

EVIDENCE-BASED PRACTICE TOOLS FOR PRACTICING CLINICIANS

National Center for Evidence-Based Practice in Communication Disorders
(N-CEP)

FINANCIAL/NON-FINANCIAL DISCLOSURES

- Financial
 - Mariel Solomon is a clinical research associate with ASHA's National Center for Evidence-Based Practice in Communication Disorders (N-CEP) and receive a salary from ASHA.
- Non-financial
 - Mariel Solomon is an ASHA member.

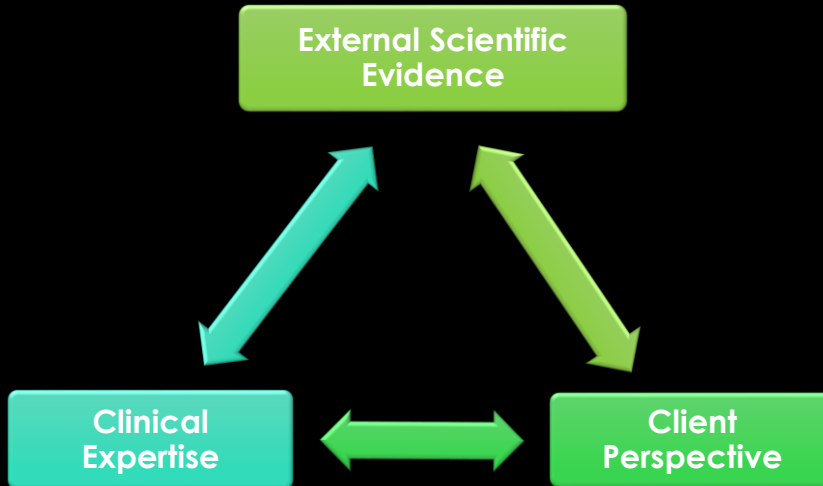
LEARNING OUTCOMES

- Define and identify components of evidence-based practice
- Describe the four steps of evidence-based practice
- Define and create a PICO question
- Identify factors that may influence study quality
- Use ASHA resources to enhance evidence-based practice

AGENDA

- I. Definition and importance of evidence-based practice (EBP)
- II. The Four Steps of EBP Process
- III. Resources for EBP
 - I. External EBP resources
 - II. ASHA Resources
- IV. Clinical Scenarios

WHAT IS EVIDENCE-BASED PRACTICE?



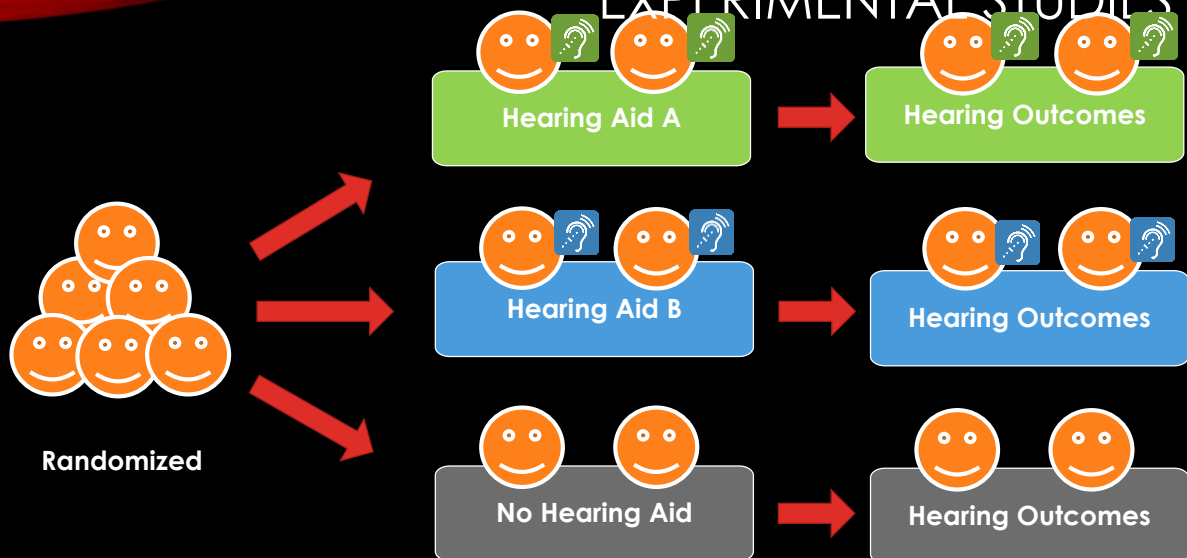
EXTERNAL SCIENTIFIC EVIDENCE

EXTERNAL SCIENTIFIC EVIDENCE: INDIVIDUAL STUDIES

Study designs

- Experimental: variable(s) altered by investigator and a controlled comparison between two or more groups
- Quasi-experimental: non-randomized, controlled comparison
- Non-experimental or observational: no altered variables and no controlled comparison

EXTERNAL SCIENTIFIC EVIDENCE: EXPERIMENTAL STUDIES



EXTERNAL SCIENTIFIC EVIDENCE: OBSERVATIONAL STUDIES



EXTERNAL SCIENTIFIC EVIDENCE: SYNTHESIZED EVIDENCE

Systematic Reviews



Meta-Analysis



Effect Size (ES)- Statistical measure of the size of a relationship that is being investigated (e.g., Cohen's d , likelihood ratio, odds ratio)

Confidence Interval (CI)- a range of values in which the true value lies with specified probability

EXTERNAL SCIENTIFIC EVIDENCE: SYNTHESIZED EVIDENCE VS INDIVIDUAL STUDIES

Synthesized Evidence

Advantages

- Compare outcomes of studies
- Transparency
- More precise estimate of the effect of an intervention

Disadvantages

- Relies on an already existing body of literature
- Heterogeneity across studies

Individual Studies

Advantages

- More topics available

Disadvantages

- Small sample size
- Methodology (poorly-designed study)
- Bias

EXTERNAL SCIENTIFIC EVIDENCE: CLINICAL PRACTICE GUIDELINES

- Developed by group of experts regarding specific clinical topic or population
- Optimize delivery of services
- Evidence-based recommendations
 - Recommendations based on systematically searched and appraised research literature

CLINICAL EXPERTISE

CLINICAL EXPERTISE

Evidence internal to the clinical practice (Dollaghan, 2007)

- Theoretical knowledge, clinical training, expertise
 - ASHA's Practice Portal
 - ASHA's Practice Policy documents
 - Clinical practice guidelines can be consensus-only documents or contain consensus-based recommendations



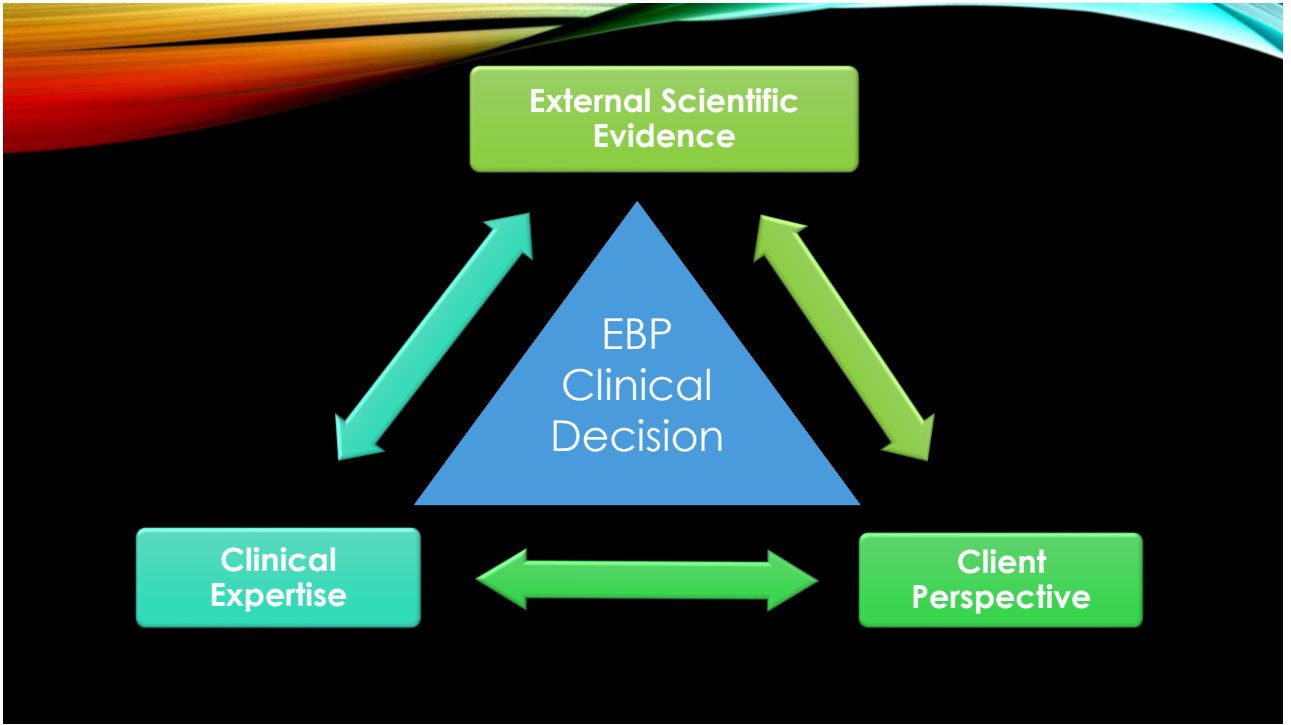
Dollaghan, C.A. (2007). *The Handbook for Evidence-Based Practice in Communication Disorders*. Baltimore, MD: Brookes Publishing.

PERSPECTIVES

CLIENT PERSPECTIVES

- What are the opinions of the client, family, or caregiver?
 - An intervention may be supported with high quality external evidence and clinical expertise, but the intervention does not truly fit into the client's preferences or culture
 - Interventions address outcomes that are important to or of interest to our clients or patients







STEP 1: FRAMING THE CLINICAL QUESTION



FRAMING THE QUESTION

Population

Intervention

Comparison

Outcome

FRAMING THE QUESTION

Population:

- military veterans with acquired brain injury
- individuals with speech and language impairment

Intervention:

- diet modifications
- hearing devices
- receptive-expressive language assessments

Comparison:

- no treatment
- sham or fake treatment
- treatment-as-usual

Outcome:

- vocabulary ability
- receptive language skills
- safe swallowing



FRAMING THE QUESTION: PICO EXAMPLE

In individuals with dementia what is the effect of spaced-retrieval memory training compared to no treatment on memory skills in activities of daily living?

Population: individuals with dementia

Intervention: spaced-retrieval memory training

Comparison: no treatment

Outcome: memory skills in activities of daily living

STEP 2: FINDING THE EVIDENCE

FINDING THE EVIDENCE

What is the most effective treatment to improve vertigo for individuals with lateral canal benign paroxysmal positional vertigo (BPPV) ?

Search Keywords

- Lateral canal BPPV
- Interventions
- Maneuvers
- Vertigo

FINDING THE EVIDENCE

ONLINE DATABASES AND RESOURCES

Cochrane
Library

Education
Resources
Information
Center (ERIC)

PubMed

ASHAWire

FINDING THE EVIDENCE

Four peer-reviewed ASHA journals

- *American Journal of Audiology*
- *American Journal of Speech-Language Pathology*
- *Journal of Speech, Language, and Hearing Research*
- *Language, Speech, and Hearing Services in Schools*

ASHA members can access; various subscriptions available for purchase by non-members

<http://pubs.asha.org>

STEP 3: ASSESSING THE EVIDENCE

ASSESSING THE EVIDENCE:



Were subjects randomly allocated to intervention or control group?

Was there blinding of assessors and clinicians?

Was there sufficient sampling during baseline & treatment phase?

Was there selective reporting of outcomes?

Did participants adhere to the intervention protocol?

ASSESSING THE EVIDENCE: APPRAISING SYNTHESIZED RESEARCH

Assessing the Methodological Quality of Systematic Reviews (AMSTAR)

- A priori design of question and inclusion/exclusion criteria
- Comprehensive literature search
- Assessment of quality of each study and extraction of participant characteristics

Critical Appraisal tools- Oxford Centre for Evidence- Based Medicine (CEBM)

- Provided inclusion or exclusion criteria
- Assessment of quality of each study
- Summary of results provided

National Institutes of Health (NIH)

- Predefined and specified eligibility criteria
- Quality of included study rated independently by two or more reviewers
- Characteristics and results of each study included

Critical Appraisal Skills Programme (CASP)

- Authors searched thoroughly for the relevant studies
- Authors thoroughly assessed the quality of included studies
- Authors clearly reviewed and provided overall results

ASSESSING THE EVIDENCE: APPRIASING PRACTICE GUIDELINES

Appraisal Guidelines for Research and Evaluation II (AGREE; AGREE Next Steps Consortium, 2009)

Six Domains

1. Scope and Practice
2. Stakeholder Involvement
3. Rigor of Development
4. Clarity of Presentation
5. Applicability
6. Editorial Independence



STEP 4: MAKING THE CLINICAL DECISION

MAKING THE CLINICAL DECISION



BARRIERS...

Quality of evidence

Time

Availability of evidence

Amount of existing research

ASHA RESOURCES FOR EBP

ASHA PRACTICE PORTAL

Dementia

Overview

- Primary Versus Secondary Dementia
- Mild Cognitive Impairment
- Early Onset
- Relationship Between Hearing Loss and Dementia

See the **Dementia Evidence Map** for summaries of the available research on this topic.

Dementia is a syndrome resulting from acquired brain disease and characterized by progressive deterioration in memory and other cognitive domains (e.g., language, judgment, abstract thinking, and executive functioning). Although the cognitive profiles of individuals diagnosed with dementia vary somewhat by etiology, the degree of deterioration represents a decline from previous levels of functioning and is sufficient to interfere with social and occupational functioning.

The cognitive decline associated with dementia affects an individual's ability to comprehend and produce linguistic information. Additionally, behavioral problems that develop as a result of the neuropathology (e.g., paranoia, hallucinations, and repetitiveness) may interfere with communication.

The cognitive and behavioral symptoms of dementia are differentiated from those of

- delirium, an acute state of confusion associated with temporary, but reversible, cognitive impairments (Mahendra & Hopper, 2013);
- age-related memory decline;
- other conditions that have inconsistent symptoms or are temporary and/or treatable (Bourgeois & Hickey, 2009), including:
 - infections (e.g., urinary tract infection [UTI], meningitis, syphilis);
 - toxicity (e.g., drug-induced dementia, toxic metal exposure);
 - neurodegenerative due to psychiatric disorders (e.g., depressive, attentional/ anxiety disorder)

Practice PORTAL

PRACTICE PORTAL HOME
CLINICAL TOPICS
PROFESSIONAL ISSUES

Thanks remaining periods to give Ed peace

Searching ASHA's work's wonders

ASHA's membership

LEARN MORE

ASHA's resources

ASHA's services

Print This Entire Topic

About This Content

- Resource for a growing list of clinical topics and professional issues
- A guide for clinical decision-making
- Used in conjunction with other resources

www.asha.org/practice-portal

ASHA EVIDENCE MAPS

- Searchable online tool
 - External Scientific Evidence
 - Clinical Expertise
 - Client/Patient Perspectives
- From systematic reviews, meta-analyses, and clinical practice guidelines

ASHA.org

CAREERS | CERTIFICATION | PUBLICATIONS | EVENTS | ADVOCACY | CONTINUING EDUCATION | PRACTICE MANAGEMENT | RESEARCH

Evidence Maps

Welcome to the Evidence Maps, the latest evidence at your fingertips.

Evidence Maps | Future Evidence Maps

Find a Map

A

- Acquired Brain Injury (Adults)
- Amyotrophic Lateral Sclerosis (ALS)
- Aphasia
- Apraxia of Speech (Adults)
- Apraxia of Speech (Childhood)
- Auditory Neuropathy Spectrum Disorder (ANSD)
- Augmentative and Alternative Communication (AAC)
- Autism Spectrum Disorders

B

- Balance System Disorders

C

- Central Auditory Processing Disorder (CAPD)
- Cerebral Palsy

Search the Evidence Map

Tutorials

What's New

View our latest update:

Tools for the Assessment of Childhood Apraxia of Speech has been added to the Childhood Apraxia of Speech Map.

Towards a Safety Net for Management of

www.asha.org/evidence-maps

Evidence Maps

Welcome to the Evidence Maps, the latest evidence at your fingertips.

Evidence Maps

Future Evidence Maps

Search the Evidence Maps

Search

In individuals with dementia, what is the effect of spaced-retrieval memory training compared to no treatment on memory skills in activities of daily living?

B

Balance System Disorders

C

Central Auditory Processing Disorder (CAPD)

Cerebral Palsy

Cleft Lip and Palate

D

Dementia

Dysarthria

Dysphagia (Adults)

Dysphagia (Pediatrics)

View our latest update.

Dysarthria in Amyotrophic Lateral Sclerosis: A Systematic Review of Characteristics, Speech Treatment, and Augmentative and Alternative Communication Options has been added to the Amyotrophic Lateral Sclerosis Map.
12/21/17

Evidence-Based Practice Guidelines for Dysarthria: Management of Velopharyngeal Function has been added to the Dysarthria Map.
12/21/17

Effectiveness of Nasopharyngoscopic Biofeedback in Clients with Cleft Palate Speech—A Systematic Review has been added to the Cleft Lip and Palate Map.



Clinical Practice Guidelines and Principles of Care for People with Dementia

GUIDELINE

Guideline Adaptation Committee. (2016).

Sydney (Australia): NHMRC Partnership Centre for Dealing with Cognitive and Related Functional Decline in Older People, 2-27.

Description

This guideline provides recommendations for the care of individuals with dementia including ethical issues, barriers, early identification, diagnosis, assessment, specialist services, and carer support. The recommendations were adapted from the NICE Guideline developed by the National Collaborating Centre for Mental Health in the United Kingdom.

[See More](#)

Recommendations from This Guideline

i Evidence Ratings for This Document

External Scientific Evidence

Individuals with a possible diagnosis of dementia should be offered a referral for a comprehensive memory assessment (Evidence-Based Recommendation, Low Evidence).

"The Rowland Universal Dementia Assessment Scale (RUDAS) should be considered for assessing cognition in [culturally and linguistically diverse] populations" (Evidence-Based Recommendation, Very Low Evidence; p. 11).

Clinical Expertise

"Clinical cognitive assessment in those with suspected dementia should include examination using an instrument with established reliability and validity" (Practice Point; p. 10). Other factors known to affect performance should also be considered such as:

[See More](#)

Article Type

Full Summary

[Read ASHA's Article Summary](#) [Go to Article](#)

Recommendations from This Guideline

Evidence Ratings for This Document

External Scientific Evidence

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Clinical Expertise

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[See More](#)

Conclusions from This Review

Client Perspectives

Themes that emerged from the reports of patients, caregivers, and the general public, in regards to factors relevant to accepting dementia screening, were as follows:

1. "Existing health state;

[See More](#)

Summary of the Clinical Practice Guideline

Article Citation

Clinical Practice Guidelines and Principles of Care for People with Dementia

Guideline Adaptation Committee. (2016).

Sydney (Australia): NHMRC Partnership Centre for Dealing with Cognitive and Related Functional Decline in Older People, 2-27.

[Go to Article](#)

Sponsoring Body

National Health and Medical Research Council (NHMRC) Partnership Centre for Dealing with Cognitive and Related Functional Decline in Older People

Article Quality Ratings

Read about Our Rating Process

AGREE Rating

Recommended with Provisos

Article Details

Description

This guideline provides recommendations for the care of individuals with dementia including ethical issues, barriers, early identification, diagnosis, assessment, specialist services, and carer support. The recommendations were adapted from the NICE Guideline developed by the National Collaborating Centre for Mental Health in the United Kingdom. This guideline is primarily intended for health and aged care staff working with individuals with dementia in the community in residential or hospital settings.

Evidence Ratings for This Document

Recommendations are labeled as evidence-based, consensus-based, or practice points as follows:

- **Evidence-Based Recommendation:** formulated after a systematic review of the evidence with supporting references provided.
- **Consensus-Based Recommendation:** formulated in the absence of quality evidence, when a systematic review of the evidence has failed to identify any quality studies meeting the inclusion criteria for that clinical question.
- **Practice Point:** A recommendation that is outside the scope of the search strategy for the systematic evidence review and is based on expert opinion.

Additionally, evidence is graded as high, moderate, low, or very low as follows:

- **High:** Further research is very unlikely to change our confidence in the estimate of effect.
- **Moderate:** Further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate.
- **Low:** Further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate.

Practice Portal

Dementia on the Practice Portal

low levels of formal education or literacy.

Conclusions from This Review

External Scientific Evidence

The following instruments were validated in a low-literate or illiterate setting: Mini Mental State Examination (MMSE), Cognitive Abilities Screening Instrument (CASI), Eurotest, and Fototest. "At present, although existing screening tools demonstrate reasonably good accuracy in low-literacy settings, the available

[See More](#)

[Read ASHA's Article Summary](#) | [Go to Article](#)

Are Cognitive Interventions Effective in Alzheimer's Disease? A Controlled Meta-Analysis of the Effects of Bias SYSTEMATIC REVIEW

Oltra-Cucarella, J., Perez-Ehviria, R., et al. (2016). *Neuropsychology*, 30(3), 631-652.

Description

This is a systematic review and meta-analysis of studies on cognitive interventions for improving cognition in people with Alzheimer's disease.

Conclusions from This Review

External Scientific Evidence

Overall, "the main finding is that [effect sizes] for functional and cognitive outcomes were negligible to low and that did not differ when potential sources of bias were controlled" (p. 14). Limitations of the paper included lack of statistical power, possible inability of broad cognitive outcome measures to detect specific

[See More](#)

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Clinical Practice Guidelines and Principles of Care for People with Dementia GUIDELINE

Guideline Adaptation Committee. (2016).

QUALITY INDICATORS: EVIDENCE MAPS

Article Quality Ratings

[Read about Our Rating Process](#)

Indicators of Review Quality

YES	The review states a clearly focused question/aim.
YES	Criteria for inclusion of studies are provided.
YES	Search strategy described in sufficient detail for replication.
YES	Included studies are assessed for study quality.
NO	Quality assessments are reproducible.
YES	Characteristics of the included studies are provided.

Article Quality Ratings

[Read about Our Rating Process](#)

AGREE Rating

Highly Recommended

Article Quality Ratings

[Read about Our Rating Process](#)

AGREE Rating

Recommended with Provisos

AMERICAN
SPEECH-LANGUAGE
HEARING
ASSOCIATION

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Home / Evidence Maps

Summary of the Systematic Review

Article Citation

Evaluation and Management of Oropharyngeal Dysphagia in Different Types of Dementia: A Systematic Review
 Alagiakrishnan, K., Bharji, R. A., et al. (2013).
 Archives of Gerontology and Geriatrics, 58(1), 1-9.
[Go to Article](#)

Sponsoring Body

No funding received

Article Quality Ratings

[Read about Our Rating Process](#)

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Article Details

SCHOOL-BASED SLP

Marcus, 5 years old,
in Kindergarten

- Existing SLP services for language disorder
- Referred for multidisciplinary evaluation for concerns of a learning disability



Population: children with language disorders

What is the best way to assess a five year-old student with a language disorder and a suspected learning disability?

Intervention, assessment protocols

SCHOOL-BASED SLP

The screenshot shows the ASHA Practice Portal page for Spoken Language Disorders. The page includes a navigation bar with links for CAREERS, CERTIFICATION, PUBLICATIONS, EVENTS, ADVOCACY, CONTINUING EDUCATION, PRACTICE MANAGEMENT, and RESEARCH. The main content area is titled "Spoken Language Disorders" and features an "Overview" section. The overview text states: "See the Spoken Language Disorders Evidence Map for summaries of the available research on this topic." It also mentions that the scope of the Practice Portal page is limited to spoken language disorders (listening and speaking) in preschool and school-age children (3-21 years old) who use verbal modes of communication. A section titled "A spoken language disorder (SLD), also known as an oral language disorder, represents a significant impairment in the acquisition and use of language across modalities (e.g., speech, sign language, or both) due to deficits in comprehension and/or production across any of the five language domains (i.e., phonology, morphology, syntax, semantics, pragmatics). Language disorders may persist across the lifespan, and symptoms may change over time." Another section states: "When SLD is a primary disability—not accompanied by an intellectual disability, global developmental delay, hearing or other sensory impairment, motor dysfunction, or other mental disorder or medical condition—it is considered a specific language impairment (SLI)." A final section lists other conditions that may be present with SLD: autism spectrum disorder (ASD), intellectual disabilities (ID), developmental disabilities (DD), attention deficit hyperactivity disorder (ADHD), traumatic brain injury (TBI), psychological/behavioral disorders, and hearing loss. The page also includes a "Practice PORTAL" sidebar with links for PRACTICE PORTAL HOME, CLINICAL TOPICS, and PROFESSIONAL ISSUES. A promotional banner for ASHA CEUs is visible, along with a "Print This Entire Topic" button and a "About This Content" section.

SLP starts with ASHA Practice Portal to gain better understanding.

Spoken Language Disorders Portal

- Scope of page focuses on oral language

SCHOOL-BASED SLP

Written Language Disorders Practice Portal

- Scope of page focuses on information about reading and writing deficits.
- Contains important considerations and key components for evaluation and treatment.

SCHOOL-BASED SLP

Multiple links to the related Written Language Disorders Evidence Map

SCHOOL-BASED SLP

Filter by Practice Area
Use tabs to focus on specific EBP component

Home / Evidence Maps / Written Language Disorders (School Age)

Written Language Disorders (School-Age)

Refine By:

Practice Area

- Assessment
- Screening/Monitoring
- Service Delivery
- Treatment

Domain

- Reading Comprehension
- Reading Fluency
- Reading Vocabulary
- Spelling
- Writing

Population or Condition

- Attention Deficit Hyperactivity Disorder
- Autism
- Behavioral/Emotional Disorder
- Cerebral Palsy
- Down Syndrome
- English Language Learners

All Articles (6) External Scientific Evidence (4) Clinical Expertise (2) Client Perspectives (0)

Assessment

Clinical Practice Guideline for the Management of Communication and Swallowing Disorders Following Paediatric Traumatic Brain Injury

Morgan, A., Mee, C., et al. (2017). Melbourne (Australia): Murdoch Childrens Research Institute, 1-45

Description

This guideline provides recommendations for managing speech, language, and swallowing impairments in children up to 18 years of age within the first year of recovery after moderate or severe traumatic brain injury (TBI). The intended audience is "primarily... hospital and community-based healthcare professionals who work with children with TBI in See More

Recommendations from This Guideline

Evidence Ratings for This Document

Clinical Expertise

When formally or informally assessing language in children with traumatic brain injury, speech-language pathologists should assess:

- Phonological communication skills, if age-appropriate

See More

Read ASHA's Article Summary | Go to Article

SCHOOL-BASED SLP

Summary of the Systematic Review

Article Citation

Developing Early Literacy Report of the National Early Literacy Panel: A Scientific Synthesis of Early Literacy Development and Implications for Intervention

National Early Literacy Panel (2008). Jessup (MD): National Institute for Literacy, 260.
Go to Article

Sponsoring Body

Department of Health and Human Services, National Institute for Literacy

Article Quality Ratings

Read about Our Rating Process

Indicators of Review Quality

- YES** The review states a clearly focused question/aim.
- YES** Criteria for inclusion of studies are provided.
- YES** Search strategy described in sufficient detail for replication.
- NO** Included studies are assessed for study quality.
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Article Details

Description

This is a meta-analysis of published, peer-reviewed experimental or quasi-experimental studies investigating programs and interventions to improve early literacy

Article Details

Description

This is a meta-analysis of published, peer-reviewed experimental or quasi-experimental studies investigating programs and interventions to improve early literacy development in young children with and without disabilities.

Questions/Aims Addressed

This review addressed the following research questions.

- What are the skills and abilities of young children (age birth through five years or kindergarten) that predict later reading, writing, or spelling outcomes?
- Which programs, interventions, and other instructional approaches or procedures have contributed to or inhibited gains in children's skills and abilities that are linked to later outcomes in reading, writing, or spelling?
- What environments and settings have contributed to or inhibited gains in children's skills and abilities that are linked to later outcomes in reading, writing, or spelling?
- What child characteristics have contributed to or inhibited gains in children's skills and abilities that are linked to later outcomes in reading, writing, or spelling? (p. 2)

Population

Children from birth to five years of age

Intervention/Assessment

Various types of reading interventions (i.e., code-focused, shared-reading, parent and home programs, preschool and kindergarten programs, language-enhancement)

Number of Studies Included

Predictors: 234 studies; Interventions: 130 studies

Years Included

up to present

Conclusions from This Systematic Review

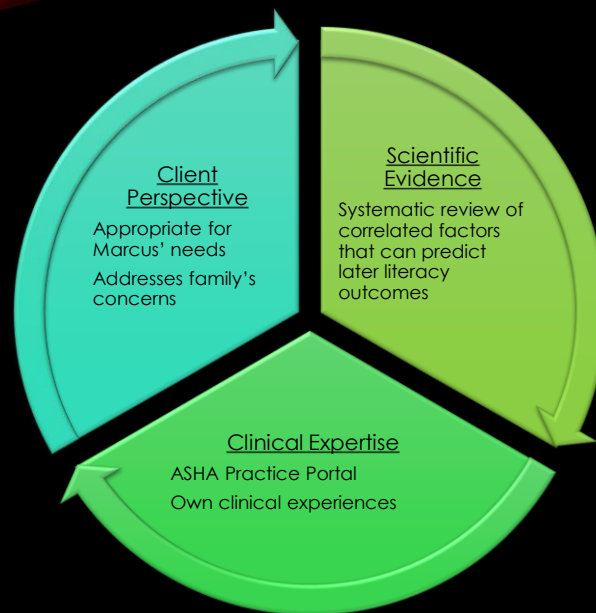
What are Conclusions?

- Spoken Language Disorders
- Written Language Disorders (School-Age)

Go to Map
Assessment

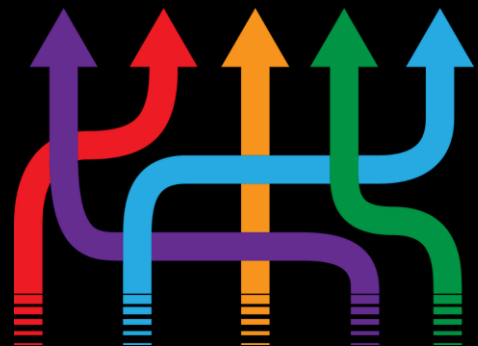
The following early literacy skills were moderately correlated with at least one later literacy outcome, but did not maintain predictive ability or were not yet evaluated for later literacy outcomes.

SCHOOL-BASED SLP



ADULT HEALTHCARE SLP

- Working in a growing hospital
- Hospital administration is initiating development of clinical pathway for stroke
 - Must be based on clinical practice guidelines
- Provide consultation on protocol for swallowing and communication



Population: Individuals hospitalized after stroke

What are the effects of speech-language pathology management on swallowing and communication outcomes in individuals hospitalized after stroke?

Outcomes: Swallowing and communication function

AMERICAN SPEECH-LANGUAGE-HEARING ASSOCIATION

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CAREERS | CERTIFICATION | PUBLICATIONS | EVENTS | ADVOCACY | CONTINUING EDUCATION | PRACTICE MANAGEMENT | RESEARCH

Evidence Maps

Welcome to the Evidence Maps, the latest evidence synthesis tool.

Evidence Maps | Future Evidence Maps

Find a Map

A

- Acquired Brain Injury (Adults)
- Amyotrophic Lateral Sclerosis (ALS)
- Aphasia
- Apraxia of Speech (Adults)
- Apraxia of Speech (Childhood)
- Auditory Neuropathy Spectrum Disorder (ANSD)
- Augmentative and Alternative Communication (AAC)
- Autism Spectrum Disorders

B

- Balance System Disorders

stroke clinical practice guideline **Search**

What's New

View our latest update.

Follow-Up in Newborn Hearing Screening – A Systematic Review has been added to the

Evidence Maps Search

What are you looking for?

stroke clinical practice guideline



Evidence Map

- Acquired Brain Injury (Adults) 1
- Aphasia 12
- Apraxia of Speech (Adults) 7
- Apraxia of Speech (Childhood) 1
- Augmentative and Alternative ... 14
- Autism Spectrum Disorders 1
- Balance System Disorders 4
- Central Auditory Processing Dis... 1
- Dysarthria 12
- Dysphagia (Adults) 27
- Dysphagia (Pediatrics) 4
- Hearing Loss (Adults) 7

Results 1-10 of 43 in 0.02 second

Stroke: Clinical Practice Guideline (2nd Edition)

This guideline provides recommendations for the assessment, management, and rehabilitation of acute stroke in adults. The target audiences for this guideline include professionals, managers, and planners involved in the care of adults with acute stroke. Of particular interest to speech-language pathologists is the section on assessment and intervention for aphasia, dysarthria, cognitive disorders, and dysphagia.

National Clinical Guidelines for Stroke

This is the fourth edition of the UK National Clinical Guidelines for Stroke. This guideline is an update of the 2008 version providing recommendations for the management of stroke in adult populations. The audiences intended for this guideline include clinical staff, managers, commissioners involved in the purchasing of services, as well as patients with stroke and their caregivers. Of particular interest to speech-language pathologists is a section on the management of swallowing and communication disorders. Specific recommendations were made based on the nature and strength of the evidence, or by using a formal consensus approach by the guideline working group.

Management of Adult Stroke Rehabilitation Care: A Clinical Practice Guideline

This guideline provide recommendations regarding the management and rehabilitation of individuals diagnosed with stroke. The recommendations were developed from best available evidence and consensus-based opinion and are intended to guide healthcare professionals working with this population. Of particular interest to speech-language pathologists are recommendations pertaining to general rehabilitation management, cognition, communication, and swallowing.

Catalan Agency for Health Technology Assessment and Research (2007). Stroke: Clinical Practice Guideline (2nd ed.). Barcelona, Spain: Catalan Agency for Health Technology Assessment and Research.

▼ Dysphagia (Adults)



Assessment

"The nausea reflex test Evidence; p. 56).

Keywords: *Assessment*

Videofluoroscopy should instrumental and dynam

Keywords: *Fluoroscop*

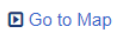
"The assessment of dys Evidence; p. 56).

Keywords: *Timing, Dys*

AGREE Rating

Highly Recommended

▼ Aphasia



Assessment

Patients with left hemisp

Keywords: *Stroke, Prov*

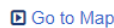
Individuals with stroke-in Evidence).

Keywords: *Stroke, Aph*

Treat

Int

▼ Augmentative and Alternative Communication (AAC)



Assessment

Individuals with dysarthria post-stroke should be referred to speech-language p amplification and augmentative and alternative communication as needed (Po

Keywords: *Diagnosis/Condition, Provider, Provider, AAC Treatments, Speech or, Agencia Devices, Acquired Brain Injury, Acquired Brain Injury, Augmentative and Altern ers Squibb; Ferrer*

Treatment

Individuals with dysarthria post-stroke should be referred to speech-language p amplification and augmentative and alternative communication as needed (Po

Keywords: *Diagnosis/Condition, Provider, Provider, AAC Treatments, Speech es, Acquired Brain Injury, Acquired Brain Injury, Augmentative and Altern*

Service Delivery

Individuals with dysarthria post-stroke should be referred to speech-language



Article Details

Description

- P**
 - Parkinson's Disease
 - Pediatric Brain Injury
- S**
 - Social Communication Disorders
 - Speech Sound Disorders
 - Spoken Language Disorders
 - Stroke (Adults)**
- T**
 - Tinnitus
 - Traumatic Brain Injury (Adults)
- V**
 - Voice
- W**

What if there is no available evidence on a clinical topic?
 What are Future Maps?

Give Us Feedback
 Send Questions or Comments
 Suggest an Article

Stroke (Adults)

Refine By:

Practice Area

- Assessment
- Screening
- Service Delivery
- Treatment

Considerations

- Bilingual Considerations
- Documentation/Goal Setting
- Education/Training

Diagnosis

- Aphasia
- Apraxia
- Cognitive/Linguistic Deficits
- Dysarthria
- Dysphagia
- Hearing Loss/Balance Disorders
- Right Hemisphere Disorder

Publication Date Range

All Articles (94)

External Scientific Evidence (87)

Clinical Expertise (18)

Client Perspectives (5)

Constraint and Multimodal Approaches to Therapy for Chronic Aphasia: A Systematic Review and Meta-Analysis

SYSTEMATIC REVIEW

Pierce, J. E., Menahemi-Falkov, M., et al. (2017).

Neuropsychological Rehabilitation, 1-37. Epub ahead of print retrieved October 18, 2017 from <http://dx.doi.org/10.1080/09602011.2017.1365730>.

Description

This is a systematic review of experimental studies on the effects of constraint or multimodal therapy on verbal output in adults with chronic aphasia after stroke.

Conclusions from This Review

GUIDELINE

External Scientific Evidence

Evidence found for constraint therapy and multimodal therapy superior in the treatment of chronic aphasia. There was variation and ambiguity in what constitutes 'constraint', and evidence was variable for different communication modalities. Results were encouraging. [See More](#)

[Read ASHA's Article Summary](#) | [Go to Article](#)

Constraint-Induced Aphasia Therapy in Post-Stroke Aphasia Rehabilitation: A Systematic Review and Meta-Analysis of

SYSTEMATIC REVIEW

Screening
 Early dysphagia screening is recommended for adults with...
 speech-language pathologist or another healthcare profes...
Keywords: *Provider (SLP/Caregiver), Provider, Dysphagia*

Treatment
 While there are no recommendations for the...
 Recommendation, IIa Evidence) and group t...
Keywords: *Stroke, Dosage (e.g. Frequency/Intensity), Format (e.g. Group/Telepractice), Aphasia*

Service Delivery
 For individuals with dysarthria or apraxia of speech, "telerehabilitation" is recommended (Recommendation, Class IIa Evidence; p. e125).
Keywords: *Format (Group/Telepractice), Format (e.g. Group/Telepractice)*

Refine By:
 Practice Area
 Screening
 Dysphagia

Considerations
 Bilingual Considerations
 Documentation/Goal Setting
 Education/Training

Diagnosis
 Anphasia
 Dysphagia
 Hearing Loss/Balance Disorders
 Right Hemisphere Disorder

Publication Date Range
 2017 All
 Selected: All Articles

External Evidence
 See More

Oral hygiene pro...

Summary of the Clinical Practice Guideline

Article Citation

Guidelines for Adult Stroke Rehabilitation and Recovery: A Guideline for Healthcare Professionals From the American Heart Association/American Stroke Association

STROKE, 47, 307-316 (2016).

Go to Article



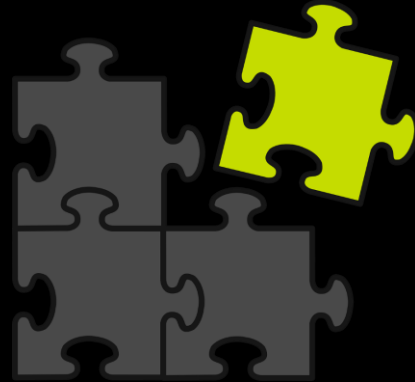
American Heart Association/American Stroke Association

Article Quality Rating

[Read about Our Rating Process](#)

ADULT HEALTHCARE SLP

- Synthesize recommendations for best practice from multiple clinical practice guidelines
- Consider evidence, and hospital's unique needs
- Advocate for SLP services along the stroke clinical pathway



AUDIOLOGY ADVOCACY



- Proposed Early Intervention Legislation
 - Includes funding cuts
 - Decreases program services in your local community
- Need to advocate for best practice
- Search the evidence for outcomes

Population: Infants and toddlers

What are the effects of early intervention services for hearing impairments on communication and education outcomes of children with hearing impairments?

do not have access to services

Outcomes: Developmental measures for hearing and communication

THE SEARCH BEGINS

Google Scholar

outcomes of early intervention for hearing loss

SIGN IN

Articles

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Language of **early**- and later-identified children with **hearing loss** [PDF] depistageneonatal.be
C Yoshinaga-Itano, AL Sedey, DK Coulter, AL Mehl - Pediatrics, 1998 - Am Acad Pediatrics
... by Bess and Paradise 25 partly on the grounds that "no empirical evidence ... supports the proposition that **outcomes** in children ... At the time, this statement was reasonable in that before Bess and Paradise's commentary, studies examining the **effects of early** identification and ...
☆ ⓘ Cited by 2231 Related articles All 12 versions

From screening to **early** identification and **intervention**: Discovering predictors to successful **outcomes** for children with significant **hearing loss** [PDF] oup.com
C Yoshinaga-Itano - Journal of deaf studies and deaf education, 2003 - academic.oup.com
Abstract This article summarizes the research findings from a longitudinal study of the language, speech, and social-emotional development of children who are deaf and hard of **hearing**, all of whom have **hearing** parents. This series of studies, from 1994 to the present,
☆ ⓘ Cited by 371 Related articles All 19 versions

Early intervention and language development in children who are deaf and hard of **hearing** [PDF] msu.edu
MP Hoeller - Pediatrics, 2000 - Am Acad Pediatrics



Newborn Hearing Screening

Overview

The scope of this page is hearing screening for children ages 0-6 months of age. Newborn hearing screening is but one part of a comprehensive Early Hearing Detection and Intervention (EHDI) program of service.

See the screening section of the [Hearing Loss \(Newborn\) Evidence Map](#) for pertinent scientific evidence, expert opinion, and client/caregiver perspective.

Newborn hearing screening is the standard of care in hospitals nationwide. The primary purpose of newborn hearing screening is to identify newborns who are likely to have hearing loss and who require further evaluation. A secondary objective is to identify newborns with medical conditions that can cause late-onset hearing loss and to establish a plan for continued monitoring of their hearing status (Joint Committee on Infant Hearing [JCIH], 2007). The EHDI guidelines include hearing screening completion by 1 month of age, diagnosis of any hearing loss by 3 months of age, hearing aid selection and fitting within 1 month of confirmation of hearing loss if parents choose that option, and entry into early intervention (EI) services by 6 months of age.

In 2014, 96.1% of babies born in the United States had their hearing screened before 1 month of age (Centers for Disease Control and Prevention [CDC], 2016), and 6,163 infants were diagnosed with permanent hearing loss.

Screening programs target permanent childhood hearing loss (PCHL) irrespective of type. However, some protocols are more effective at identifying types and degrees of hearing loss within different populations (i.e., well-baby nursery or neonatal intensive care unit [NICU]).

Practice PORTAL

PRACTICE PORTAL HOME

CLINICAL TOPICS

PROFESSIONAL ISSUES



ADVERTISING DISCLAIMER | ADVERTISE WITH US

Print This Entire Topic

Hearing Loss (Newborn)

Refine By:

Practice Area

- Assessment
- Screening

Service Delivery

Special Considerations

- Communication Modalities
- Comorbid Diseases and Disorders
- Disorders of the Ear
- IFSP Considerations
- Risk Factors

Early Intervention Program

- Group Treatment
- Home Program
- Provider
- Referral
- Telepractice

Publication Date Range

2017 All

Selected: All Articles

External Scientific Evidence (5)

Client Perspectives (1)

Service Delivery x Early Intervention Program x

What is External Scientific Evidence

External scientific evidence refers to research that has been conducted in a specific area of treatment, assessment, or service delivery. While evidence may be obtained from individual studies, only *evidence-based guidelines* and *systematic reviews* are included in this section.

The Impact of Early Identification of Permanent Childhood Hearing Impairment on Speech and Language Outcomes

Pimperton, H., & Kennedy, C. R. (2012). *Archives Of Disease In Childhood, 97(7), 648-653.*

Description

This is a systematic review investigating the effects of early hearing detection and intervention on language outcomes in children with hearing impairment.

Conclusions from This Review

External Scientific Evidence

The authors concluded that universal newborn hearing screening and early identification of permanent childhood hearing loss were "associated with benefits to language development in deaf children, with more consistent evidence provided for links between early identification and positive language outcomes" (p. See More

It was noted that "early identification must be coupled with comprehensive early intervention programmes to improve the quality of language input for children" (p. 651) particularly within the sensitive period of language development of the first few months of life. See More

SYSTEMATIC REVIEW

Summary of the Systematic Review

Article Citation

The Impact of Early Identification of Permanent Childhood Hearing Impairment on Speech and Language Outcomes

Pimperton, H., & Kennedy, C. R. (2012).
Archives Of Disease In Childhood, 97(7), 648-653.
[Go to Article](#)

Sponsoring Body

Wellcome Trust (United Kingdom)

Article Quality Ratings

[Read about Our Rating Process](#)

Indicators of Review Quality

YES	The review states a clearly focused question/aim.
YES	Criteria for inclusion of studies are provided.
NO	Search strategy described in sufficient detail for replication.
YES	Included studies are assessed for study quality.
YES	Quality assessments are reproducible.
YES	Characteristics of the included studies are provided.



Article Details

Description

This is a systematic review investigating the effects of early hearing detection and intervention on language outcomes in children with hearing impairment.

Questions/Aims Addressed

What is the effect of early identification of hearing impairment in children on later speech and language outcomes?

The authors concluded that universal newborn hearing screening and early identification of permanent childhood hearing loss were "associated with benefits to language development in deaf children, with more consistent evidence provided for links between early identification and positive language outcomes" (p. 651).

The following key constructs have frequently been reported to contribute to significantly better outcomes for children with a hearing loss, however the relative degree of contribution of each construct to outcomes is unclear. The underlying quality of research supporting these constructs is poor.

- "Early detection of hearing loss"

It was noted that "early identification must be coupled with comprehensive early intervention programmes to improve the quality of language input for children" (p. 651) particularly within the sensitive period of language development of the first few months of life.

- Parental / family / caregiver involvement
- Parent-centered services
- Continuity of care

"There is little doubt of the importance of early detection and early intervention for children who have a hearing loss. Whilst high level evidence is lacking (Level I and II), there is a sufficient number of methodologically strong research publications (Level III) that support the use of early detection and early intervention for children who have a hearing loss. This body of evidence indicates that the earlier the detection and subsequent intervention, the better the outcomes are for children who have a hearing loss" (p. 492).

- Regular input and monitoring
- Evidence-based intervention
- Evidence-based intervention

in team integrated classrooms
by trained teachers (one study)

These studies "used cut-off points for early identification of 6 months and 9 months, suggesting a time for the ability to maximally benefit from intervention following early identification that ends before the age of 1 year" (p. 651).



SUMMARY



EBP

- External Scientific Evidence
- Clinical Expertise
- Client perspective



Four Steps of EBP Process

- Frame the clinical/PICO question
- Find the evidence
- Assess the evidence
- Make the clinical decision



ASHA resources are here to help YOU

- Evidence Maps
- Practice Portals
- ASHAWire

FOR MORE ABOUT EBP

www.asha.org/Research/EBP/

AMERICAN SPEECH-LANGUAGE HEARING ASSOCIATION | CAREERS | CERTIFICATION | PUBLICATIONS | EVENTS | ADVOCACY | CONTINUING EDUCATION

Evidence-Based Practice (EBP)

The goal of EBP is the integration of: (a) clinical expertise/expert opinion, (b) external scientific evidence, and (c) client/patient/caregiver perspectives to provide high-quality services reflecting the interests, values, needs, and choices of the individuals we serve. Conceptually, the trilateral principles forming the bases for EBP can be represented through a simple figure.

Read more about Evidence-Based Practice (EBP)

Key Steps in the EBP Process

- Step 1: Framing the Clinical Question
- Step 2: Finding the Evidence
- Step 3: Assessing the Evidence
- Step 4: Making the Clinical Decision

EBP Resources

- Evidence-Based Practice Tutorials and Resources
- Glossary of key terms and definitions.

EBP Compendium of Clinical Practice Guidelines and Systematic Reviews

In the summer of 2005, staff of ASHA's National Center for Evidence-Based Practice in Communication Disorders (N-CEP) embarked upon a project to identify and obtain clinical practice guidelines from all over the world related to audiology and/or speech-language pathology. As noted elsewhere on this site, clinical practice guidelines, when tied directly to a systematic review of scientific evidence, can be an invaluable tool in helping clinicians to make the best decisions with and for their clients. Proceed to the EBP Compendium.

ASHA Evidence Maps

The evidence maps are intended to provide clinicians, researchers, clients, and caregivers with tools and guidance to engage in evidence-based decision making. These maps highlight the importance of the three components of evidence-based practice: clinical expertise, current best evidence, and client/patient perspectives. Proceed to the Evidence Maps.

www.asha.org/research/ebp

OTHER EBP RESOURCES

Evidence-based Practice Tutorials and Resources

- General EBP Information
- Framing the Clinical Question
- Finding the Evidence
- Assessing the Evidence
- Making the Clinical Decision

www.asha.org/research/ebp

The screenshot shows the ASHA website page for Evidence-Based Practice Tutorials and Resources. The page header includes the ASHA logo and navigation links: CAREERS | CERTIFICATION | PUBLICATIONS | EVENTS | ADVOCACY | CONTINUING EDUCATION. The main heading is 'Evidence-Based Practice Tutorials and Resources'. Below this, it states: 'The following are a number of Web-based tutorials/resources that relate to different aspects of Evidence-Based Practice.' The page is organized into sections: 'General EBP Information' and 'Tutorials on the basic principles of evidence-based practice'. Under 'General EBP Information', there is a list of resources including 'What is EBM?' from Oxford Centre for Evidence-Based Medicine, 'Introduction to Evidence-Based Medicine' from Boston University Medical Center, 'What is Evidence Based Practice?' from speechBITE, 'Evidence-Based Practice in Applied Health' from University of Illinois at Chicago Library of the Health Sciences, 'Introduction to Evidence-Based Medicine' from Duke University Medical Center Library/Health Sciences Library UNC-Chapel Hill, 'AAC Evidence-Based Clinical Practice: A Model for Success' from AAC Institute, 'Introduction to EBM: What is EBM?' from Centre for Evidence-Based Medicine - University of Toronto Libraries, 'Cochrane Handbook for Systematic Reviews of Interventions' from The Cochrane Collaboration, 'What Works for Children? Evidence Guide [PDF]' from Economic & Social Research Council, 'What is EBH Series' from Harvard Medical Communications, 'Evidence-Based Health Care Resources' from New York University Health Sciences Library, 'Evidence Based Practice Resources' from McMaster University Health Sciences Library, 'SIGN Guideline Development Process' from Scottish Intercollegiate Guidelines Network (SIGN), 'Evidence Based Medicine Tutorial' from State University of New York Downstate Medical Center, 'Evidence-Based Medicine Tutorials' from University of Massachusetts Medical School, Lamar Soutter Library, 'Evidence-Based Medicine' from University of Maryland Health Sciences & Human Services Library, 'Basic Introduction to Evidence-Based Practice Resources' from University of Washington Health Sciences Libraries, 'Evidence-Based Practice Tools Summary' from University of Washington Health Sciences Library, 'Making Evidence-Based Medicine Double in Everyday Practice [PDF]' from American Academy of Family Physicians, 'Evidence-Based Medicine' from GProtebook, 'Defining Evidence-Based Behavioral Practice' from Office of Behavioral & Social Sciences Research, National Institutes of Health, and 'From Evidence-Based Medicine to Evidence-Based Public Health - Partners in Information Access for the Public Health Workforce' from East of Smith - State University of New York Downstate Medical Center.

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