

## **Top Tier Evidence Initiative:**

### **Selected Examples of the Expert Panel’s Reasoning in Its Top Tier Decisions**

These examples, which will be compiled and posted on the initiative’s website after each Panel meeting, are designed to (a) provide additional guidance to readers and future applicants on what meets the Top Tier standard, to supplement the existing guidance in the [Project Overview](#) (see Appendix C, item 2, pdf page 7); and (b) serve as a body of precedents to help guide the Panel’s future reviews and decisions. These examples generally address interventions that the Panel considered as viable candidates for the Top Tier, where application of the Top Tier standard required especially careful analysis that the Panel felt should be articulated.

#### **Example #1 – Two important considerations in the Panel’s review of Success For All:**

- *On the question of whether the evidence on Success For All meets our initiative’s guidelines on “How many randomized controlled trials are needed to establish strong evidence of effectiveness”* (see [Project Overview](#), pdf page 14), the Panel’s majority view is that Success For All meets these guidelines, on the following basis. The one randomized controlled trial of this program – showing positive effects as described in our evidence summary – was a multi-site trial conducted in the real-world public school settings and conditions where this program is normally implemented (41 high-poverty elementary schools across 11 states). Such a study falls within the stated guidelines, aimed at ensuring sufficient confidence that the program would be effective if faithfully replicated in other, similar schools.
- *On the question of whether the trial’s finding of an improvement in schoolwide reading ability, including comprehension, at the end of second grade constitutes a “sustained” effect* (as required by the Top Tier standard), the Panel’s majority view is that Success For All meets this condition, on the following basis. The end of second grade, though it was the end of the intervention, was three years after children entered the program, and reading ability increased over all three program years, with the largest effects found in year three. A minority of Panel members would have preferred to see evidence that the effects were sustained through later grades – i.e., after the completion of the intervention – before identifying this program as Top Tier. Based on the majority view, the Panel identified this program as meeting the Top Tier standard.

#### **Example #2 – An important consideration in the Panel’s review of a specific school-based intervention to improve child behavior:**

- *On the question of whether the evidence on this behavioral intervention meets our initiative’s guidelines on “How many randomized controlled trials are needed to establish strong evidence of effectiveness”* (see [Project Overview](#), pdf page 14), the Panel’s majority view is that the intervention does not yet meet these guidelines, for the following reason. The two randomized controlled trials of this intervention with a long-term follow-up evaluated substantively different versions of the intervention: (a) a stand-alone version implemented in grades 1 and 2; and (b) a version implemented only in grade 1, and as part of a comprehensive classroom curriculum that, in addition to the intervention, included academic components and supplemental behavioral strategies. Also, neither of these studies was a large, multi-site trial that might by itself provide sufficient evidence.

Importantly, this Panel finding does not imply that the intervention is not effective and/or evidence-based – just that an additional, well-implemented trial of the intervention by itself, showing sizeable, sustained effects, would likely be needed to meet the Top Tier standard. (*Note: A paper currently in press reports on long-term findings from an additional trial of this intervention. Thus our review of this intervention is still in process, and the Panel will consider the new results, along with the published existing findings, at its next quarterly meeting.*)

**Example #3 – An important consideration in the Panel’s review of a specific preschool program:**

- ***On the question of whether the evidence on this preschool program meets our initiative’s guidelines on “How many randomized controlled trials are needed to establish strong evidence of effectiveness”*** (see [Project Overview](#), pdf page 14), the Panel’s majority view is that the program does not yet meet these guidelines, for the following reasons.

There have been two randomized controlled trials of this preschool program. The first trial had a sample of over 100 African American children living in poverty in the mid-1960s; it reported sizable, sustained effects on participants’ life outcomes. Because this study was conducted in a single site and population under conditions that may differ from today (e.g., control group members generally did not have access to other preschool or daycare options, as they would now), the Panel looked for corroboration of this finding in another site and/or population, and a more contemporary setting. The second trial evaluated the preschool program in a more ethnically-diverse, low-income sample, against a control group that participated in traditional nursery school (a treatment-as-usual condition). However, this trial did not produce clear evidence of effectiveness -- both because of limitations in the study design<sup>1</sup> and the absence of statistically-significant effects.<sup>2</sup>

Importantly, this Panel finding does not imply that this program is not effective and/or evidence-based – just that an additional, well-implemented trial (i) conducted under conditions typical for today’s low-income children, and (ii) showing sizeable, sustained effects, would likely be needed to meet the Top Tier standard.

**Example #4 – An important consideration in the Panel’s review of a specific educational childcare program**

- ***Background:*** This program was evaluated in a large, multi-site randomized controlled trial with a long-term follow-up. In both the childhood and young adult (age-18) follow-ups, the trial found statistically-significant effects on cognitive ability and reading and/or math achievement for a key subgroup (but not for the full sample). At age 18, the standardized effect sizes were about 0.2 to 0.4, which translate to about 3-6 points on the IQ scale.
- ***On the question of whether these positive effects constitute “sizable ...benefits to participants and/or society”*** (as required by the Top Tier standard), the Panel’s majority view is that the program does not yet meet this condition, for the following reasons.

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<sup>1</sup> For example, although the study randomly assigned children to the preschool program versus traditional nursery school, it did not randomly assign teachers. This raises the possibility that there were differences in teacher quality between the two groups, which could account for any difference in outcomes.

<sup>2</sup> This trial – in addition to evaluating the program compared to traditional nursery school – evaluated it against another preschool program using a very different curriculum, and reported some significant effects versus that condition.

First, in the childhood and young adult follow-ups, the effects on cognitive and academic tests, while important, had not translated to improvements in other key school outcomes that were measured (e.g., special education placements, school drop-out rates, grade retentions) or long-term behavioral or health outcomes that were measured (e.g., substance use, arrests, jail time). It is possible that such effects will appear in future follow-ups of this study, leading the Panel to revisit its findings for this program.

Second, this is an expensive program, costing about \$20,000 per child per year over the program's three year span (in 2009 dollars). As discussed in our guidance on the Top Tier evidence standard, the Panel's decisions are based mainly on the evidence of sizeable, sustained effects; however, in some cases the Panel may also consider cost (see [Project Overview](#), Appendix C, item 2, pdf page 7). In light of the study's finding of limited positive effects, the Panel decided to consider the program's cost in relation to the benefits, and found this consideration to weigh against identifying the program as meeting the Top Tier standard.