­­­­­­­ASD Evidence Based Intervention Chart

(Behavioral Packages except for Positive Behavioral Support are not included)

Intervention evidence is combined from NPDC, CMS, National Autism Program (2009; 2015) so may reflect a combined result.

* **National Autism Program two reviews of treatment literature published between 1957 and the Fall of 2015 that targets one of the core characteristics of ASD.**
  + **Includes both group and single case studies**
  + **Phase 2 (2015)** [**http://www.nationalautismcenter.org/national-standards-project/phase-2/**](http://www.nationalautismcenter.org/national-standards-project/phase-2/)
  + **Phase 1 (2009)** [**http://www.nationalautismcenter.org/affiliates/reports.php**](http://www.nationalautismcenter.org/affiliates/reports.php)
  + **Educators’ Manual** [**http://www.nationalautismcenter.org/learning/practitioner.php**](http://www.nationalautismcenter.org/learning/practitioner.php)

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| **Intervention/**  **Strategy** | **Brief Description** | **Purpose(s)** | **Intended for Systematic Review Support** | **Resources** |
| Antecedent-based interventions | Refers to several interventions together (prompting, time-delay, and stimulus control)  Antecedent-based interventions (ABI) include a variety of modifications that are made to the environment/context in an attempt to change or shape a student’s behavior. Common ABI procedures include: 1) modifying educational activities, materials, or schedule (e.g., incorporating student interest), 2) incorporating student choice in educational activities/materials, 3) preparing students ahead of time for upcoming activities (e.g., priming), 4) varying the format, level of difficulty, or order of instruction during educational activities (e.g., varying high and low demand requests), 5) enriching the environment to provide additional cues or access to additional materials (e.g., visual cues, access to sensory stimuli), and 6) modifying prompting and reinforcement schedules and delivery (e.g., varying access to reinforcement prior to educational activities). ABI strategies often are used in conjunction with other evidence-based practices such as functional communication training, extinction, and reinforcement. | Antecedent-based interventions (ABI) include a variety of modifications that are made to the environment/context in an attempt to change or shape a student’s behavior. ABI typically start by identifying both the function of an interfering behavior, along with environmental conditions that may have become linked to a behavior over time. Then ABI are implemented to modify the environment or activity so that the factor no longer elicits the interfering behavior. Common ABI procedures include: 1) modifying educational activities, materials, or schedule (e.g., incorporating student interest), 2) incorporating student choice in educational activities/materials, 3) preparing students ahead of time for upcoming activities (e.g., priming), 4) varying the format, level of difficulty, or order of instruction during educational activities (e.g., varying high and low demand requests), 5) enriching the environment to provide additional cues or access to additional materials (e.g., visual cues, access to sensory stimuli), and 6) modifying prompting and reinforcement schedules and delivery (e.g., varying access to reinforcement prior to educational activities). | Established research for ages 2-22 | http://www.autisminternetmodules.org/user\_mod.php |
| Augmenta-tive and Alternative Communica-tion | Strategies, devices, or processes used to support people who are minimally verbal | Provides ways for children who struggle to communicate verbally to express their needs across various functions (requests, greetings, protests, descriptions, providing information ,etc). | Established/Emerging because of lack of empirically designed studies not because of lack of results | http://praacticalaac.org/praactical/how-i-do-it-autism-and-aac-five-things-i-wish-i-had-known-by-deanne-shoyer/ |
| Cognitive Behavioral Interventions | Cognitive behavioral intervention (CBI) is based on the belief that behavior is mediated by cognitive processes. Learners are taught to examine their own thoughts and emotions, recognize when negative thoughts and emotions are escalating in intensity, and then use strategies to change their thinking and behavior. These interventions tend to be used with learners who display problem behavior related to specific emotions or feelings, such as anger or anxiety. Cognitive behavioral interventions are often used in conjunction with other evidence-based practices including social narratives, reinforcement, and parent-implemented intervention. | CBI is used to address social, communication, behavior, social cognitive, adaptive, and mental health outcomes. | Emerging to established evidence for elementary school-age learners (6-11 years) to high school-age learners (15-18 years) with ASD. | https://pro.psychcentral.com/child-therapist/2016/01/cognitive-behavioral-interventions-for-children-with-autism-spectrum-disorder-asd/ |
| Computer-aided/Technology Interventions | Applications of technology-based interventions with children with autism. | Various tools from ipads, computer based programs, video modeling. | Emerging | <https://www.iidc.indiana.edu/pages/the-use-of-technology-in-treatment-of-autism-spectrum-disorders>  <https://www.autismspeaks.org/family-services/resource-library/online-learning-tools-software> |
| Joint attention intervention | Joint attention occurs when two people share a focus on objects or events in the environment and both aware of their joint attention. Working on joint attention can take varied forms including pausing for connection during joint activity routines and then engaging with enthusiasm and joy. | Joint attention occurs when two people share a focus on objects or events in the environment. Typically developing children both initiate and respond to joint attention by the time they are about 9 months old, and this skill helps them learn to communicate back and forth with another person. In contrast, young children with autism seldom display joint attention—a problem that hinders them from learning to communicate. Therefore, interventions to improve joint attention may be a priority in early intervention programs for these children. Most research is done with young children but also shows it is never too late. | Established | <https://www.amazon.com/Relationship-Development-Intervention-Young-Children-ebook/dp/B00336ES92/ref=sr_1_1?ie=UTF8&qid=1499949418&sr=8-1&keywords=relationship+development+intervention+with+young+children>  <https://www.amazon.com/Relationship-Development-Intervention-Children-Adolescents/dp/1843107171/ref=sr_1_fkmr0_1?ie=UTF8&qid=1499949478&sr=8-1-fkmr0&keywords=relationship+development+intervention+with+older+children> |
| Naturalistic Interventions | Naturalistic interventions are behavior teaching procedures that occur in the context of naturally occurring activities. Intervention procedures embed teaching opportunities within the environment where the skills will be needed. | This is based on taking advantage on environmental activities. Setting up motivating planned activities, and choices making during routine activities. | Established and can be done at all ages. | <http://autismpdc.fpg.unc.edu/sites/autismpdc.fpg.unc.edu/files/Naturalistic_Steps.pdf>  <http://asdtoddler.fpg.unc.edu/naturalistic-intervention/module-naturalistic/introduction-naturalistic-module/overview-naturalist-0> |
| Parent implemented interventions | Interventions which are administered by parents/caregivers. The following is from Autism Speaks: **Allow easy access by creating interventions that fit into families’ busy lives:** Individual or group interventions, choice of home or clinic based, technology-mediated alternatives (e.g., video conferencing, online coaching), flexible scheduling, financial supports as necessary, child care for siblings**Accommodate different learning styles by presenting information in multiple modalities:** Didactic workshops, worksheets with illustrations and visual supports, use of simple language without terminology, take-home reading materials, video models and examples, use of videos to illustrate developmental milestones, provide content in small increments**Support deep learning and mastery of intervention strategies though practice opportunities:** Video feedback, live performance feedback and coaching (e.g., with ‘bug in the ear’), live modeling   * Support generalization: Homework assignments, reminders that can be posted throughout the home (e.g., on the refrigerator) or are sent to the parent’s cell phone, use of technology (e.g., apps) to monitor implementation and/or collect data **Implementing the intervention within the families’ natural environment:** Embedding intervention strategies in natural family routines, take intervention into the community, use the child’s own toys and build on the child’s preferred activities **Engage families as partners:** Build upon families’ strengths, listen, encourage parents to ask questions, elicit the parents’ ideas on what works and what does not work, treat parents as equal, explain concepts in the parents’ language, elicit parental values, goals and concerns, ask parents about their child’s strengths and needs, meet the parents where they are, use a collaborative approach driven by the parents’ priorities, provide encouragement to inspire confidence, provide information based on the parents’ priorities and needs, recognize what parents do well**Encourage reflection and self-evaluation:** Ask reflection questions, review videos of parent-child interaction, use parent journals or diaries * **Create opportunities for parents to network:** Play groups, parent support groups, social networking online (e.g., chat rooms, blogs), parent workshops, peer mentors for parents * **Engage the entire family:** Engage mothers, fathers, siblings, and the extended family, incorporate family therapy approaches, evaluate interaction involving more than two family members * **Embrace differences on culture and language:** Provide bi-cultural and bi-lingual staff, intervention goals should be consistent with family values * **Support the parents emotionally:** Anticipate challenging situations and feelings, support the family emotionally throughout the diagnostic process, ensure a ‘good’ diagnostic experience, listen to the parents’ concerns and understand their goals and concerns, help parents to move beyond feelings of guilt and blame | Used in all interventions; shown to help generalization | Established/Emerging . Most research is on small children but applicable to all ages. | <https://www.sciencedaily.com/releases/2014/11/141104091030.htm>  <https://www.asatonline.org/research-treatment/clinical-corner/encouraging-parent-participation-in-home-based-intervention/> |
| Peer Mediated Interventions | Peer-mediated instruction is used to teach typically developing peers ways to interact with and help learners with ASD acquire new social skills by increasing social opportunities within natural environments. With PMII, peers are systematically taught ways of engaging learners with ASD in social interactions in both teacher-directed and learner-initiated activities. | Used with a variety of interventions including social, play and academic skills. | Established; most studies on young children and elementary but one with middle and high school | http://autismpdc.fpg.unc.edu/sites/autismpdc.fpg.unc.edu/files/imce/documents/Peer-Mediated-Complete10-2010.pdf |
| Picture Exchange Communication System | AAC that uses a very specific training process used for children with limited verbal abilities. | Teaches communication by exchange of objects/pictures/printed word. Taught in phases that have been broken down into specific stages. | Emerging/Established for children of all ages depending on need. | http://pecsusa.com/pecs.php |
| Pivotal Response Training | Works on development of communication, language and positive social behaviors and relief from disruptive self-stimulatory behaviors. | Works on “pivotal” areas of a child's development. It incorporates motivation, response to multiple cues, self-management and the initiation of social interactions. Because it works on multiple areas, it is seen as an efficient process. | Established for all ages | http://www.autismprthelp.com/ |
| Self-Management | Helps children learn to independently regulate their own behaviors and act appropriately in a variety of home, school, and community-based situations. | Works on self-awareness of behavior, appropriate replacement, generalization of many different types of abilities. | Established for all ages | http://www.pediastaff.com/blog/self-management-for-students-with-autism-spectrum-disorders-4117 |
| Social Communication Interventions | A collection of many interventions that address social communication with children with autism. | Works on use of social communication across settings, people and materials. | Emerging/established depending on review | <http://researchautism.net/social-communication-interventions> |
| Social Stories | Stories written in a very specific manner that is and exchange of information to address social understanding, challenges, fears, and many other things. | Must be trained to write social stories appropriately. | Established | http://carolgraysocialstories.com/ |
| Video Modeling | Video modeling is a mode for teaching behaviors or skills that includes using a video recording as a model. Video self-modeling is when the student views a video recording of others or self performing the behavior or skill successfully. | Video modeling involves taking a video of the targeted ability. It uses the context of the ability and addresses multiple skills at one time. | Established for children of all ages and adults | https://www.iidc.indiana.edu/pages/video-self-modeling |
| Visual Schedules | Visual represented order of activities. Can represent the whole day or a particular part of the day or and particular activity. | A visual schedule must use a symbol that the child understands (objects, photographs, line drawings, or written word). Should be clear and within the children attention. Can include first/then up to elaborate schedules. | Established for children and adults for all ages. | https://www.iidc.indiana.edu/pages/using-visual-schedules-a-guide-for-parents |
| Visual Supports | A variety of visual tools that provide support for comprehension and abilities at school and home. | Children with ASD learn well with materials presented visually. These can include graphic organizers, affirmation cards, sticky note reminders, etc. | Emerging/Established depending on aid targeted. | https://www.iidc.indiana.edu/pages/visualsupports https://www.autismspeaks.org/family-services/resource-library/visual-tools |