

Identifying Core Practice Components Across Evidence-based Psychosocial Treatments for Youth

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The values of science and the values of democracy are concordant, in many cases indistinguishable.

Sagan, 1996

System Design

- System of care research
 - Increased access
 - Less restrictive care
 - More informal supports
 - Longer engagement in services

Focus on Clinical Outcomes

- Requires a closer consideration of **evidence** on efficacious treatments

What Is Evidence?

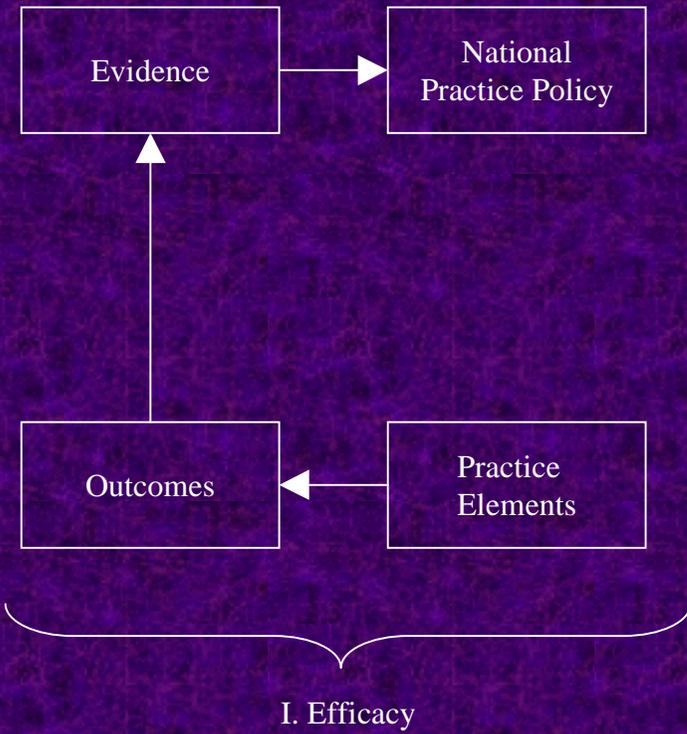
*Everyone seemed to agree with
Socrates that justice was a good thing,
but there was a complete lack of
consensus on the definition of justice*

Kazdin, 1996

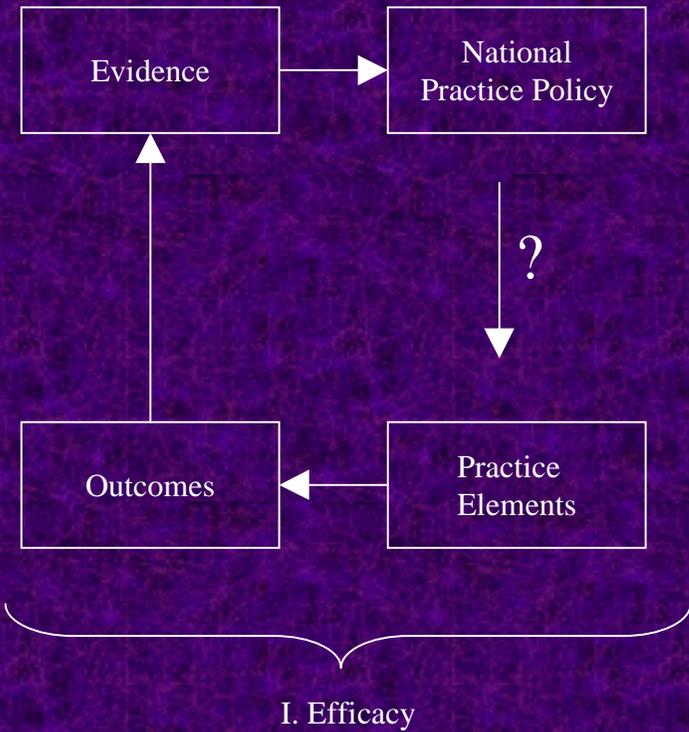
National Efforts: Defining and Reviewing Evidence

- APA Guidelines Task Force
 - Barlow et al., 1995
- APA Div. 12 Dissemination Task Force
 - Chambless et al., 1995
- APA Division 53 Task Force
 - Lonigan et al., 1998
- John D. and Catherine T. MacArthur Youth Mental Health Initiative Phase I Review

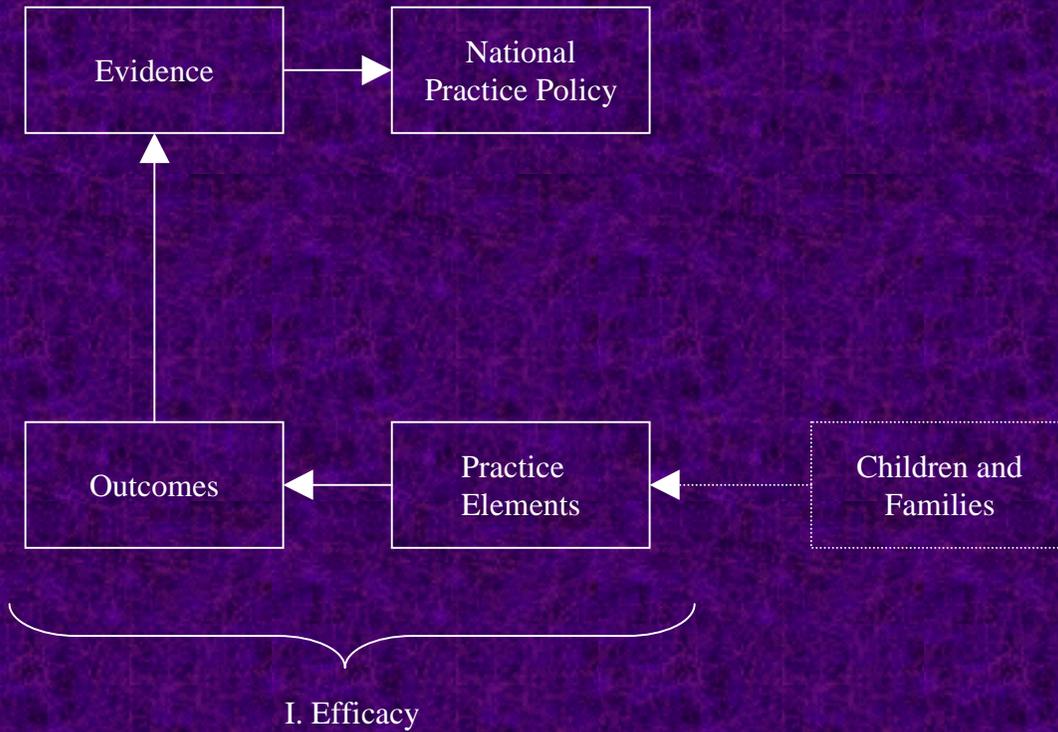
Practice Development



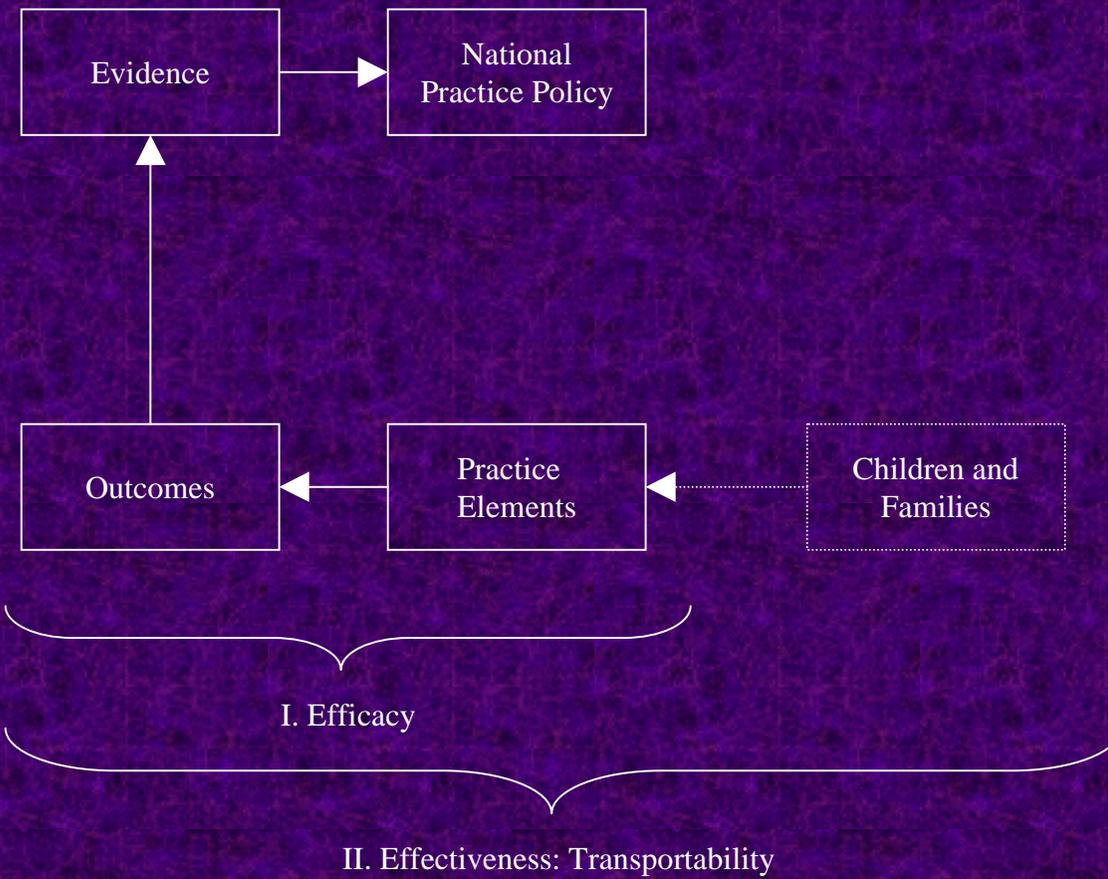
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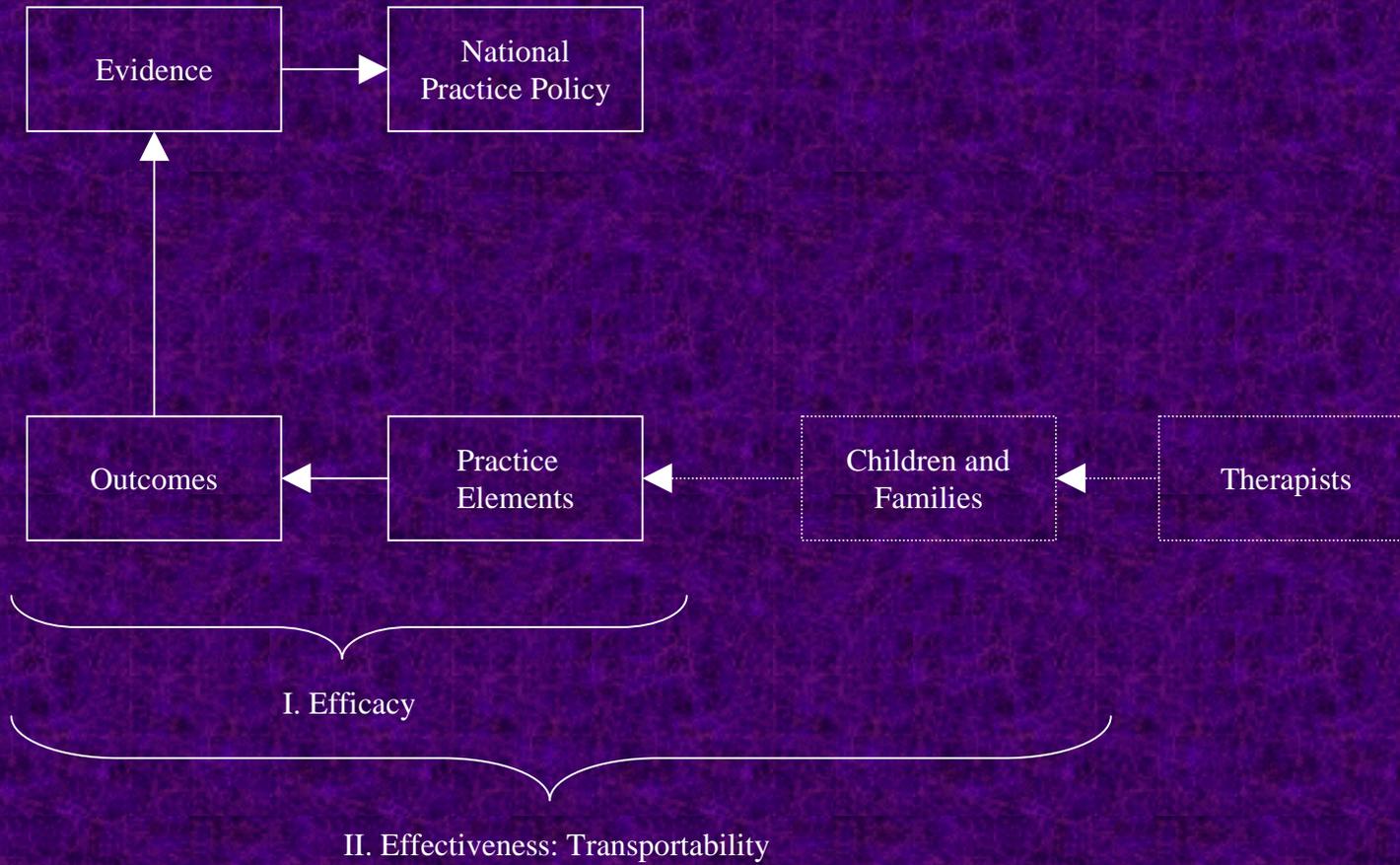
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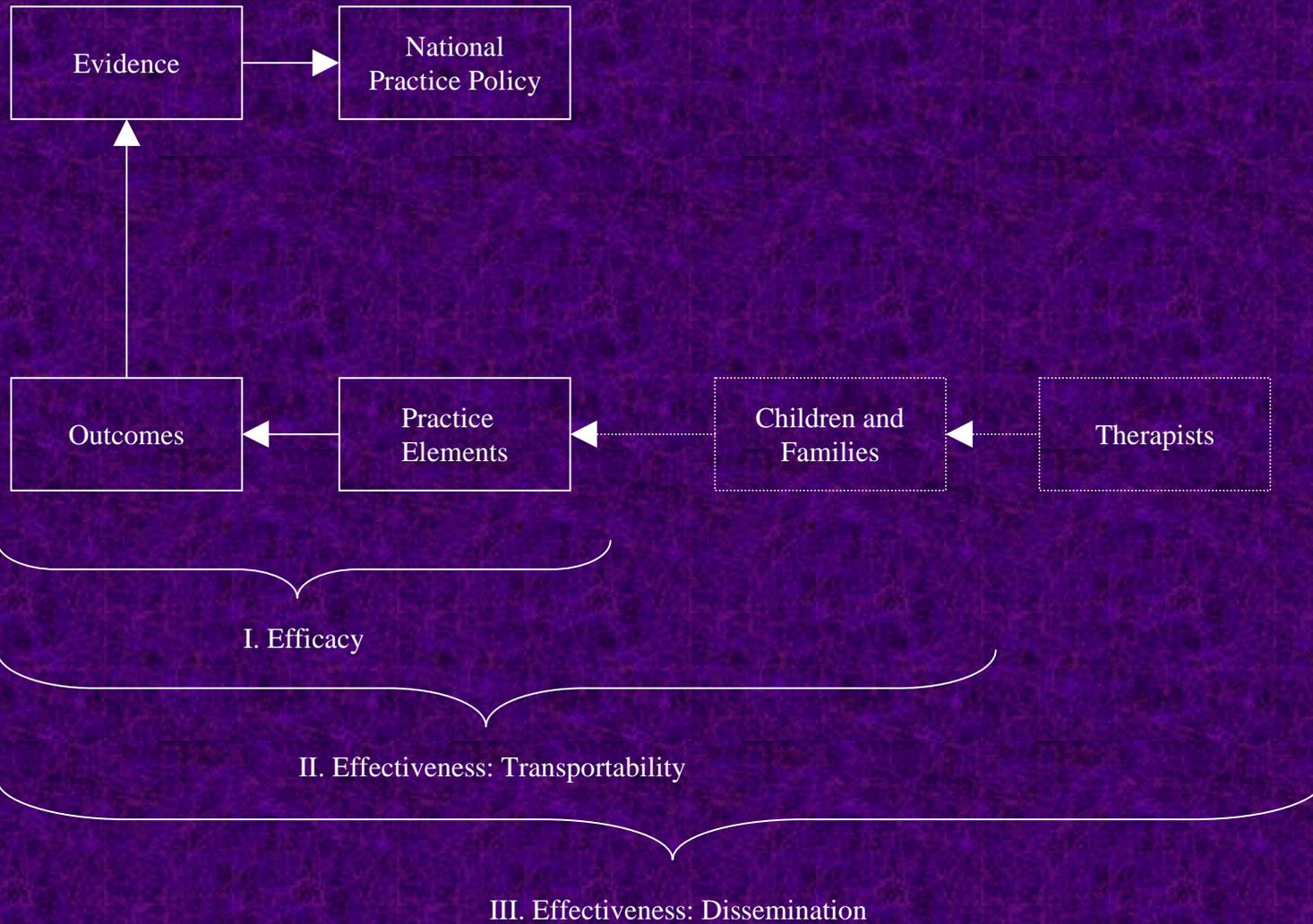
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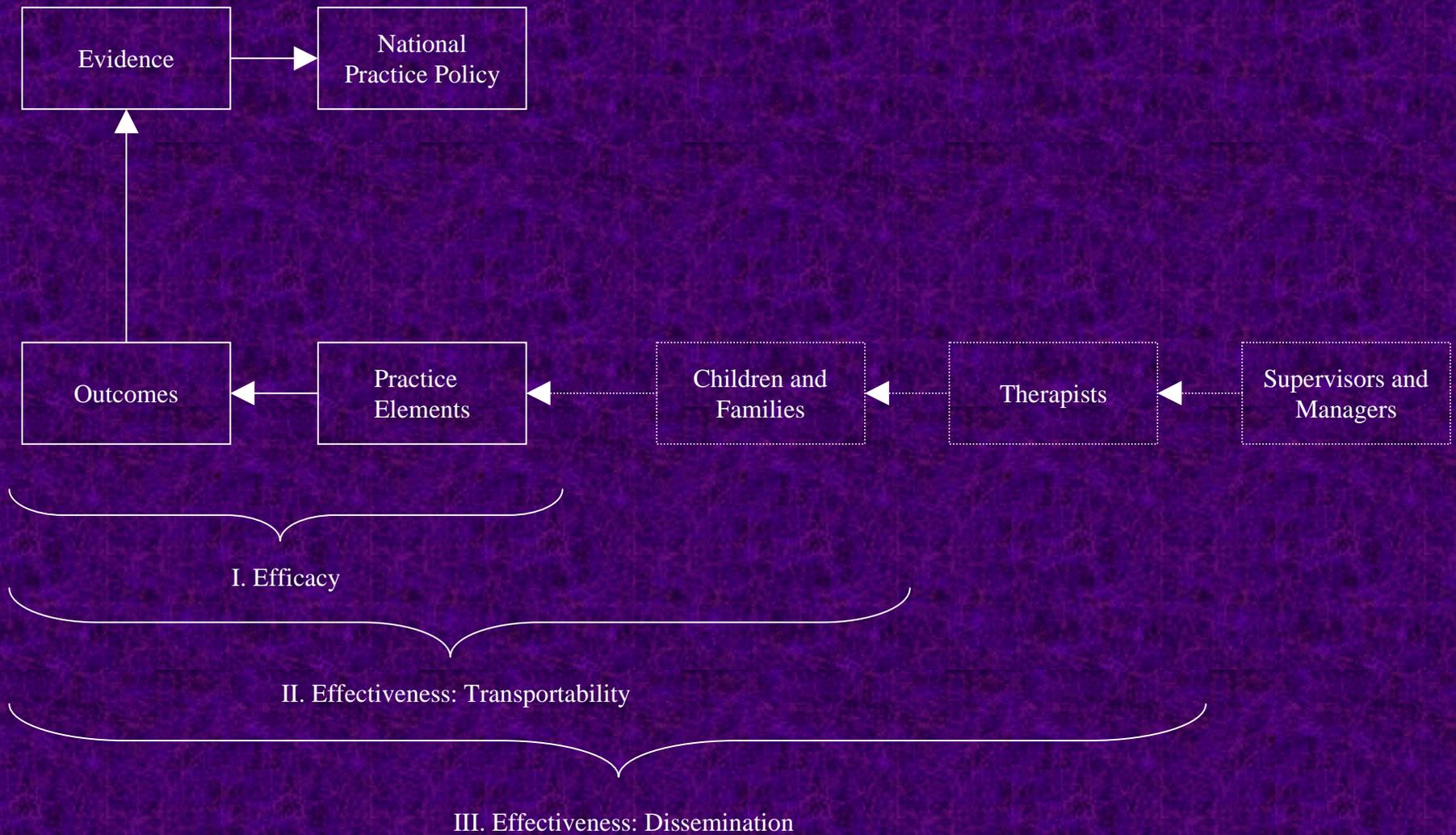
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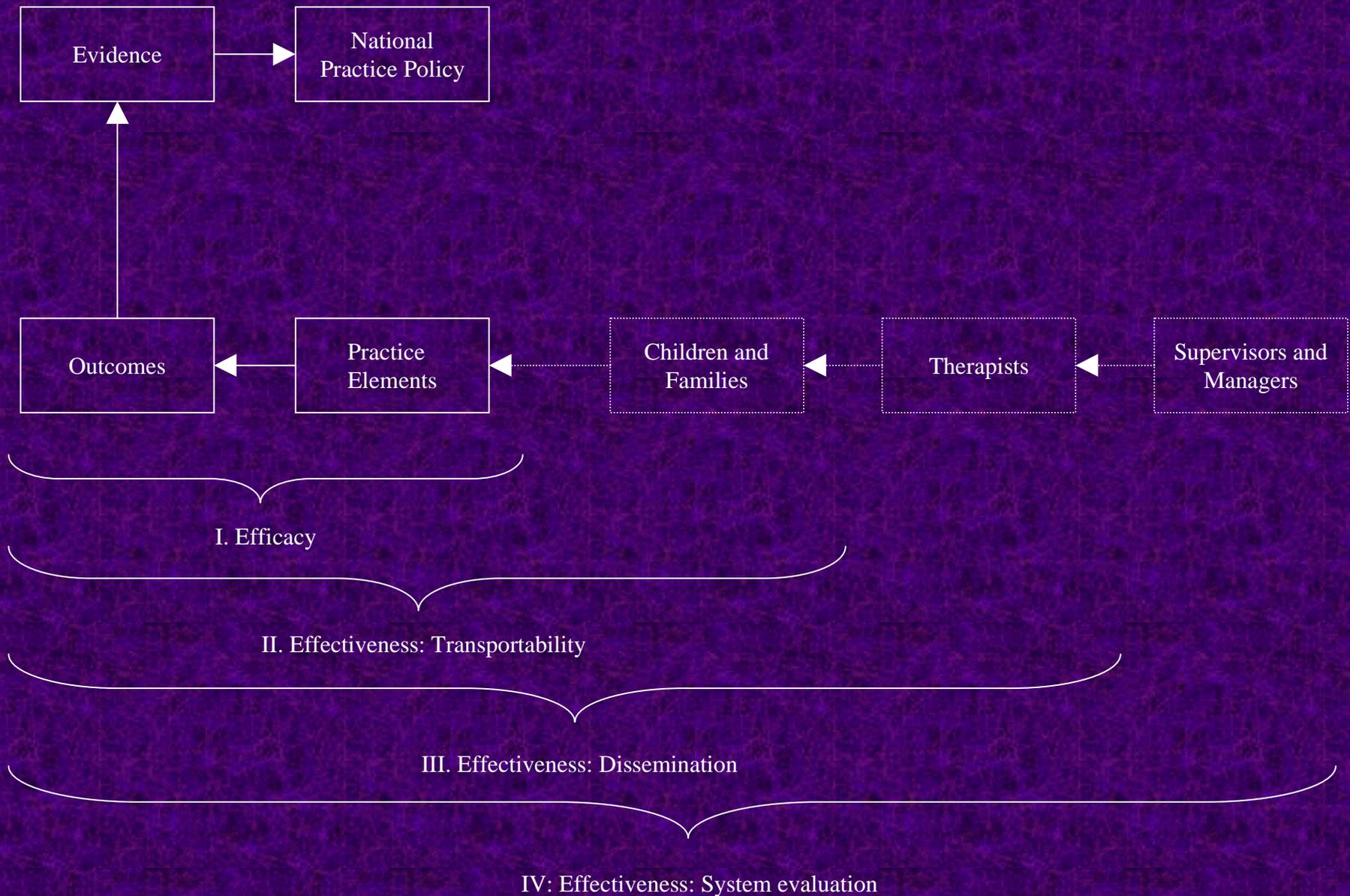
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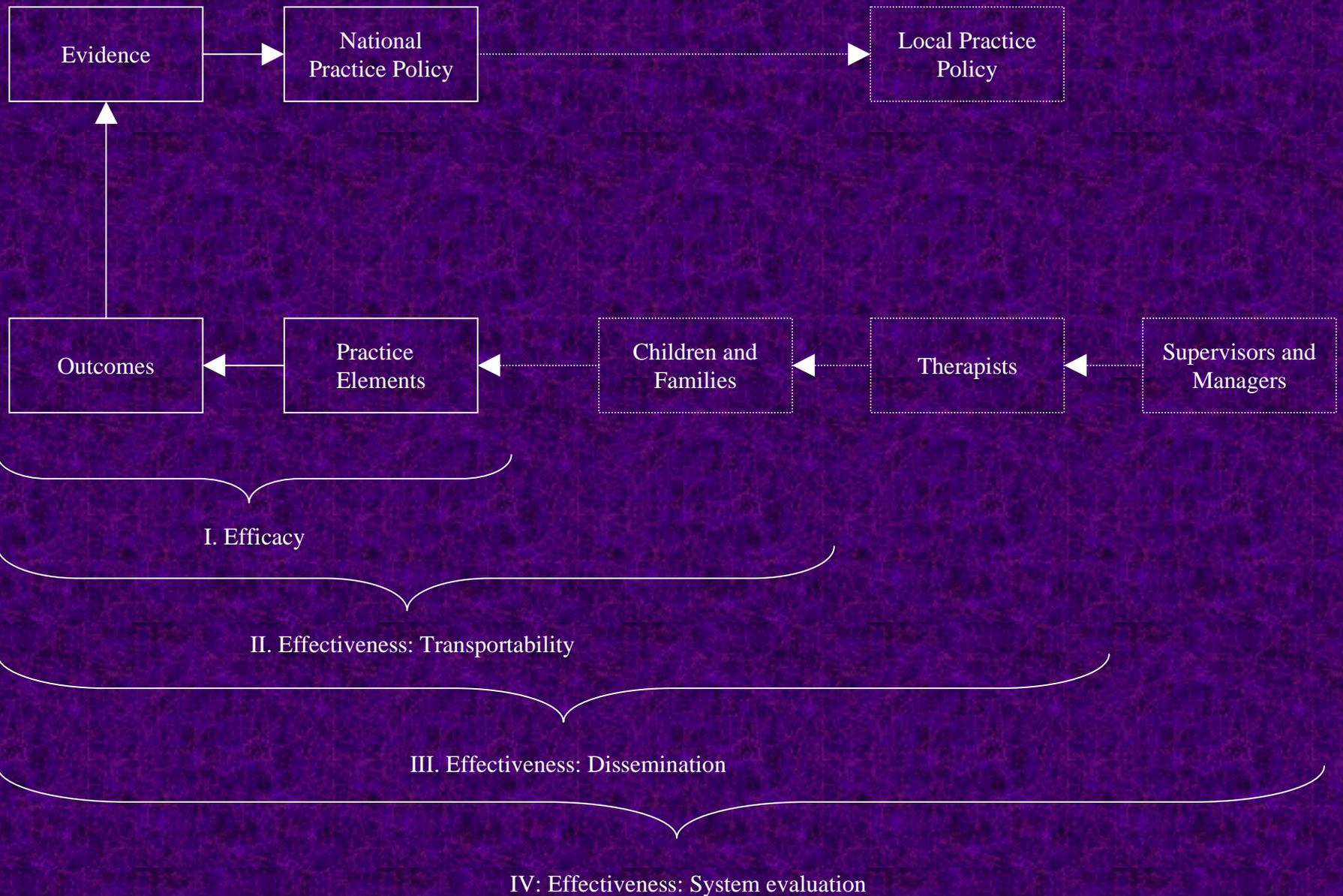
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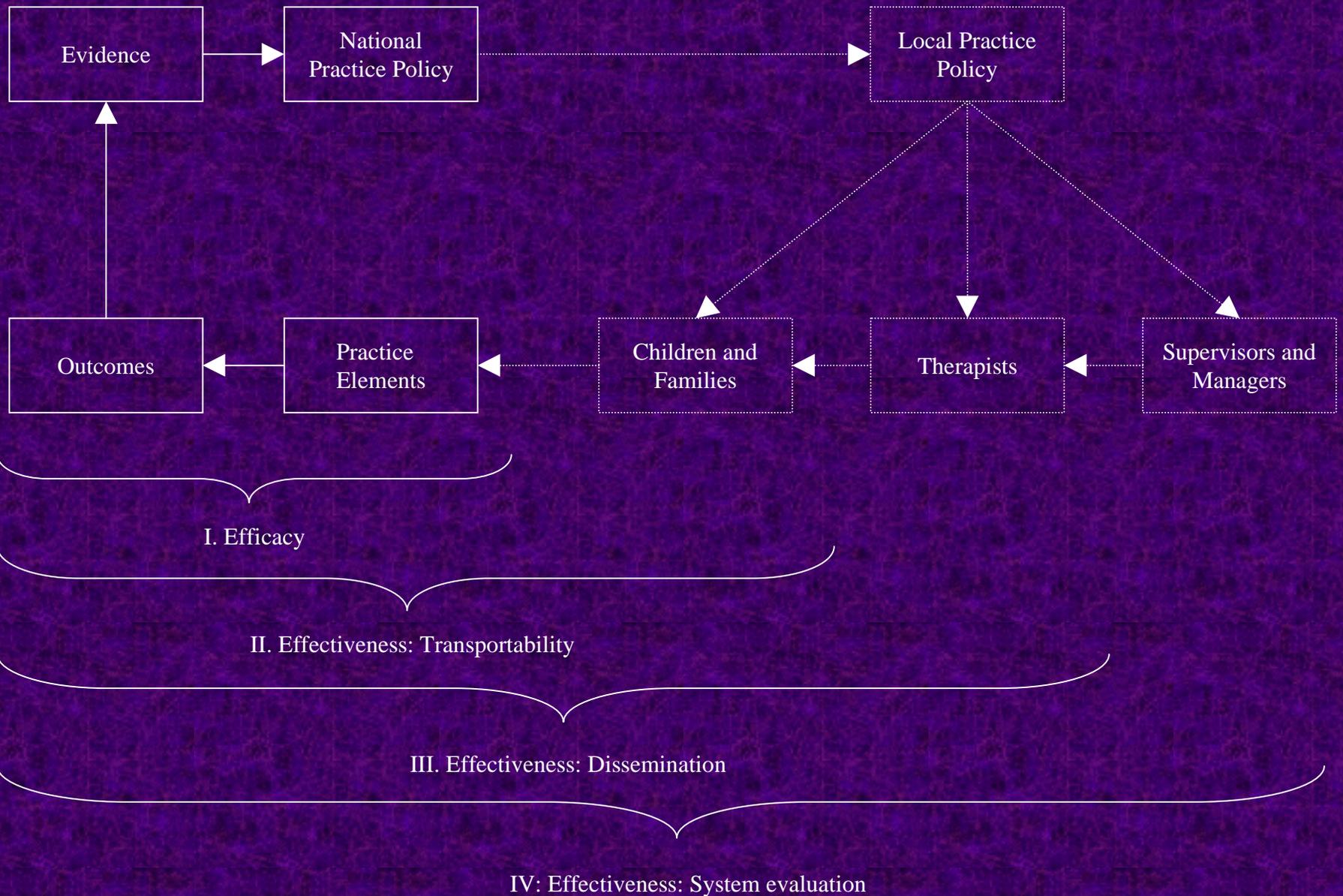
Problem

The majority of evidence may not be considered fully relevant to systems that seek to use such evidence to shape practice policy and improve clinical outcomes

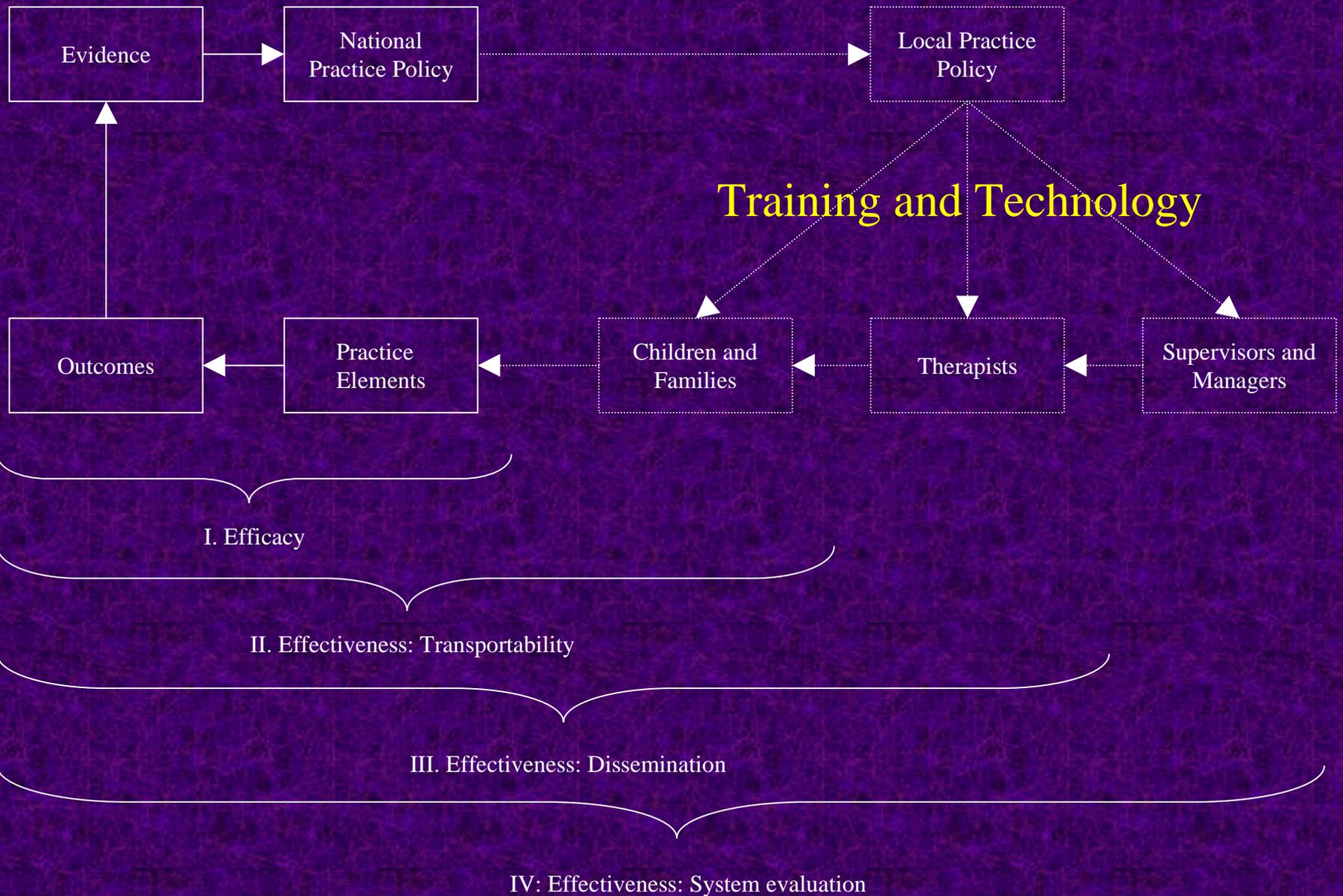
Practice Development



Practice Development



Practice Development



Making Evidence More Available

In all uses of science, it is insufficient—indeed it is dangerous—to produce only a small, highly competent, well-regarded priesthood of professionals. Instead, some fundamental understanding of the findings and methods of science must be available on the broadest scale.

Sagan, 1996

Hawaii Department of Health Evidence Based Services Committee

- Psychology, Psychiatry, Social Work, Nursing, Law, Family Members
- Established Broader Definition of Evidence
- Screened over 1,500 studies
- Crafted relevant local practice policy

Evidence

- Multiple levels of support:
 - Level 1: Best support
 - Level 2: Good support
 - Level 3: Some support
 - Level 4: No support or effects
 - Level 5: Known risks

Feasibility

- Acceptability
 - How many participate?
- Dropouts
 - How many complete?
- Trainability
 - Manuals and training materials available?

Generalizability

- Child/Family
 - Age; Culture; SES
- Therapist
 - Training; Degree
- Setting
 - School; Clinic
- Frequency
 - Daily; weekly
- Duration

Cost and Benefit

- Demands on system
- Expected benefit
 - Effect size (how much will the average child improve?)

Implementation

- Individuals selecting an intervention now use much more of the relevant data in the research base
- Goal is to have the data at the fingertips of all stakeholders

Example: Efficacy

Problem	Level 1 best support	Level 2 good support	Level 3 some support	Level 4 no support	Level 5 known risks
Anxiety	CBT; Exposure; Modeling	CBT+ parents; Ed support	None	EMDR; Play Tx; GIST	None
ADHD	Behavior Therapy	None	None	Biofeedback; Play Tx; GIST	None
Autism	None	None	ABA; FCT	Play Therapy; GIST	None
Conduct	None	Multisystemic Therapy	None	Juvenile Justice; Individual Tx	Group Therapy
Depression	CBT	CBT + parents; IPT; Relaxation	None	Family Tx; Individual Tx	None
Oppositional	Parent/Teacher Training	Anger Coping; Assertiveness; PSST	None	Relaxation; Individual Tx	Group Therapy
Substance	CBT	Behavior Tx; Family Tx	None	Individual Therapy	Group Therapy

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Example: Effectiveness

- *14 year old*
- *Depressed*
- *Puerto Rican*
- *Male*
- *Late in semester*

Evidence: Interventions for Depression

Intervention	Finish	Age	Ethn	Staff	Length	Setting	Effect
Level 1							
CBT	94%	9 to 18	84% NS; 18%PR; 3%AA	MA; PhD	5 to 16 weeks	Clinic; school	1.74
Level 2							
CBT + parents	88%	14 to 18	NS	MA; PhD	7 to 8 weeks	clinic	1.40
Interpersonal	85%	12 to 18	49% PR; 41% HA; 10% C	MA; PhD; MD	12 weeks	clinic	1.51
Relaxation	100%	11 to 18	NS	MA; PhD	5 to 8 weeks	school	1.48

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Example

- *16 year old*
- *Female*
- *Anxiety problems*
- *Both parents available*

Evidence: Interventions for Anxiety

Intervention	Finish	Age	Ethn	Staff	Length	Setting	Effect
Level 1							
CBT	95%	2 to 17	54% NS; 33% C; 7% Arm; 6%AA	UG; MA; PhD	3 to 16 weeks	Clinic; school	1.05
Level 2							
CBT + parents	93%	14 to 18	NS	MA; PhD	12 weeks	clinic	1.78
Edu support	85%	6 to 17	92% C	N/A	12 weeks	clinic	N/A

Evidence: Interventions for Anxiety

Intervention	Finish	Age	Ethn	Staff	Length	Setting	Effect
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Evidence-Based Decision Making

- About making *informed* choices
- Partnerships help determine what information is relevant
- Choices should expand as evidence continues to accumulate

Remaining System Concerns

- Fixed content
- Fixed intensity
- Fixed length
- Single target approach
- Empty cell problem
- Crowded cell problem

Solution

Add another level of analysis

Interventions and Elements

- Interventions are multifaceted services with many techniques and strategies
- Each technique or strategy can be identified as a **practice element**
- These elements are the building blocks of interventions

Strategy

- **DISTILLATION:** Identify common elements in evidence-based approaches
- **MATCHING:** See how they match with client problems and characteristics

Strategy: Distillation

- Code each demonstration of effective intervention for practice elements
- Cross-tabulate studies with practice elements
- Use all studies contributing to the evidence base
- Yields a matrix demonstrating protocol overlap

Example

Treatment	Cognitive	Exposure	Rewards	Relaxation
A	1	0	1	1
B	1	1	1	0

Strategy: Distillation

- Classify elements
 - Core: 90% or more
 - Common: 40% or more
 - Optional: fewer than 40%

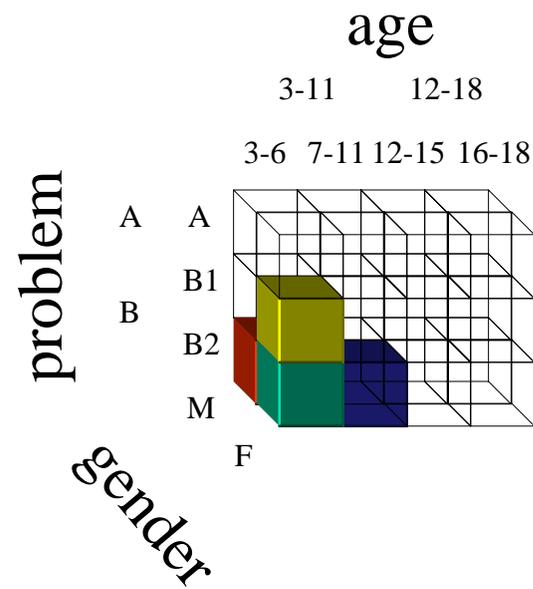
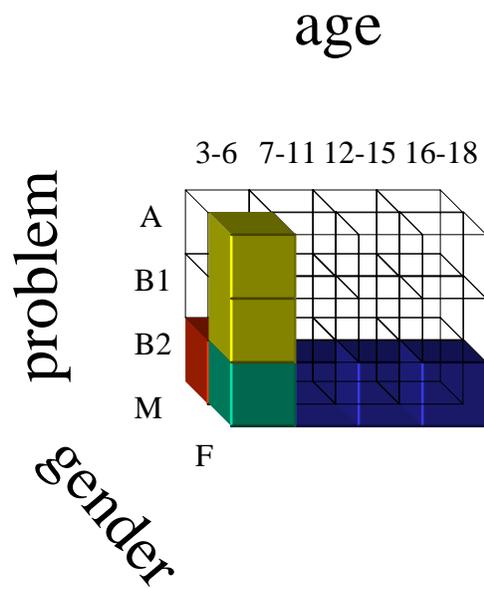
Example

- Treatment of phobia
 - Core: exposure
 - Common: therapist praise
 - Optional: relaxation, coping statements, psycho-education

Strategy: Matching

- Similar to CHAID algorithm
- Develop a multidimensional problem space with all variables of interest
- Patch missing data
 - Local versus factor averages

Patching: Two Types of Estimation

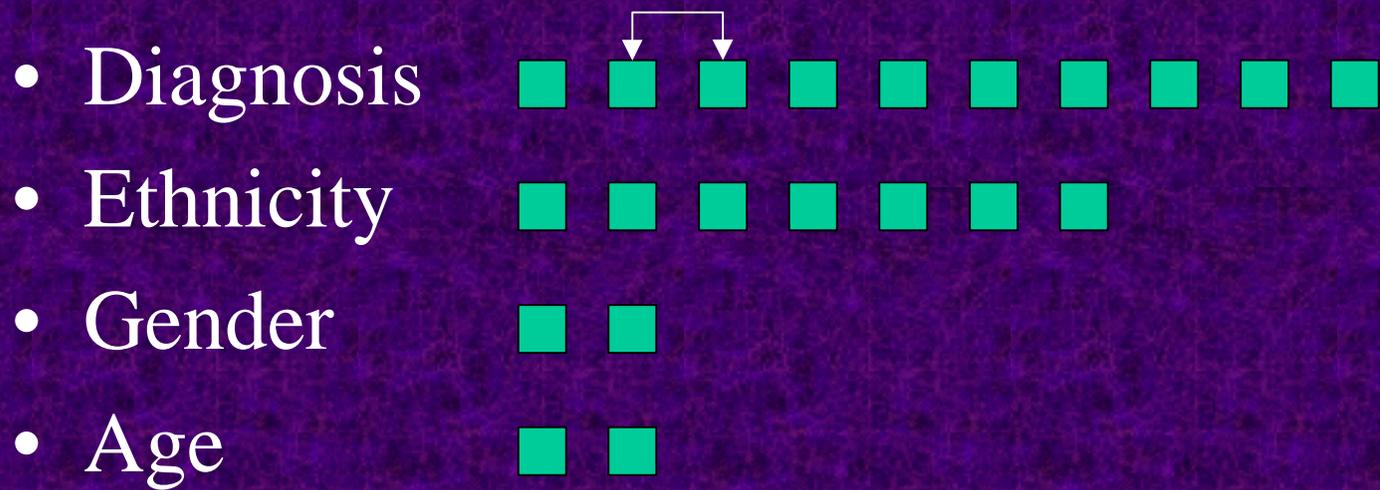


Example

- Diagnosis 
- Ethnicity 
- Gender 
- Age 

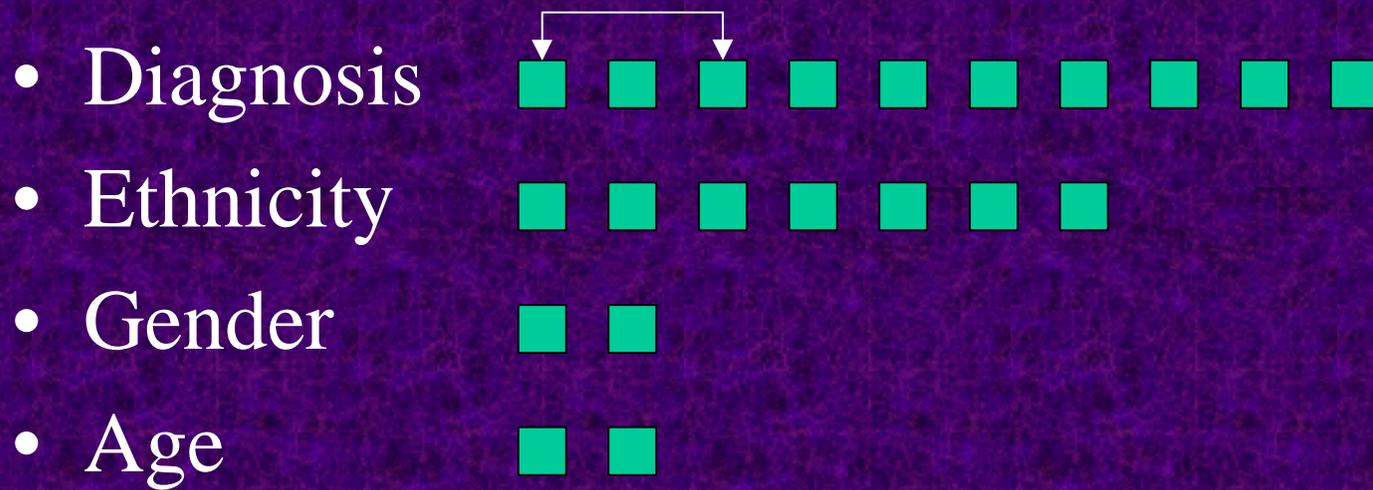
280 cell problem space

Example



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Example



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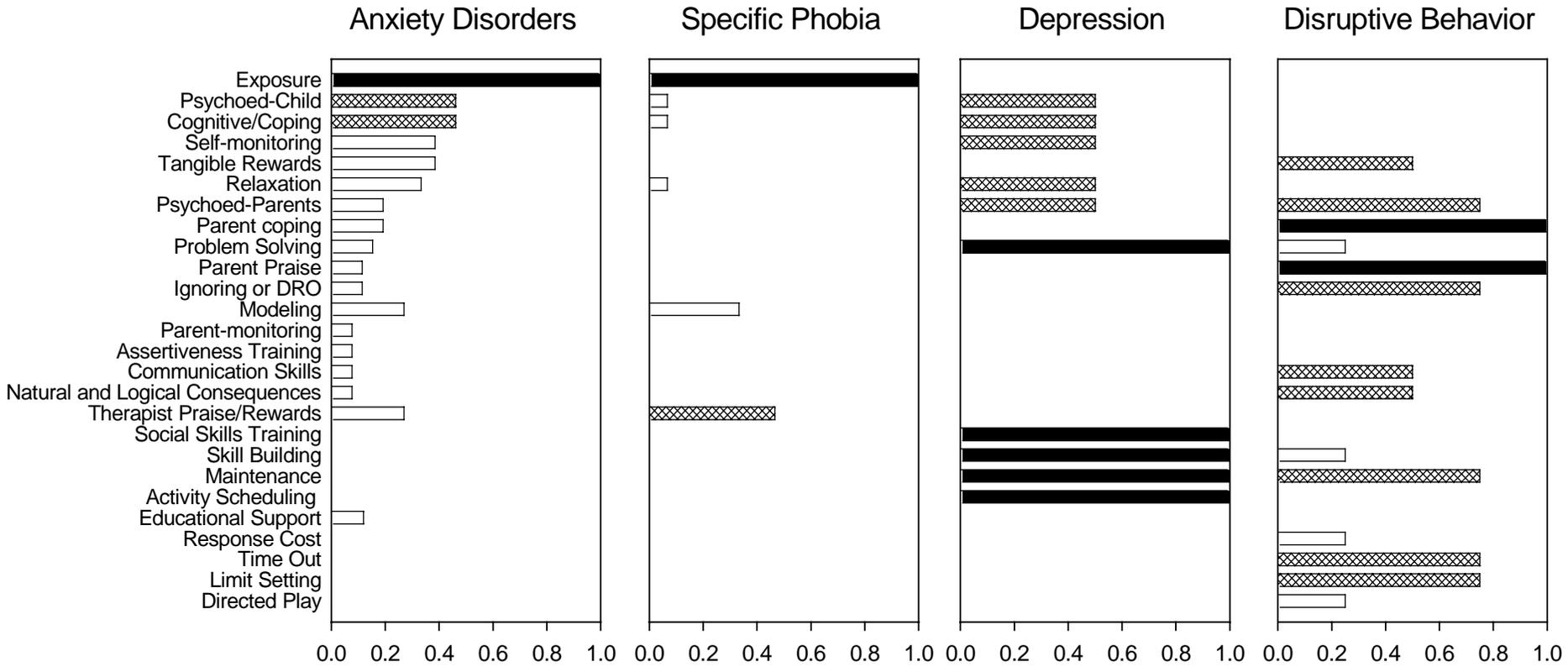
280 cell problem space

Example

- Diagnosis  
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280 cell problem space

Example



Repeat Analysis

(Specific Phobia)

- Ethnicity 
- Gender 
- Age 

Repeat Analysis

(Specific Phobia)

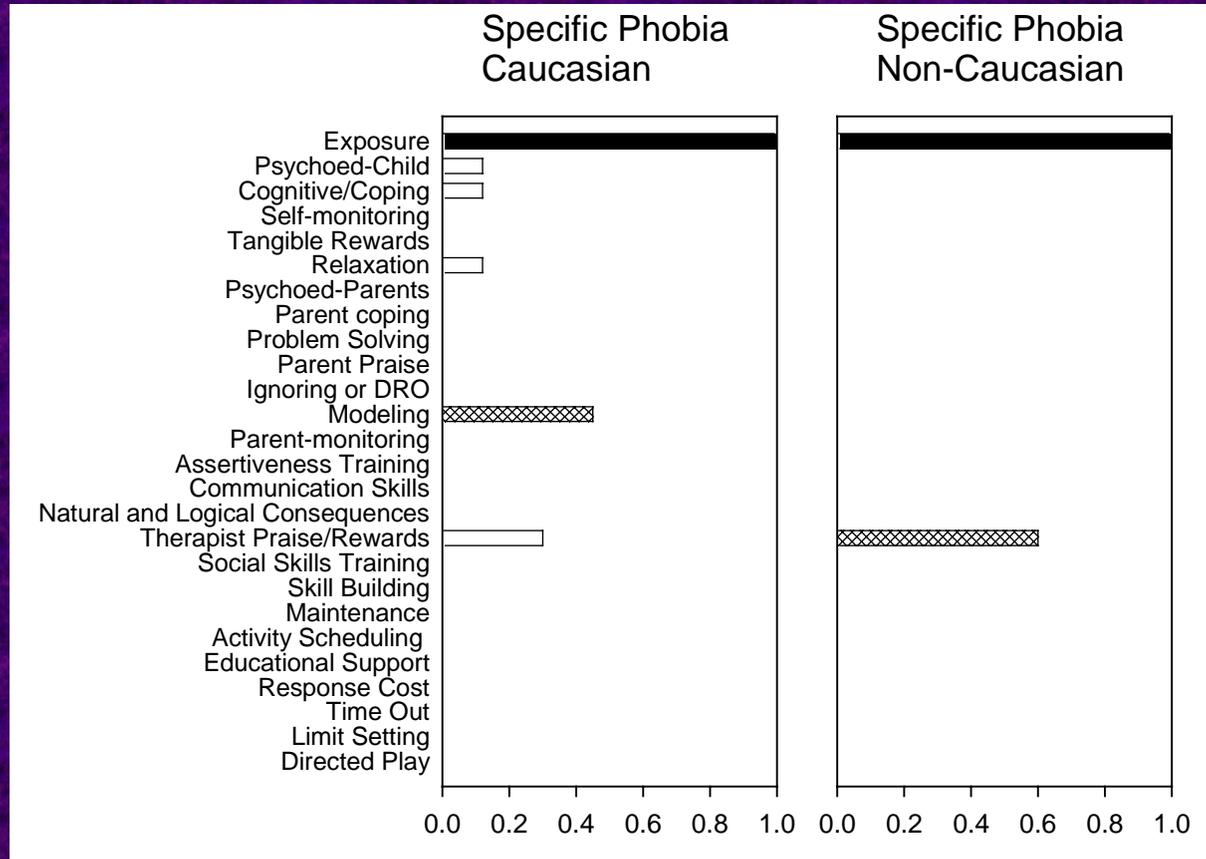
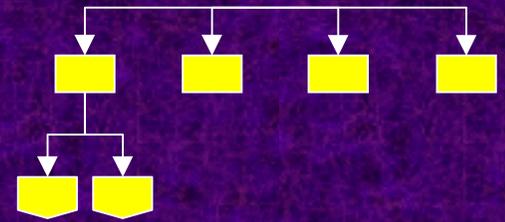
- Ethnicity
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Repeat Analysis

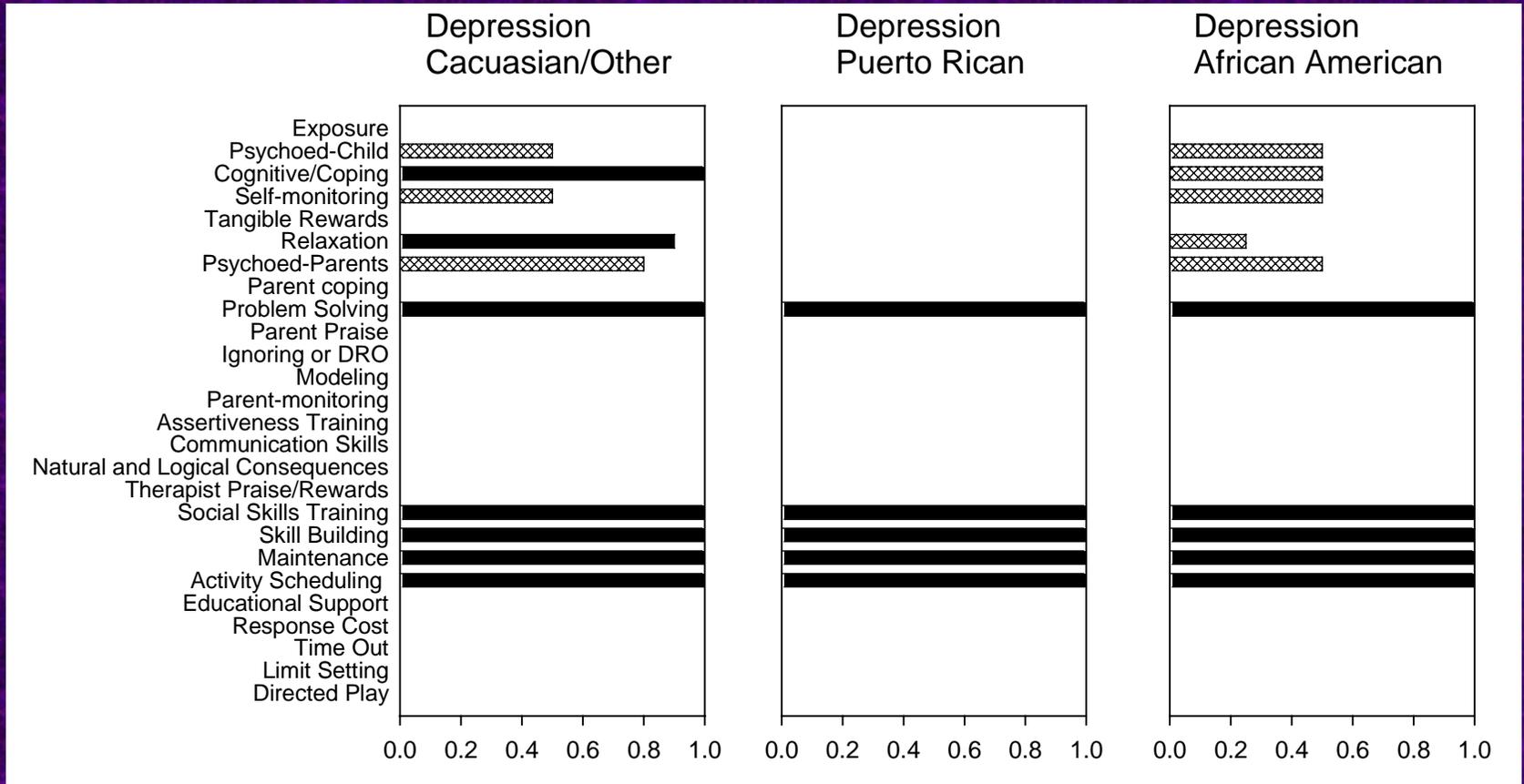
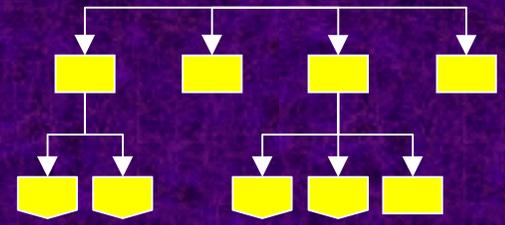
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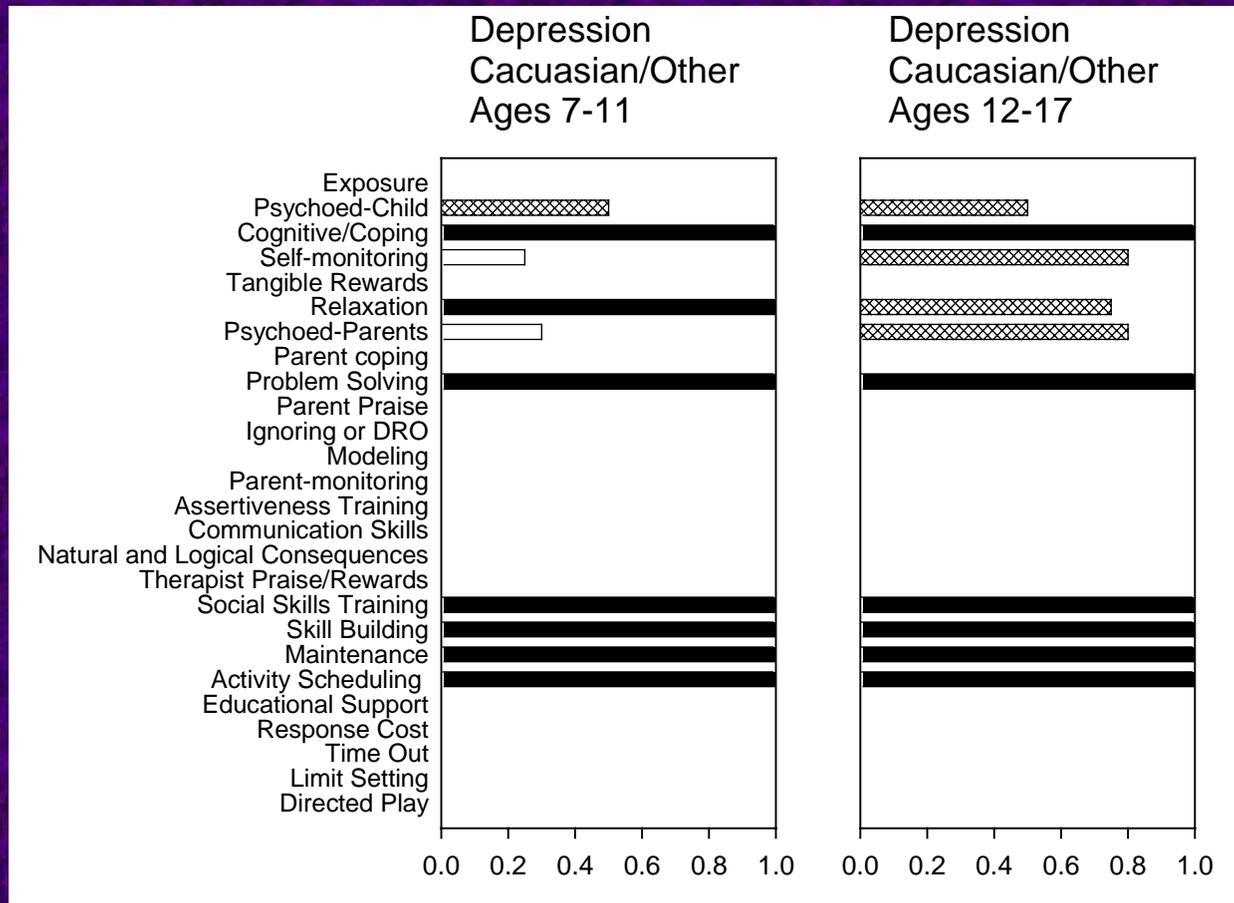
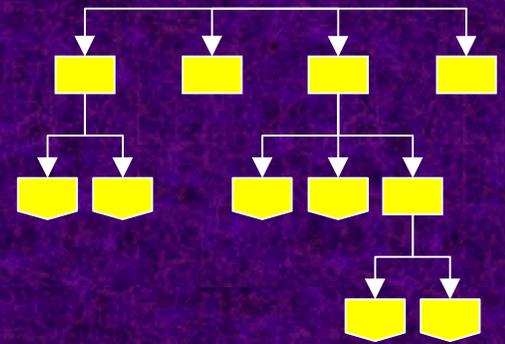
Example



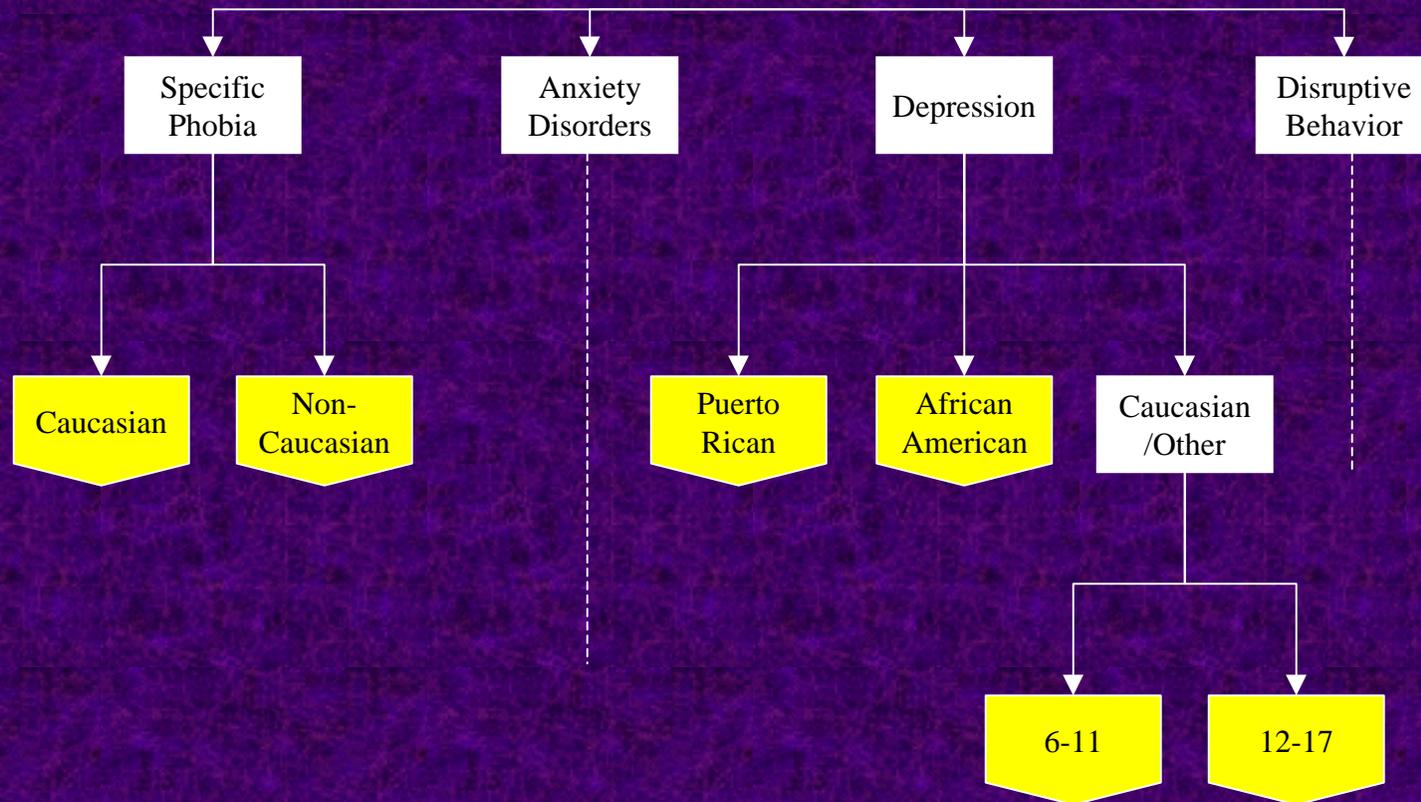
Example



Example



Decision Tree (Partial Example)



Results as a Guidepost

- Can point to a single, fully elaborated intervention
- Can point to choice of multiple promising interventions
- Can profile across areas for which there are no promising interventions
- Not intended to deconstruct promising interventions – intended to point to them

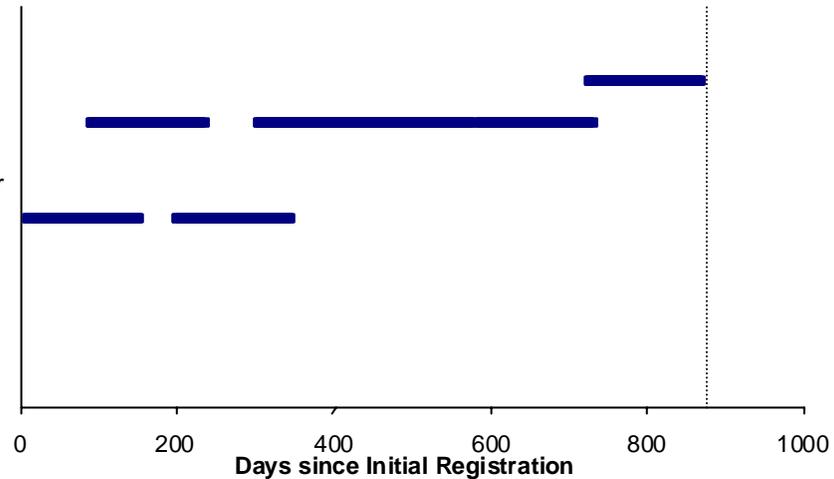
Application

- To the extent that data exist, can address the question of what works for whom under what conditions
 - e.g., what has worked for African American girls between ages 2 and 5 with posttraumatic stress disorder (PTSD)?

Reporting Examples

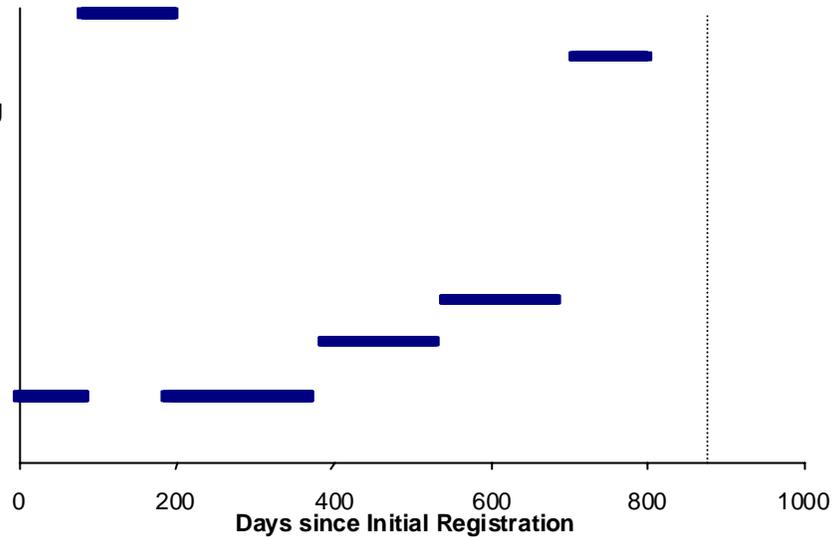
Treatment Targets

- Aggression
- Anxiety
- Avoidance
- Depressed Mood
- Mania
- Oppositional/Non-Compliant Behavior
- Peer Involvement
- Phobia/Fears
- School Refusal/Truancy
- Substance Use/Abuse
- Traumatic Stress
- Willful Misconduct/Delinquency



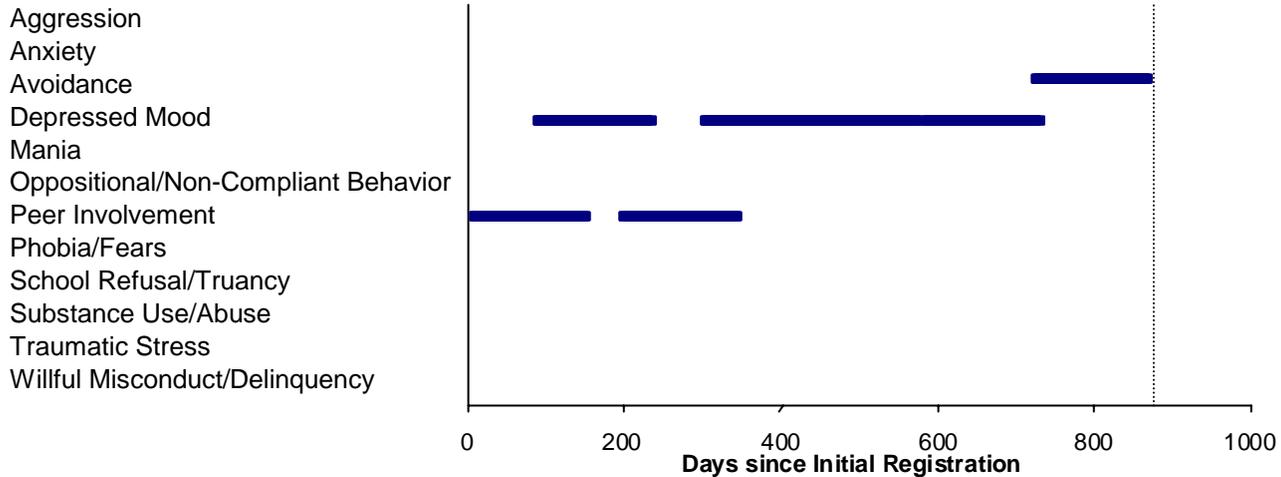
Practice Elements

- Activity Scheduling
- Assertiveness Training
- Communication Skills
- Educational Support/Tutoring
- Functional Analysis
- Ignoring or DRO
- Limit Setting
- Line of Sight Supervision
- Parent-Monitoring
- Problem Solving
- Relaxation
- Self-Monitoring
- Social Skills Training
- Time Out

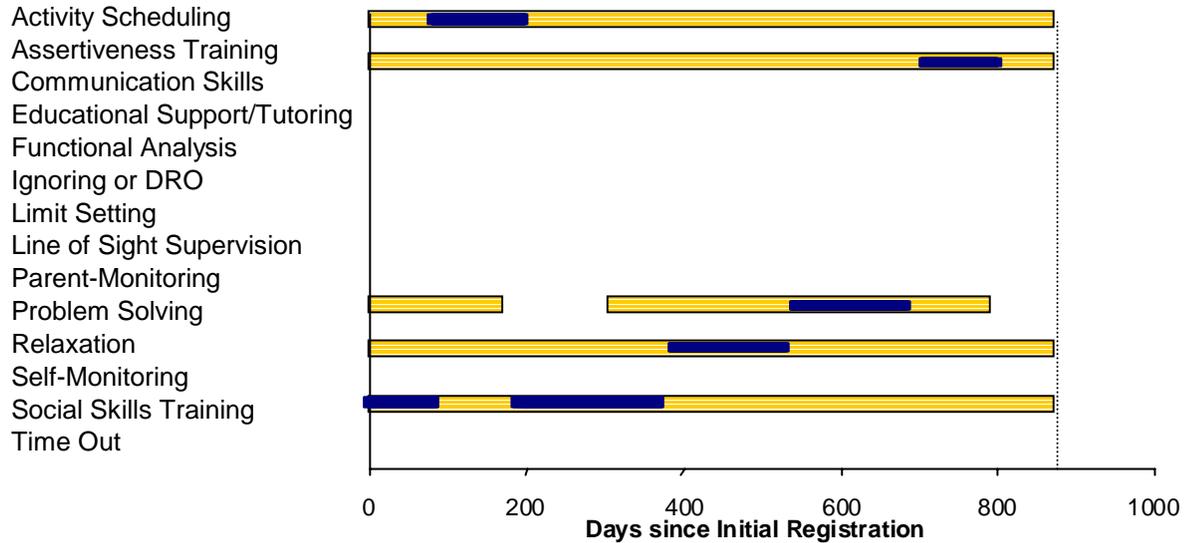


Reporting Examples

Treatment Targets



Practice Elements



Advantages

- Ranks relative frequency of elements
 - Leads to individualized interventions informed by the evidence base
 - Potentially more efficient assembly
 - Avoid shotgun approaches

Advantages

- Reduces training demands
 - In initial review, 64 studies reduced to 26 elements
 - Only 11 elements emerged as “core” at highest levels of specificity
 - Number of practice elements should grow less rapidly relative to overall knowledge base

Advantages

- Allows for examination of any youth characteristics coded from the literature
 - Presence or absence of substance use
 - Gender
 - Child or adolescent
 - Outpatient or out of home

Advantages

- Supports youth with multiple targets
- Summation of practice elements
 - Allows for evidence-based provision of services to more than just “pure” cases

Advantages

- Flexible matching of interventions to youth
 - Families can better participate in intervention planning
 - Helps inform revisions to plan

Advantages

- Handles problem of duplicate evidence
 - Averages across interventions that have equivalent evidence for addressing a target in a given context
 - Gives weighted consideration to all effective approaches

Advantages

- Handles problem of no evidence
 - Averages across broad classes of targets to leave fewer areas for which there are no informed options
 - Leaves fewer families and youth behind
 - (e.g., obsessive compulsive disorder, bulimia)

Summary

- System design to facilitate access and manage appropriate utilization
- Incorporation of strategies to involve evidence at every level of decision making
- Protocol deployment might be context-dependent based on feasibility issues