based practices.

### NPDC NEWS & UPDATES

### Welcome to our new website!

We are pleased to be able to continue developing resources and materials that assist teachers and interventionists in implementing evidence-based practices (EBP).

**READ MORE** 

**AFIRM** 



### Autism Focused Intervention Resources and Modules

Coming Soon!

### **BRIEF NPDC OVERVIEW VIDEO**



HONE

ABOUT MPDC

**EVIDENCE-BASED PRACTICES** 

NPOC MODEL

RESOURCES

EVIDENCE-NASED PRACTICES

WHAT CRITERIA DETERMINED IF AN INTERVENTION WAS EFFECTIVE?

HOW DO I FIND OUT MORE ABOUT EBPS?

### WHAT ARE EVIDENCE-BASED PRACTICES?

Many interventions will for autium spectrum discrete (ASD). Yet, scentific research has found only some of these interventions to be effective. The interventions that researchers have shown to be effective are called explane-based precioes (EEPs). One reason for using EEPs is because, by law, teaching practices must be based on evidence of effectiveness.

### WHAT EBPS HAVE BEEN IDENTIFIED?

The NPDC used a rigorous criteria to classify 27 focused interventions as EEPs in 2014. The 27 identified EEPs have been shown through scientific research to be effective when implemented correctly with students with ASD. The NPDC is currently developing online modules, called AFRM, for each of the 27 identified practices.

You can currently access online modules for the original 24 evidence-based practices on the Autism Internet Modules (AIM) website from the Ohio Lenter for Autism and Loss Incidence (OCAID).



Select an ESP before to access a brief about the practice frach brief provides an overview and general description, step-by-step instructions of implementation, an implementation checklist, and the evidencebase which includes the list of references that demonstrate the practice meets the NPOC's criteria.

To print out a specific section of a brief, download the EEP and open using Adobe Neader. You can disk to different sections of the brief using the menu the left while viewing in Adobe Neader.

### EVIDENCE-BASED PRACTICES Meta-relate Intervention (NI)

Peer-mediated Instruction and

Prential Response Training:

Parent-implemented

Intervention (FE)

Intervention (PMII)

Picture Eschange Communication System

DAME

Anterestion (ABI)

Cognitive Behavioral Intervention (CBI)\*

Differential Beinforcement of Alternative, Incompatible, or Other Behavior (DSA/UC)

Discrete Irial Teaching (2011)

Exercise (ECE)\*

Functional Behavior Assessment (FEA)

Functional Communication Training (FCT)

Modeling (MD)\*

Response Interruption/Restruction (RIR)

Scripting (SC)\*

Prompting (PF)

Beinforcement (814)

Self-management (SM)

Social Narratives CNO

Social Skills Frening (SST)\* Previously Social Skills Groups

Structured Play Group (SPC)\*

Task Anilysis (TA):

Fechnology-aided Instruction and Intervention (TAE)\* Previously

Computer Aided Instruction

-

Speech Generating Devices

Time Delay (10)

(MV) graining (VM)

Visual Support (VS)

See the working definitions of each EIP in this except from the 2014 batterize-Based Practices for Children, Youth, and Young Adults with Autism Spectrum Disorder report. The full report is available here.

### **Briefs**

Indicates new LIDP identified in 2014 review. Practice briefs are not available for these practices, but are currently being developed as part of AUDM.

# **Evidence-Based Practice Brief**

National Professional Development Center on Autism Spectrum Disorders

Module: Video Modeling

Evidence-Based Practice Brief: Video Modeling

This evidence-based practice brief on video modeling includes the following components:

- Overview, which gives a quick summary of salient features of the practice, including what it is, who it can be used with, what skills it has been used with, settings for instruction, and additional literature documenting its use in practice
- 2. Steps for Implementation, detailing how to implement the practice in a practitioner-friendly, step-by-step process
- Implementation Checklist, to be used to monitor fidelity of the use of the practice
- 4. Evidence Base Summary, which details the NPDC-ASD criteria for inclusion as an evidence-based practice and the specific studies that meet the criteria for this practice

### Module: Video Modeling

### Steps for Implementation: Video Modeling

These steps for implementation were adapted from:

LaCava, P. (2008). Video modeling: An online training module. (Kansas City: University of Kansas, Special Education Department). In Ohio Center for Autism and Low Incidence (OCALI), Autism Internet Modules, <a href="https://www.autisminternetmodules.org">www.autisminternetmodules.org</a>. Columbus, OH: OCALI.

The implementation process for video modeling is similar for each type of video modeling strategy (i.e., basic video modeling, video self-modeling, point-of-view modeling, video prompting). Ten steps are outlined below which describe how video modeling is implemented with learners with ASD.

### Step 1. Targeting a Behavior for Teaching

In Step 1, teachers/practitioners focus on identifying a behavior for the learner with ASD to acquire and then clearly describe it so that accurate data can be collected throughout the

### Module: Video Modeling

### Implementation Checklist for Video Modeling

The implementation checklist steps were adapted from:

LaCava, P. (2008). Video modeling: An online training module. (Kansas City: University of Kansas, Special Education Department). In Ohio Center for Autism and Low Incidence (OCALI), Autism Internet Modules, <u>www.autisminternetmodules.org</u>. Columbus, OH: OCALI.

Instructions: The Implementation Checklist includes each step in the process of implementing video modeling. Please complete all of the requested information including the site and state, individual being observed, and the learner's initials. To assure that a practice is being implemented as intended, an observation is always preferable. This may not always be possible. Thus, items may be scored based on observations with the implementer, discussions and/or record review as appropriate. Within the table, record a 2 (implemented), 1 (partially implemented), 0 (did not implement), or NA (not applicable) next to each step observed to indicate to what extent the step was implemented/addressed during your observation. Use the last page of the checklist to record the target skill, your comments, whether others were present, and plans for next steps for each observation.

Site:	State:
Individual (s) Observed:	Learner's Initials:

### Skills below can be implemented by a practitioner, parent, or other team member

	Observation	1	2	3	4	5	6	7	8						
	Date														
	Observer's Initials														
	Planning (Ste	ps 1	<b>– 6)</b>												
Step 1. Targeting a Behavi	or for														
Teaching					Sco	re**									
<ol> <li>Identify a target behavior the be taught.</li> </ol>	at is important to														
<ol><li>Define and describe the targ that it is observable and mea</li></ol>															
Step 2. Having the Correct	Equipment														



### **AFIRM**

# <u>Autism Focused Intervention Resources and Modules http://autismpdc.fpg.unc.edu/npdc-resources</u>

afirm.fpg.unc.edu/afirm-modules



My Account | Logout

You are logged in.
Need help? Visit the FAQs section

**AFIRM Modules** 

Learn with AFIRM

Selecting EBPs

Resources

#### **Prompting**

Use prompting to reduce incorrect responding as learners with ASD acquire new skills.

**Learn more about Prompting** 







**New EBP Learning Modules!** 

AFIRM Modules are designed to help you learn the step-by-step process of planning for, using, and monitoring an EBP with learners with ASD from birth to 22 years of age. Supplemental materials and handouts are available for download.

Visit the Learn with AFIRM section to find out more.

Available EBP Modules

# AFIRM Autism Focused Intervention Resources and Modules

### What you'll learn with AFIRM Modules:

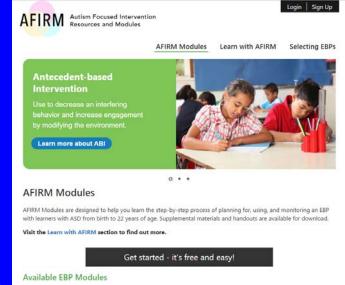
- Key components of an EBP
- Behaviors and skills that can be addressed
- A step-by-step process for applying the practice
- Specific resources that you can download and customize for your own use

You can even choose to earn a Certificate!

### **AFIRM Modules**

#### [15 of 27 EBPs Available as of 11/27/16

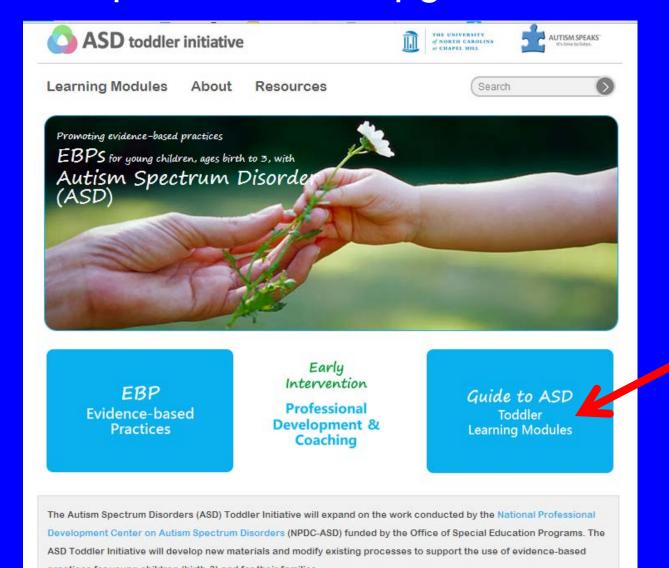
- 1. ABI Antecedent-based Intervention
- 2. DTT Discrete Trial Training
- 3. ECE Exercise
- 4. FBA Functional Behavior Analysis
- 5. MD Modeling
- 6. PMII Peer-Mediated Instruction and Intervention
- 7. PECS Picture Exchange Communication System
- 8. PP Prompting
- 9. R+ Reinforcement
- 10. SM Self-management
- 11. SN Social Narratives
- 12. SST Social Skills Training
- 13. TA Task Analysis
- 14. TD Time Delay
- 15. VS Visual Supports



#### **Upcoming:**

SM Structured Play VM Video Modeling SC Scripting

# SELF LEARNING MODULES FOR TODDLERS! NPDC-ASD Early Start Website http://asdtoddler.fpg.unc.edu















CAPTAIN is a multiagency network developed to support the understanding and use of Evidence Based Practices for individuals affected by Autism Spectrum Disorder across the state.

#### CAPTAIN is dedicated to the following:

- · Providing statewide access to trainings and resources in Evidence Based Practices (EBPs) that are culturally sensitive, family centered, cost effective, and competency based.
- . Establishing supports that are locally based with trainer of trainers at the local
- . Emphasizing how to use EBPs to assist students in accessing the California Common Core State Standards and developing College and Career Readiness.
- · Providing ongoing training, support, and technical assistance to implement EBPs and ensure fidelity of implementation.
- · Supporting the development of local multiagency collaborations to support consistent use of EBPs.
- · Providing an annual training summit and a forum for collegial communication and support to CAPTAIN Cadre members.
- · Providing web based access to materials and resources that are vetted and align
- · Providing information and outreach to other interested stakeholders and provider groups who could benefit from learning more about EBPs (E.g. Professional Organizations, Higher Education, Self Advocates, Allied Health Providers)





#### Quick Links

National Professional Development Center On Autism Spectrum Disorders

AFIRM ASD Learning Modules

National Autism Center

Autism Internet Modules

CAPTAIN Summit Resources

Autism Fact Sheets

English/Spanish

Other Languages

Ask a Specialist - ASD CAPTAIN Cadre

Regional Plans

CAPTAIN Leadership

Act Early

Effective Early Childhood Transitions Guide

ASD Toddler Initiative

ADEPT

#### **CAPTAIN Partners**

Diagnostic Centers, CDE

Family Resource Centers Network of California

Center for Excellence for Developmental Disabilities at UC Davis MIND Institute

USC University Center for Excellence in Developmental Disabilities (USC UCEDD)

California Department of Developmental Services

> CAPTAIN Summits [by invitation only]

North: October 15-16, 2015 South: November 9-10, 2015









### Use these **Quick Links** on the **CAPTAIN** website to access these **EBP** resources!

## 2 Important ASD EBP Resources

National Professional Development Center (NPDC)

**National Autism Center (NAC)** 

- 1. 27 Evidence Based Practices Briefs
- 2. AFIRM
- 3. EBPs for Young Children

Released March 2014

1. National Standards Project Report-Phase NSP2

Released April 2015

http://autismpdc.fpg.unc.edu http://asdtoddler.fpg.unc.edu www.nationalautismcenter.org



- Based on research conducted in the field from 2007 to February 2012
- Provides an update to the previously published summary of empirical treatment literature (2009)
- 351 articles (ages 0-22) and 27 articles (ages 22+)
  included studies if the interventions could be implemented in or by
  school systems, early intervention, home, hospital, vocational. and/or
  community-based programs or in clinic settings

www.nationalautismcenter.org

### Strength of Evidence Classification System

#### **Established:**

Sufficient evidence is available to confidently determine that an intervention produces favorable outcomes for individuals on the autism spectrum. That is, these interventions are established as effective.

### **Emerging:**

Although one or more studies suggest that an intervention produces favorable outcomes for individuals with ASD, additional high quality studies must consistently show this outcome before we can draw firm conclusions about intervention effectiveness.

#### **Unestablished:**

There is little or no evidence to allow us to draw firm conclusions about intervention effectiveness with individuals with ASD. Additional research may show the intervention to be effective, ineffective, or harmful.

## The National Standards Project-Phase 2 (NSP2)



Overall Findings for Individuals Under Age 22

•14 Established Interventions

•18 Emerging Interventions

•13 Unestablished Interventions



The following interventions have been identified as falling into the Established level of evidence:

- Behavioral Interventions
- Cognitive Behavioral Intervention Package
- Comprehensive Behavioral Treatment for Young Children
- Language Training (Production)
- Modeling
- Natural Teaching Strategies
- Parent Training
- Peer Training Package
- Pivotal Response Training
- **■** Schedules
- Scripting
- Self-Management
- Social Skills Package
- Story-based Intervention

14 ESTABLISHED
INTERVENTIONS
(for individuals under age 22)



Emerging Interventions are those for which one or more studies suggest they may produce favorable outcomes. However, before we can be fully confident that the interventions are effective, additional high quality studies are needed that consistently show these interventions to be effective for individuals with ASD. Based on the available evidence, we are not yet in a position to rule out the possibility that Emerging Interventions are, in fact, not effective.

A large number of studies fall into the Emerging level of evidence. We believe scientists should find fertile ground for further research in these areas.

The following interventions have been identified as falling into the Emerging level of evidence:

- Augmentative and Alternative Communication Devices
- Developmental Relationship-based Treatment
- Exercise
- Exposure Package
- Functional Communication Training
- Imitation-based Intervention
- Initiation Training
- Language Training (Production & Understanding)
- Massage Therapy
- Multi-component Package
- Music Therapy
- Picture Exchange Communication System
- Reductive Package
- Sign Instruction
- Social Communication Intervention
- Structured Teaching
- Technology-based Intervention
- Theory of Mind Training

18 EMERGING INTERVENTIONS

(for individuals under age 22)



Unestablished Interventions are those for which there is little or no evidence in the scientific literature that allows us to draw firm conclusions about their effectiveness with individuals with ASD. There is no reason to assume these interventions are effective. Further, there is no way to rule out the possibility these interventions are ineffective or harmful.

The following interventions have been identified as falling into the Unestablished level of evidence:

- Animal-assisted Therapy
- Auditory Integration Training
- Concept Mapping
- DIR/Floor Time
- Facilitated Communication
- Gluten-free/Casein-free diet
- Movement-based Intervention
- SENSE Theatre Intervention
- Sensory Intervention Package
- Shock Therapy
- Social Behavioral Learning Strategy
- Social Cognition Intervention
- Social Thinking Intervention

# 13 UNESTABLISHED INTERVENTIONS (for individuals under age 22)



#### Research Findings for Adults (22+ Years)

#### Established Interventions for Adults Only 1 Established

The only intervention to be identified as Established for individuals ages 22 years and older is Behavioral Interventions. The Dehavioral Intervention category consists of applied behavior analytic interventions to increase adaptive behaviors and decrease challenging behaviors. Examples of specific strategies identified in the 17 articles supporting Behavioral Interventions are provided in the table on the following page.

#### **Emerging Interventions for Adults**

Emerging Interventions are those for which one or more studies suggest they may produce favorable outcomes. However, before we can be fully confident that the interventions are effective, additional high quality studies are needed that consistently show these interventions to be effective for individuals with ASD. Based on the available evidence, we are not yet in a position to rule out the possibility that Emerging Interventions are, in fact, not effective.

The following intervention has been identified as falling into the Emerging level of evidence:

Vocational Training Package

#### Unestablished Interventions for Adults

Unestablished Interventions are those for which there is little or no evidence in the scientific literature that allows us to draw firm conclusions about their effectiveness with individuals with ASD. There is no reason to assume these interventions are effective. Further, there is no way to rule out the possibility these interventions are ineffective or harmful.

The following interventions have been identified as falling into the Unestablished level of evidence:

- Cognitive Behavioral Intervention Package
- Modeling
- Music Therapy
- Sensory Integration Package



## NSP2 Example of EBP

#### Modeling

#### Established Intervention



One of the most effective ways to teach someone what to do is to show him or her how to do it. The goal of modeling is to correctly demonstrate a target behavior to the person learning the new skill, so that person can then Imitate the model. Children can learn a great deal from observing the behavior of parents, siblings, peers, and teachers, but they often need to be taught what behaviors should be

#### Basic Facts



Number of articles reviewed:

NSP1 = 51 NSP2 = 28

Effective ages: Children and adolescents 3-18 years

#### Skills increased:

- higher cognitive functions (NSP1)
- academic (NSP2)
- communication, interpersonal, personal responsibility, and play (NSP192)

#### Behaviors decreased:

- problem behaviors (NSP1)
- sensory or emotional regulation

#### Detailed Description



There are two types of modeling-live and video modeling.

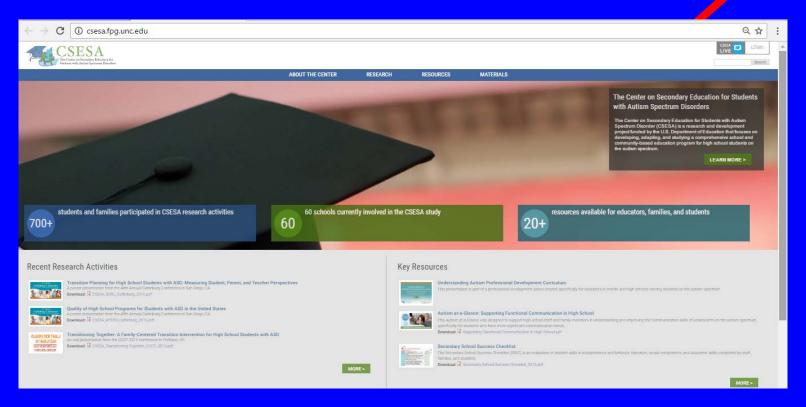
Live modeling occurs when a person demonstrates the target behavior in the presence of the child with autism spectrum disorder (ASD). When providing live modeling:

- Clearly outline, in writing, the target behavior to model.
- Ensure all individuals modeling the target behavior are doing so in a consistent manner. It may be helpful for parents/caregivers/therapists to practice together to make certain each person provides the same model.
- Obtain the child's attention prior to modeling the target behavior.
- Develop a plan to fade or stop the use of modeling to encourage the child to independently display the target behavior.

Video modeling occurs when you pre-record a person demonstrating the target behavior. Video modeling can be a great option for children/adolescents with an affinity for television shows, movies, or interest in seeing themselves on a monitor (i.e., television screen, computer monitor, video recorder monitor). Some children/adolescents may enjoy assisting in the production of the video.

# Another Excellent EBP Resource for Older Individuals with ASD





www.captain.ca.gov http://csesa.fpg.unc.edu

## NSP2 Recommendations For Intervention Selection

## Established Interventions have sufficient evidence of effectiveness

"We recommend the decision-making team give serious consideration to these interventions because:

- these interventions have produced beneficial effects for individuals involved in the research studies published in the scientific literature
- access to interventions that work can be expected to produce more positive long-term outcomes
- there is no evidence of harmful effects

However, it should not be assumed that these interventions will universally produce favorable outcomes for all individuals with ASD"

## NSP2 Recommendations For Intervention Selection

#### **EMERGING INTERVENTIONS**

"We generally do not recommend beginning with these interventions

However, Emerging Interventions should be considered promising and warrant serious consideration if Established Interventions are deemed inappropriate by the decision-making team, or were unsuccessful in producing positive outcomes"

# NSP2 Recommendations For Intervention Selection

#### **UNESTABLISHED INTERVENTIONS**

"Unestablished Interventions either have no research support or the research that has been conducted does not allow us to draw firm conclusions about intervention effectiveness for individuals with ASD.

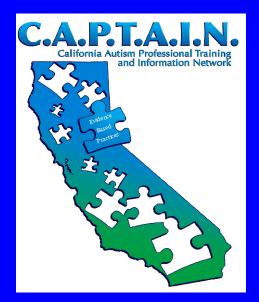
When this is the case, decision-makers simply do not know if this intervention is effective, ineffective, or harmful because researchers have not

conducted any or enough high-quality research.

Given how little is known about these interventions, we would recommend considering these interventions only after additional research has been conducted and this research reveals favorable outcomes for individuals with ASD."

## CAPTAIN Recommends

- Use 27 EBPs from NPDC
- Use 14 Established Interventions for Ages 0-22 from NAC
- Use 1 Established Intervention for Ages 22+ from NAC



### 2 Important ASD EBP Resources

National Professional Development Center (NPDC) **National Autism Center (NAC)** 

- 1. 27 Evidence Based Practices Briefs
- 2. AFIRM
- 3. EBPs for Young Children

Released March 2014

1. National Standards Project Report-Phase NSP2

Released April 2015

http://autismpdc.fpg.unc.edu http://asdtoddler.fpg.unc.edu www.captain.ca.gov

www.nationalautismcenter.org www.captain.ca.gov

### Why Are these EBP resources so important?





### Knowing of these EBPs:

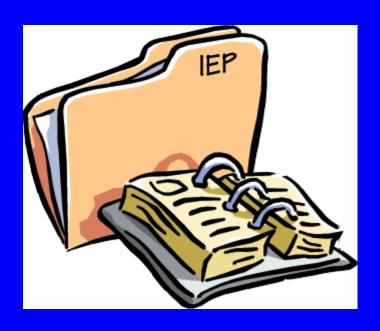
 helps us know which treatments have evidence of effectiveness and which treatments do not

allows us to make informed decisions when we select treatments

provides us with the opportunity to support 
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# Implementing EBPs goes right along with.....

The Individuals with Disabilities Education Act



# IDEA 2004 \* Sec. 300.320 Definition of Individualized Education Program......

- ,,,,,(4) A statement of the special education and related services and supplementary aids and services, based on peer-reviewed research to the extent practicable, to be provided to the child, or on behalf of the child, and a statement of the program modifications or supports for school personnel that will be provided to enable the child--
- (i) To advance appropriately toward attaining the annual goals;
- (ii) To be involved in and make progress in the general education curriculum in accordance with paragraph (a)(1) of this section, and to participate in extracurricular and other nonacademic activities; and
- (iii) To be educated and participate with other children with disabilities and nondisabled children in the activities described in this section;......

# IDEA 2004 Part C: Infants and Toddlers with Disabilities

#### SEC. 635. REQUIREMENTS FOR STATEWIDE SYSTEM

- (a) In General.--A statewide system described in section 633 shall include, at a minimum, the following components:
- (2) A State policy that is in effect and that ensures that appropriate **early intervention services based on scientifically based research**, to the extent practicable, are available to all infants and toddlers with disabilities and their families, including Indian infants and toddlers with disabilities and their families residing on a reservation geographically located in the State and infants and toddlers with disabilities who are homeless children and their families.

#### SEC. 636. INDIVIDUALIZED FAMILY SERVICE PLAN

- (d) Content of Plan.--The individualized family service plan shall be in writing and contain--
- (4) a statement of specific **early intervention services based on peer-reviewed research**, to the extent practicable, necessary to meet the unique needs of the infant or toddler and the family, including the frequency, intensity, and method of delivering services;

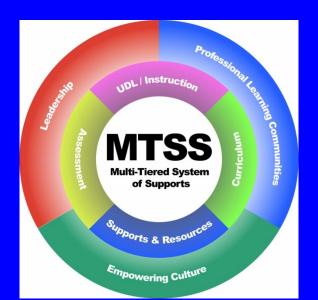
### Every Student Succeeds Act (ESSA) S.1177-290

#### (21) EVIDENCE-BASED.—

- (A) IN GENERAL.—Except as provided in subparagraph
- (B), the term 'evidence-based', when used with respect to a State, local educational agency, or school activity, means an activity, strategy, or intervention that—
- (i) demonstrates a statistically significant effect on improving student outcomes or other relevant outcomes based on—
- I) **strong evidence** from at least 1 well designed and well-implemented experimental study;
- II) moderate evidence from at least 1 well designed and well-implemented quasi-experimental study; or
- (III) **promising evidence** from at least 1 well designed and well-implemented correlational study with statistical controls for selection bias; or
- (ii)(I) demonstrates a rationale **based on high quality research findings** or positive evaluation that such activity, strategy, or intervention is likely to improve student outcomes or other relevant outcomes; and
- (II) includes ongoing efforts to examine the effects of such activity, strategy, or intervention.

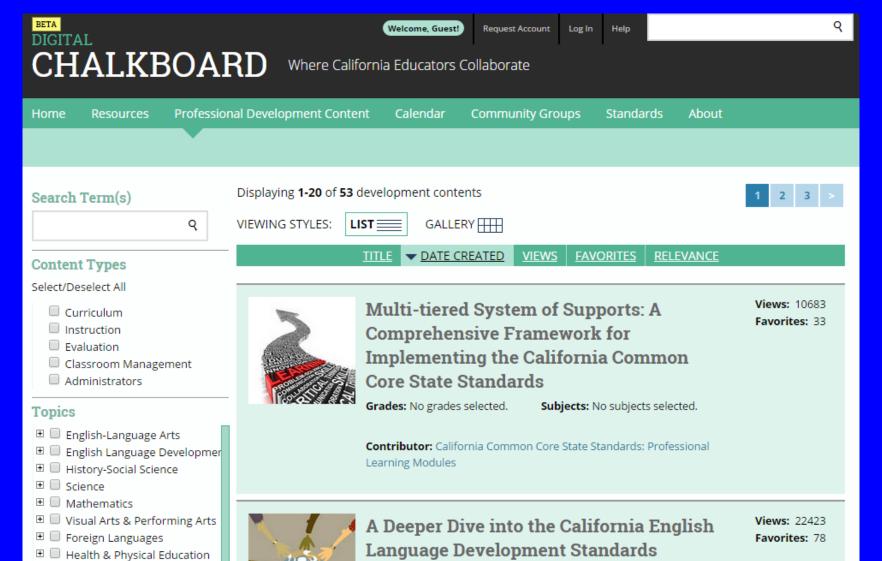
# Implementing These EBPs goes right along with.....

CDE's encouragement of the use of Multi-tiered System of Support (MTSS) as a framework for implementation of CCSS for the success of *all* students.



## Multi-tiered System of Supports (MTSS):

A Comprehensive Framework for Implementing the CCSS www.mydigitalchalkboard.org



# Multi-tiered System of Supports (MTSS): A Comprehensive Framework for Implementing the CCSS www.mydigitalchalkboard.org

# Implementing the CA CCSS Through MTSS

". . . Implementing the Common Core State Standards within a framework of a Multi-Tiered System of Support will help ensure that all students have an evidence-based system of instruction to assist them in achieving success."

(Gamm, Elliott, Halbert, et. al., 2012)





### Multi-tiered System of Supports (MTSS):

A Comprehensive Framework for Implementing CCSS www.mydigitalchalkboard.org

### **MTSS Principles and Practices**

- Early Intervention
- · Multi-tiered model · Integration of
- Evidence-based supports and practices
- Fluidly driven by data
- Individualized interventions
- Principles of UDL

- Differentiated learning
- Integration of intervention and instructional supports
- Classroom instruction aligned with the CA CCSS
- Strong, predictable, and consistent classroom management structures

www.kansasmtss.org





# Implementing EBPs Aligns With CCSS Instruction and UDL



The principles of Universal Design for Learning (UDL) provide a framework for educators to use:

- multiple ways to teach the content
- multiple ways for students to demonstrate knowledge
- multiple ways to engage ALL learners

# Implementing EBPs goes right along with Senate Bill 946.....

Health and Safety Code Section 1374.73 (4)(c)(1) Insurance Code Section 10144.51 (4)(c)(1)

"Behavioral health treatment" means professional services and treatment programs, including applied behavior analysis and evidence-based behavior intervention programs, that develop or restore, to the maximum extent practicable, the functioning of an individual with pervasive developmental disorder or autism and that meet all of the following criteria..."

# Implementing EBPs goes right along with the Lanterman Act.....

- "4686.2. (b) Effective July 1, 2009, notwithstanding any other provision of law or regulation to the contrary, regional centers shall:
- (1) Only purchase ABA services or intensive behavioral intervention services that reflect evidence-based practices, promote positive social behaviors, and ameliorate behaviors that interfere with learning and social interactions..."

# Implementing EBPs goes right along with Lanterman Act.....

"4686.2. (d) (3) "Evidence-based practice" means a decision making process that integrates the best available scientifically rigorous research, clinical expertise, and individual's characteristics. Evidence-based practice is an approach to treatment rather than a specific treatment. Evidence-based practice promotes the collection, interpretation, integration, and continuous evaluation of valid, important, and applicable individual- or family-reported, clinically-observed, and research-supported evidence. The best available evidence, matched to consumer circumstances and preferences, is applied to ensure the quality of clinical judgments and facilitates the most cost-effective care. "

## Teaching About EBPs....

- Requires adherence to best practices in professional development to ensure fidelity of implementation of those EBPs......
- All CAPTAIN Cadre are TRAINERS
- CAPTAIN requires all Cadre members to conduct training and disseminate information about ASD and EBPs
- Let's look at what research says about training practices

#### **Training Outcomes Related to Training Components**

Training Components	Training Outcomes		
	Knowledge of Content	Skill Implementation	Classroom Application
Presentation/ Lecture	10%	5%	0%
Plus Demonstration in Training	30%	20%	0%
Plus Practice in Training	60%	60%	5%
Plus Coaching/ Admin Support Data Feedback	95%	95%	95%

#### Source:

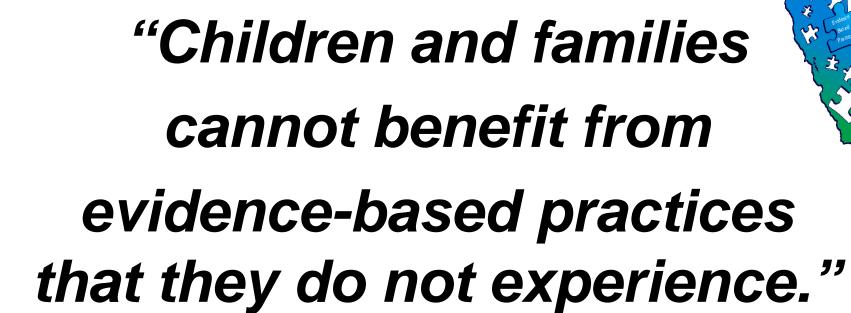
Joyce, B., & Showers, B. (2002). Student achievement through staff development (3rd ed.). Alexandria, VA: Association for Supervision and Curriculum Development.

## Effective Training Should Include

 Presentation that is well balanced between didactic lecture and visual media to support information sharing

Should include some form of demonstration and/or discussions

Should include role playing and/or hands on practice



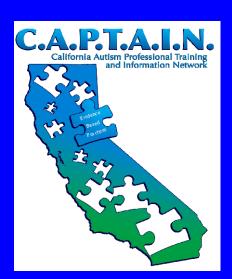
-Dean Fixsen, NIRN, 2006



http://nirn.fpg.unc.edu/

# CAPTAIN Website www.captain.ca.gov

You can easily access all these EBPs, NPDC tools and EBP Resources through the CAPTAIN website!





CAPTAIN
Website
Hosted by
DCN!



Links to

ASD

Resources

CAPTAIN
Social Media
Links

www.captain.ca.gov

autismebp@gmail.com

### **STAY CONNECTED and UP-TO-DATE!**













Services

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www.captain.ca.gov



# Post-Assessment What did you learn?



## POST-ASSESSMENT

What did you learn?





## **END**

### What are Evidence-Based Practices (EBPs) for ASD?

