



# Evidence-Based Practice and the California ASD Guidelines/National Standards Projects

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# Topics

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- Evidence-based practice
  - What it is
  - Why it is important
- Evidence-based practice guidelines
  - How they are developed
  - How they are implemented
- Summary



# Evidence-based practice

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- Using best available scientific evidence, combined with clinical expertise and consumer preferences, to guide decisions about practice
- Gaining support in several disciplines -- e.g., medicine, psychology, speech-language pathology, education
- *California ASD Guidelines Project and National Autism Center are committed to this approach*



# Why base practice on scientific evidence?

- Science provides the best tools for determining which practices work, how well, with what side effects, for which consumers.
- Practice based on scientific evidence
  - Allows consumers to make fully informed choices
  - Protects consumers, practitioners, and funding agencies
  - Prevents needless waste of resources
- Scientific research has enhanced the health, skills, and quality of life for people with many conditions.
- No less than people with other conditions, people with ASD deserve interventions that have been tested directly and rigorously.
- *With large numbers of people with ASD diagnoses seeking services in CA, it is essential to use time, effort, and money as efficiently as possible by investing in interventions that are most likely to produce tangible benefits.*



# Why scientific evidence?

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- We humans are extraordinarily easy to fool.
  - Our observations, perceptions, and memories are easily influenced, so are not reliable.
- Hope and the desire to help can make us vulnerable to false or exaggerated claims.
  - We want to believe.
- There are a multitude of ideas and theories about what causes ASD.
  - Some ideas really are better than others.
- There are a multitude of treatments for ASD. All are claimed to be effective by *someone*, many remarkably so.
  - It does not stand to reason that all treatments are comparably effective.
- Some treatments *appear* to be helpful, or at least not to be harmful.
  - Appearances are often deceiving, especially when observers have certain expectations.
  - Harmful effects may not be readily apparent or immediate.



## Why science (cont'd)

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- Basing decisions about interventions mainly on opinions, speculations, subjective observations, and poorly done studies has many risks:
  - Wasted money, time, energy
  - Exploitation of vulnerable people
  - Physical and emotional injuries
  - Lost opportunities to make real advances
  - Reinforcement and perpetuation of practices that impede progress
- The most tried-and-true way to reduce those risks is to rely on careful scientific evaluation as a “filter.”



# The quality of evidence

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## Least ambiguous:

- Directly tested
- Publicly verified
- Measured
  - Direct
  - Objective
  - Accurate
  - Reliable (consistent)
- Experimental (controlled) studies
- Peer reviewed

## Most ambiguous:

- Untested speculations, interpretations
- Unobservable, unverified
- Unquantified
  - Indirect (surveys, interviews, third-party reports)
  - Subjective (personal observations)
  - Unknown accuracy, reliability
- Descriptive, uncontrolled studies; case reports
- No or inadequate review



# How evidence-based practice guidelines are developed

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- Team assembled
  - Panels of expert reviewers and advisors from relevant disciplines
  - Expert methodologists
- Peer-reviewed empirical research literature searched
  - Criteria developed for including and excluding published articles
- Each study evaluated by reviewers for quality of evidence produced; limitations, harms also considered
  - Study rating system developed
    - Each of several components assigned a score: Research design, measurement methods, participant selection, treatment integrity, effects
  - Reviewers trained to use rating system
  - Preferably, each study is evaluated by more than one reviewer, and interrater agreement is checked periodically



## Guidelines development (cont'd)

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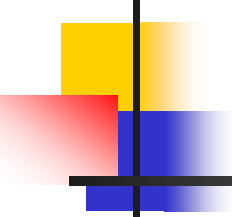
- Evaluations of all studies on a particular intervention method are aggregated
- Interventions with strong supporting evidence are recommended; those proved ineffective or harmful or lacking scientific support are not recommended
  - Promising interventions needing more research may be identified
- General recommendations may be translated into specific suggestions for practitioners, consumers, and funding agencies



## Guidelines development (cont'd)

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- Resulting guidelines or standards are
  - Reviewed by other professionals, consumers
  - Updated and revised periodically
- Process includes input from many sources, standardized methods, multiple checks and balances so as to minimize influence of personal biases, maximize objectivity
  - Not the case with many literature reviews or guidelines developed by individuals, small groups, or single disciplines



# Using evidence-based guidelines in everyday practice

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- As when a physician prescribes a treatment for a physical ailment,
  - Evidence-based guidelines serve as starting point, or initial screen, for selecting interventions
  - Individual and family characteristics, strengths, needs, goals, and preferences also govern choices
  - Practitioner competencies, other resources must also be considered
  - Effects of intervention on individual and significant others must be evaluated carefully



# Summary

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- Science isn't perfect or failsafe, but using scientific evidence to guide intervention decisions
  - Empowers consumers and practitioners to make truly informed choices
  - Increases the likelihood that the person with ASD will benefit
  - Assures that consumers and practitioners are alerted about possible side effects
  - Makes accountability possible
  - Focuses precious resources where they are most likely to be used effectively and efficiently