

Index

- acquired brain injury (ABI).
See also adolescents with ABI's transition to adulthood; family-centered interventions
 defined, 124
 executive functioning interventions for typical children for, 82–83
 executive functioning problem solving interventions for, 81–82
 family burden from neurocognitive consequences of, 100
 family conflict and dysfunction from, 100, 101
 family depression and distress from, 100
 family functioning and parenting and cognitive and behavioral outcomes, 101
 memory impairments, 30
 memory impairments (implicit and explicit memory), 31
 sibling impact, 101
 adolescents with ABI's transition to adulthood, 208
 American Academy of Pediatrics (AAP) framework for transition, 192–93
 assessment and evaluation process for, 196, 197
 assessment and evaluation process for as collaborative effort, 197
 behavioral management and self-regulation rating scales, 201–2
 behavioral regulation interventions, 205
 case example of, 207–8
 challenges in, 190
 clinical interview and evaluation questions, 197–200
 clinical programs and resources, 206–7
 cognitive assessment test battery guidelines and recommended tests, 200–1
 decision-making capacity assessment and, 202–3
 executive functioning interventions, 204–5
 medical management in transition plan, 192–93
 need to assess and treat cognitive impairments in transition, 193
 need to assess and treat EF impairments in transition, 193–94
 planning considerations at initiation of transition, 194–96
 self, home, life management skills in transition plan, 190–92
 social competence interventions, 205–6
 advocacy in service delivery
 CDC study on incidence and prevalence of pediatric TBI, 242
 in medically based services, 244
 national advocacy programs, 251
 recommendations for future federal and state policies, 251–53
 school-based interventions and, 248
 TBI Acts of 1996 and 2014 and, 241
 vocational rehabilitation programs, 250
 AixTent program, 19
 American Academy of Neurology (AAN) clinical practice guidelines for evidence-based practice recommendations, 8
 American Academy of Pediatrics (AAP), 192–93
 Amsterdam Memory and Attention Training for Children (Amat-C), 17, 36, 37
 anosodiaphoria, 52, 53
 anosognosia, 52, 53
 aphasia, 2, 144–45
 attention and attention interventions, 22
 case example of, 19–22
 clinical applications and practical concerns for cognitive rehabilitation programs, 19
 commercially available cognitive rehabilitation programs, 10–16
 definitions, 5–6
 early plasticity and vulnerability and, 6–7
 measurement of attention and, 8
 meta-analyses of current research on, 8–10
 non-commercially available cognitive rehabilitation programs, 16–19
 practice recommendations, classifications and definitions, 8–9
 setting of intervention implementation and, 7
 studies on transfer of training effects and age of participants, 7
 theoretical approaches to deficits in attention, 7
 attention deficit hyperactivity disorder (ADHD), 170, 242. *See also* attention and attention interventions

- attention deficit hyperactivity disorder (ADHD) (*cont.*)
 EF interventions for, 82
 pharmacological interventions for, 160–61
- Attention Process Training (APT), 12, 36
- Attenzione and Concentrazione program, 19
- autism spectrum disorder and
 ASD interventions, 2.
See also language, cognitive and social communication impairments
- case study of toddler intervention, 145–46
- Early Social Interaction* (ESI) project for, 128
- PECS as, 129
- Social ABCs* program for, 129
- Treatment and Education of Autistic and Related Handicapped Children (TEACCH) and, 135
- Behavior Rating Inventory of Executive Function, Second Edition (BRIEF), 201
- billing and reimbursement issues, 231, 233
 authorization, 228–29, 237
 authorization (peer-to-peer reviews), 229–30
 case example of, 231–32
 cognitive rehabilitation codes, 217–18
- Current Procedural Terminology (CPT) codes, 214–16
 documentation, 230–31
 health and behavior CPT codes, 218–24
 psychotherapy CPT codes, 216–17
 relative value units and, 224–26
 sample letter to referring physician and, 234
 understanding external systems, 226–28
 understanding internal systems, 226
- Brain Injury Family Intervention for Adolescents (BIFI-A), 109
- brain training, 2
- BrainSTEPS (school-based intervention), 248–49
- Captain's Log MindPower Builder, 15
- Center for Brain Injury Research and Training (CBIRT, Oregon), 249
- Center for Disease Control (CDC), 242
- Center for Outcome Measurement in Brain Injury, 201
- Chomsky, Noam, 123
- CogMed Working Memory Training, 13
- cognitive deficits
 effects of on learning, 169–70
 TBI's and, 242
- cognitive rehabilitation
 case example of, 19–22
 defined, 1
 effective interventions defined, 77
 neurodevelopmental context of interventions and, 3
- cognitive rehabilitation codes, 217–18
- Cognitive Remediation Program (CRP), 16, 35, 36, 37
- CO-Kids (school-based intervention, Colorado), 249
- Collaborative Brain Injury Intervention, Positive Everyday Routines* (Feeney and Ylvisaker), 205
- Columbus City Schools Traumatic Brain Injury Project and Concussion Management Program (Ohio), 250
- communication. *See* language, cognitive and social communication impairments
- community-based services, 243
- Computerized Progressive Attention Training (CPAT) program, 18
- Constraint Induced Movement Therapy (CIMT), 57, 59–60
- constraint-induced language therapy (CILT), 145
- Current Procedural Terminology (CPT) codes, 214–16
 psychotherapy CPT codes, 216–17
- Diamond's developmental model of EF, 75
- Dysexecutive Questionnaire (DEX), 201
- early plasticity and vulnerability, 6–7
- Early Social Interaction* (ESI) project, 128
- emotional and behavioral difficulties
 TBI's and, 242
- environmental supports, for hemispatial neglect, 64
- errorless learning techniques, 42–43
- executive functioning (EF)
 assessment, 76–77
 cognitive flexibility and, 76 defined, 75
 Diamond's developmental model of, 75
 inhibitory control of attention and behavior and working memory, 75–76
 need to assess and treat deficits in adolescents with ABI's in transition to adulthood plan, 193–94
- executive functioning interventions, 90
 for adolescents with ABI's transition to adulthood, 204–5
- Behavior Rating Inventory of Executive Function, Second Edition (BRIEF), 201
 case study of for TBI, 85–90
 for college students with ADHD, 82
 developmental considerations and family and school support in, 77–78
 errorless learning and self-awareness development and, 80–81
 Executive Functional Performance Test, 201

- four key approaches to, 78–79
 future research
 recommendations, 91
 Goal-Plan-Do-Review script
 for, 79–80
 lack of validated methods
 for, 78
 limitations of published
 studies and lack
 of evidence-based
 interventions and, 84–85
 problem solving interventions
 for ABI, 81–82
 self-regulatory scripts
 for, 79–80
 special school curricula,
 physical activity and stress
 reduction for typical
 children, 82–83
 strategy learning for typical
 children as, 83
 Ylvisaker's
 recommendations for
 EF and strategy learning
 interventions, 83–84
- family functioning
 ABI interventions and, 101
 ABI's and parenting and
 cognitive and behavioral
 outcomes, 101
 ABI's effect on, 100–1
 family-centered interventions,
 2, 81, 117, 118
 cognitive behavioral and
 problem solving for
 coping, 102–3
 considerations in
 selecting, 113
 family problem-solving
 therapy (FPST), 103–9,
 113–16
 parenting skills interventions,
 109–12, 116–17
 psychoeducation and peer
 support, 102
 telehealth interventions
 vs. traditional in-clinic
 sessions, 113
 Federal Traumatic Brain Injury
 Act (TBI Act), 241
 Feeney, Timothy, 79, 205
 Frontal Systems Behavior Scale
 (FrSBe), 201
 Functional Language
 Intervention Program for
 Narratives (FLIP-N), 135
- Goal Attainment Scaling
 (GAS), 143
 Goal-Plan-Do-Review
 script, 79–80
- hemispatial neglect, 2, 69
 assessments for, 53–55
 case study of interventions
 for motor neglect and
 cognitive deficits, 67–69
 case study of interventions
 for visual and motor
 neglect, 64–66
 causes in adults, 51
 causes of in infants and
 children, 51, 52
 in children vs. adults, 52
 cognitive, motor, and sensory
 impairments co-occurrence
 with, 52
 defined, 51
 environmental supports for, 64
 evidence-based
 intervention comparisons
 and combination
 interventions, 58–59
 evidence-based interventions
 for adults, 55–58
 evidence-based
 interventions for children,
 59–60
 evidence-based
 interventions for children
 (modifications from adult
 interventions for), 60–64
 future research
 recommendations, 69
 impact on daily and adaptive
 functioning, 53
 plasticity and recovery of
 function in, 51
 recovery trajectory of, 53
 types of, 51
 holistic intervention, 2
- Individual Education Plans
 (IEPs), 178–80, *See*
 also school-based
 interventions; Section 504
- Individuals with Disabilities
 Education Act (IDEA),
 175, 182
 assessment and eligibility
 process in, 178
 comparison with Section
 504, 175
 FAPE defined under, 177
- IEPs and, 178–80
 13 categories of disability
 under, 176
 International Classification of
 Functioning, Disability
 and Health (ICF, WHO),
 77, 122
- language, cognitive and
 social communication
 impairments, 122, 148.
See also autism spectrum
 disorder and ASD
 interventions
 ABIs as target population
 focus, 124
 academic and family/social
 environments impact, 122
 aphasia and, 144–45
 case study of intervention
 for 8-year old with
 TBI, 146–48
 case study of toddler ASD
 intervention, 145–46
 definition of cognitive-
 communication and, 123
 definition of language and, 123
 definition of social
 communication and, 123
 functional goal setting
 and, 124
 future research
 recommendations, 148
 ICF framework and, 122
 in infants and toddlers (0–4
 years old), 125
 in infants and toddlers
 (naturalistic,
 developmental, behavioral
 interventions), 125–29
 in infants and toddlers
 (PECS and PRT ABA
 interventions), 129
 middle and high school
 years (cognitive
 communication
 interventions), 141
 middle and high school
 years (communication
 partner training
 interventions), 144
 middle and high school
 years (language
 and literacy
 interventions), 139–41
 middle and high school
 years (pragmatics and

- language, cognitive and
 social communication
 impairments (*cont.*)
 social communication
 interventions), 142–44
 middle and high school
 years (13–19), 137–38
 need for collaborative
 multidisciplinary
 teamwork for, 123–24
 preschool and early
 school-age years
 (4–7 years), 129–30
 preschool and early school-
 age years (peer-mediated
 interventions), 130–31
 school age (communication
 partner training
 interventions), 137
 school age (narrative skills
 interventions), 135
 school age (7–13), 131–35
 school age (social
 communication
 and peer support
 interventions), 136
 language therapy, 2
 learning and learning
 disabilities. *See also*
 school-based
 interventions; school
 performance
 effect of cognitive deficits
 on, 169–70
 high-school drop-out and
 employment rate and, 170
 LEGO® Therapy, 136
 limb activation training, for
 hemispatial neglect, 57, 62
 Living with Aphasia-Framework
 for Outcome Measurement
 (A-FROM), 145
- Malec's Goal Attainment
 Scaling, 124
 Medicaid, 244
 medically based cognitive
 rehabilitation
 services, 243–44
 gaps and barriers in, 246
 gaps and barriers associated
 with transition to
 the educational
 system, 246–48
 memory
 developmental
 considerations, 30
 memory acquisition
 process, 28
 terminology and subtypes
 of, 28, 30
 memory impairments and
 interventions, 46
 ABI and, 30
 case study of for TBI, 44–45
 compensatory strategies, 32
 errorless learning
 techniques, 42–43
 evidence for efficacy of
 techniques for in adults
 with TBI and stroke, 32
 external memory aid use
 recommendations, 41–42
 external memory aids, 37–40
 future research
 recommendations
 and, 46
 importance of motivation
 in, 43–44
 internal memory strategy
 training, 34–37
 limitations of current
 research in, 46
 memory impairments
 (implicit and explicit) in
 ABI, TBI and NDD, 31
 NDD and, 28, 31
 need for neuropsychological
 assessment prior to, 31
 pediatric TBI and, 30
 restorative strategies, 32
 summary of intervention
 techniques, 32, 33t2.2
- national advocacy
 programs, 251
 National Association of
 State Head Injury
 Administrators
 (NASHIA), 251
 National Collaborative on
 Children's Brain Injury
 (NCCBI), 251
 neurodevelopmental
 disabilities (NDD)
 memory impairments
 (implicit and explicit
 memory), 31
- Pay Attention! Attention
 Training for Children, 13
 pharmacological interventions,
 2, 154, 164
 case example of, 163–64
- for agitation and
 confusion, 159–60
 future research
 recommendations
 and, 164
 for impaired arousal and
 responsiveness, 158–59
 for improved cognitive
 functioning and
 ADHD, 160–61
 lack of FDA approval for use
 for pediatric ABIs, 154
 lack of research on, 154
 for mood and behavior
 problems, 161–62
 for sleep disorders, 162–63
 table of medications,
 medication mechanisms,
 symptoms used for, and
 side effects, 154, 155t7.1,
 157t7.1
- Picture Exchange
 Communication System*
 (PECS), 129
Pivotal Response Training
 (PRT), 129
- plasticity
 early, 6–7
 in hemispatial neglect, 51
 prism adaptation (PA)
 method, for hemispatial
 neglect, 58, 63
 Project BRAIN (school-
 based intervention,
 Tennessee), 249
- reading interventions, 140
 recovery continuum, 6
 RehaCom program, 19
 relative value units
 (RVUs), 224–26
 Repetitive Transcranial
 Magnetic Stimulation
 (rTMS), 91
 Rivermead Behavioural
 Memory Test-Third
 Edition, 201
- school-based interventions,
 2, 182, 243. *See also*
 Individual Education
 Plans (IEPs); Section 504
 advocacy in service delivery
 recommendations, 251–53
 BrainSTEPS
 (Pennsylvania), 248–49
 case studies of, 180–81

- Center for Brain Injury Research and Training (CBIRT, Oregon), 249
- CO-Kids (Colorado), 249
- Columbus City TBI and Concussion Management programs (Ohio), 250
- evidence-based interventions, 171–75
- gaps and barriers associated with transition from medically based services to, 246–48
- Project BRAIN (Tennessee), 249
- reading interventions, 140
- service delivery model of, 244–45
- Treatment and Education of Autistic and Related Communication Handicapped Children (TEACCH) and, 135
- writing interventions, 139
- school performance, 182
- effect of fatigue, depression and anxiety from TBI on, 170–71, 242
- working memory and, 169–70
- Section 504, 175, 182. *See also* Individual Education Plans (IEPs); school-based interventions
- accommodations provided by, 176
- comparison with Section 504, 175
- defined, 176
- eligibility requirements for services, 176
- Self-regulated Strategy Development (SRSD), 139
- Social ABCs program, 129
- Social Communication Intervention Program (SCIP), 136
- Social Competence Intervention (SCI), 143
- speech language pathologists (SLPs), 123–24
- Strategic Memory Advanced Reasoning Training (SMART), 141
- stroke, 2
- aphasia and, 145
- hemispatial neglect and, 51
- memory impairment
- intervention evidence for efficacy of techniques for adults with, 32
- Supported Conversation for Adults (SCA), 145
- Teen Online Problem Solving (TOPS), 108
- telehealth interventions, 113, 118
- Texas Functional Living Scale, 201
- theatre training, 142
- transcranial direct current stimulation (tDCS), 91
- traumatic brain injury (TBI). *See also* family-centered interventions
- advocacy in service delivery and CDC study on incidence and prevalence of, 242
- advocacy in service delivery and TBI Act of 1996 and 2014, 241
- cognitive impairments associated with, 242
- defined, 124
- effects of fatigue, anxiety and depression from on school performance, 170–71, 242
- executive functioning intervention case study for, 85–90
- executive functioning strategy learning interventions for typical children for, 83
- hemispatial neglect and, 51
- memory impairment intervention case study, 44–45
- memory impairment intervention evidence for efficacy of techniques for adults with, 32
- memory impairments, 30
- memory impairments (implicit and explicit memory), 31
- offending behavior and convictions and, 243
- Treatment and Education of Autistic and Related Communication Handicapped Children (TEACCH), 135
- unemployment, rates for ABIs, 243
- Virtual Reality social cognition training (VR-SCT) program, 143
- visual scanning training, for hemispatial neglect, 56, 62
- vocational rehabilitation programs, 250
- vulnerability, early, 6–7
- Williams syndrome, 31
- WM. *See* working memory and working memory interventions
- Workforce Investment Opportunity Act (WIOA) Re-authorization Act of 2014, 250
- working memory and working memory interventions, 22, 169
- case example of, 19–22
- clinical applications and practical concerns for cognitive rehabilitation programs, 19
- commercially available rehabilitation programs, 10–16
- definitions, 5–6
- early plasticity and vulnerability and, 6–7
- measurement of WM and, 8
- meta-analyses of current research on, 8–10
- non-commercially available rehabilitation programs, 16–19
- practice recommendations, classifications and definitions, 8–9
- school performance and, 169–70
- setting of intervention implementation and, 7
- studies on transfer of training effects and age of participants, 7
- theoretical approaches to deficits in WM, 7
- writing interventions, 139
- Ylvisaker, Mark, 78, 79, 81, 83, 205