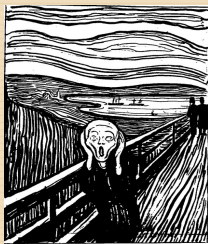## What Works? Comparing the Blueprints List of "Evidence-Based" Prevention Programs, Policies, and Practices with Other Lists

Dr. Del Elliott, University of Colorado

Dr. Abby Fagan, University of Florida

How do you assess the evidence?

On the one hand….

On the other hand…

Ask two questions:

1. Does it work?
2. How do you know it works?

Nature of Evidence Varies with Questions Asked

- Is the intervention grounded in theory, practical and logical?
- How difficult is it to implement the intervention as designed?
- Does the program have the intended effect on the targeted outcome?
- What is the magnitude of change on the targeted outcome? Is it cost effective?
- Can the IV be replicated with fidelity; can it be integrated into existing service systems with fidelity?
- Is the IV valued sufficiently to be given a high social, economic and political priority for funding?

Components of Blueprints/ Evidence2Success Review

- ☐ Intervention Specificity (Screened by Staff)
  - ☐ Questions 1 & 2
- ☐ Evaluation Quality
  - ☐ Questions 3
- ☐ Intervention Impact
  - ☐ Question 4 & 5
- ☐ System Readiness (on Board Recommendation)
  - ☐ Question 5

Blueprint Quality/Impact Standard for Certification as **Model Program**

- ☐ Experimental Design: RCT
- ☐ Impact: Statistically significant and substantive positive effects
- ☐ Sustainability: Effect sustained for at least 1 year post- intervention
- ☐ Replication: At least 1with RCT/QED
- ☐ RCT's/QED's adequately address threats to internal validity
- ☐ No known health-compromising side effects

Blueprint Quality/Impact Standard for Certification as **Promising Program**

- ☐ Design: 1 RCT or 2 QEDs
- ☐ Impact: Statistically significant and substantive positive effects
- ☐ Sustainability: Not required
- ☐ Replication: Not required
- ☐ RCT's/QED's adequately address threats to internal validity
- ☐ No iatrogenic effects

Blueprint Review Process

- A Systematic Review Method*
  - Inclusive search for all studies: reduce potential selection bias
  - Explicit eligibility criteria
  - Studies screened by these criteria
  - Review includes all screened studies
  - Quantitative review: pre-established guidelines/rules
  - Meta-analysis when appropriate (3+ quality studies)
  - Detailed write-up of review and decision

  *Campbell Collaboration, www.campbellcollaboration.org, Welsh and Farrington, 2006.

Blueprint/Evidence2Success
Behavior and Developmental Outcomes

- Behavior -45
  - Antisocial Behavior – 38
  - Positive Behavior - 7
- Educational Skills and Attainment - 8
- Emotional Well-Being - 7
- Physical Health - 6
- Positive Relationships - 9

Blueprint Database Fact Sheet

- Program Name and Description
- Developmental/Behavioral Outcomes
- Risk/Protective Factors Targeted
- Contact Information/Program Support
- Target Population
- Program Effectiveness (Effect Size)
- Operating Domain: Individual, Family, School, Community

Blueprint Database Fact Sheet

- Logic/Theory Model
- Program Costs:
  - Unit Cost, Start-up, Implementation, Fidelity Monitoring, Other, Budget Tool
- Cost Benefit/ROI:
  - Net Unit Cost-Benefit, Benefits
- Funding: Overview, Financing Strategies
- Program Materials
- References

Evidence-Based Programs and Practices

- Evidence-Based Programs: Individual "brand name" interventions (explicit theoretical rationale & change model, targeted population, program manuals, training, TA, fidelity checklists) proven effective in a systematic review of their evaluations (ideally with meta-analysis)
  - e.g., LST, NFP, MST
  - Evidence-based Practices: Lipsey, 2009
  1) General intervention strategies or policies proven effective, on average, in a systematic review of the group of programs using that strategy (meta-analysis)
  - e.g., skills building, family interventions, CBT
  2) Characteristics of programs that differentiate between those with strong vs weak effects in a meta-analysis
  - e.g., high risk clients, implementation quality, therapeutic philosophy

Other "What Works" Lists

- the National Registry of Evidence-Based Programs and Practices (NREPP)
- the Office of Justice Programs Crime Solutions
- the Office of Juvenile Justice and Delinquency Prevention Model Programs Guide (MPG)
- the Best Evidence Encyclopedia (BEE)
- the U.S. Department of Education What Works Clearinghouse (WWC)

Other "What Works" Lists

- The Centers for Disease Control Community Guide
  - Broad range of programs and policies affecting physical and mental health, violence, and substance use/abuse
  - Goal: identify effective program "types" using meta analyses
- The Coalition for Evidence-based Policy (Top Tier)
  - Broad range of social programs affecting education, employment, and crime
  - Goal: assist Congressional policy makers in decision-making and spending

Summary of the Lists & Criteria

List	Outcomes	Types of Interventions	Readiness for Dissemination?
Blueprints	Education; Physical and mental health; Antisocial and positive behavior	Programs	Must be ready for replication (imp. tools)
NREPP	Mental health, Substance use	Programs Practices	-Must be ready for replication (imp. tools) -Rates readiness (0 to 4)
Crime Solutions	Crime and victimization	Programs Practices	No requirement
BEE	Education	Programs Practices	No requirement
WWC	Education	Programs Practices	No requirement?

Summary of the Lists & Criteria

List	Required Number/ Type of Studies	Sustained Effects?	Programs with Harmful Effects?	Overall Research Design Rigor
Blueprints	Model: 2 RCTs or 1 RCT & 1 QED Promising: 1 RCT or 2 QEDs	Model: 1 year Promising: No	Excluded	HIGH
NREPP	1 RCT or QED *with comparison group	No	May be included	VARIED (Rated 0 to 4)
Crime Solutions	1 RCT or QED *with comparison group	No	Identified as having "no effect"	MEDIUM/HIGH
BEE	2 RCTs or QEDs *with comparison group	No	May be included	HIGH
WWC	Meets Evidence: 1 RCT Meets w/ Reservations: 1 RCT or QED	No	Identified as "negative" or potentially negative	MEDIUM/HIGH

National Registry of Evidence-Based Programs and Practices (NREPP): http://www.nrepp.samhsa.gov/Search.aspx

- **Outcomes of Interest:** Mental health and substance use/abuse
- **Types:** Programs and Practices
- **Rating System:** rates 'Quality of Research' and 'Readiness for dissemination' on 0-4 scale
- **Criteria**
  - Number of required studies: 1 RCT or QED; comparison group and pre/post tests required
  - Quality of Research: based on study design and rated on: validity and reliability of measures, appropriate analysis, low attrition and missing data, attention to confounding variables, implementation fidelity
  - Readiness to Disseminate: rated on availability of materials, training and technical assistance, and quality assurance tools
  - Follow up period: Not required
- **Strengths:** comprehensive, provides many details on programs, including costs and implementation; rates readiness to disseminate
- **Weaknesses:** does not recommend or discourage particular programs; difficult to interpret scoring system; not updated with new (or negative) findings

Office of Justice Programs - Crime Solutions.Gov
http://www.crimesolutions

- **Outcomes of Interest:** Crime, delinquency, victimization, corrections, courts, police
- **Types:** Programs and Practices
- **Rating System:** Effective, Promising, No Effects
- **Criteria**
  - Number of required studies: 1RCT or QED (with a comparison group)
  - Study Design: rated on: sample size, reliable and valid measures, follow-up period, considers confounding variables, good implementation fidelity, size of effects
    - Effective Programs have more rigorous study designs than Promising Programs; neither category can show evidence of harm
  - Follow up period: Not required
- **Strengths:** comprehensive (range of outcomes and practices), very specific rating system/criteria, user-friendly website, updated, identifies ineffective interventions
- **Weaknesses:** does not consider readiness to disseminate

Best Evidence Encyclopedia (BEE)
http://www.bestevidence.org/

- **Outcomes of Interest:** Educational: reading, math, school reform
- **Types:** Programs and practices (e.g., school-wide reform)
- **Criteria:** based on meta-analyses
  - **Strong Evidence:** at least 2 studies, 1large RCT or QED and one other RCT or QED with total sample size of >500 students and effect size of >0.20
  - **Moderate Evidence:** at least 2 large RCT or QED or multiple smaller studies with a total sample size of >500 students and effect size of >0.20
  - **Limited Evidence/Modest Effects:** same as above with effect size between 0.10 and 0.19
  - Follow up Period: Not required; program duration must be >12 weeks
- **Strengths:** regularly updated
- **Weaknesses:** limited information about each program, can't search website

U.S. Dept. of Education – What Works Clearinghouse
http://ies.ed.gov/ncee/wwc/

- **Outcomes of Interest:** Education: academic achievement, school drop out
- **Types:** Programs and Practices
- **Criteria** (based on study design)
  - **Meets Evidence:** 1 RCT with low (<50%) and non-differential attrition and participant equivalence at baseline
  - **Meets with Reservations:** at least one QED (with a comparison group) or less well implemented RCT study that shows participant equivalence at baseline
  - **Does not Meet Standards:** high attrition, groups not equivalent at baseline, measures were not valid or reliable, confounding factors not controlled
  - **Effectiveness** (based on outcomes) rated as: positive, potentially positive, mixed, no discernible effects, potentially negative, or negative
  - Follow up period: not required
- **Strengths** – periodically updated, good search tools, provides many details including costs, identifies effects sizes and harmful programs, very specific rating criteria
- **Weaknesses** – no replication or sustained effects required; website not very user friendly; rating system somewhat cumbersome (too detailed) and difficult to understand

Example of Differences Across Lists

List	Nurse Family Partnership	Big Brothers/ Big Sisters	Project Alert	Lion's Quest Skills for Adolescence	Success for All
Blueprints	Model	Promising	REMOVED	Not listed	Promising
NREPP	Outcomes: 3.2-3.5 Readiness: 3.7	Outcomes: 3.0-3.1 Readiness: 3.7	Outcomes: 4.0 Readiness: 3.8	Outcomes: 2.1-3.5 Readiness: 3.5	--
Crime Solutions	Effective	Effective	No Effects	No Effects	Effective
BEE	--	--	--	--	Moderate Evidence
WWC	--	--	--	Meets Standards (Small Effects)	Depends on the study: Meets Standards and Meets w/ Reservations (Med-Lg. Effects)

Recommendations & Next Steps

- Know which outcomes you are interested in and consult the appropriate list
- Prioritize adoption of programs meeting the most rigorous standards (e.g., "model" and "effective")
  - Next, prioritize "promising" programs that appear on multiple high standards lists
- Use multiple sources to obtain other important information about programs (costs, targeted populations, ease of implementation, etc.)
- Fact check: look for **evidence of effectiveness** in changing the outcomes you are interested in; don't be fooled by propaganda