

**Phone Conversation between (Dr. Alan Mendelsohn) and GiveWell (Elie Hassenfeld and Wendy Knight) regarding Reach Out and Read  
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**GiveWell:** The data we've seen on Reach Out and Read mostly looks at short-term studies that seem to indicate some increases in reading activities between parents and children. Are there other studies that you know of?

**Dr. Mendelsohn:** The data are mostly short-term kinds of outcomes. There are no two ways about that fact. It's reflective of what this intervention does. It sets up children to have increased familiarity with books and reading and gain in vocabulary and be prepared for a school environment.

A lot of the rationale for a program like this comes from the importance of the first five years before children start school which are very compelling data. The best predictor of how a child does in school is the transition into Kindergarten and first grade, and the best predictors of that are markers of early childhood development, including language, cognitive and social emotional development.

The data are also very compelling that if you look at low income children compared to families with more resources, low income children really fall off in all of those domains almost from the time you can begin to measure differences. Hart and Risley did a study in the 1990s in which they followed children beginning at age 6 months through age three years by visiting their homes monthly and by standing in the background and tape recording every word said to and by the child. They were able to compare trajectories of early language development and early language experiences based on income level, low income/ working class and higher income/highly educated families. They were able to show that you can really see differences in low-income children's language development from the time they say their first words (around a year) and those disparities widen over time. They were able to link those early disparities to some elementary school markers in 2<sup>nd</sup> or 3<sup>rd</sup> grade.

What's clear from their work is not only that the disparities are there and that they widen, but that those disparities are related to measurable differences in children's early experiences. They found that high-income children were exposed to 4x more language than low-income children and that this was reflected in the words that children could speak. That data and other data, support the idea that the best approach is to intervene early in a preventive way. You want to reduce differences between low and high-income children and reading aloud is one great way to do that.

The genesis of Reach Out and Read came from that recognition on the one hand, and also that if you want to reach children on a large scale, almost at a population level, the only way to do that is via the healthcare system, at least in the 0-3 period,

because almost every child has health care and vaccines and screenings. When thinking about how to reach the population, the idea of intervening in a preventive way via healthcare makes a great deal of sense: the families are already there and one can really intervene early at a stage where low-income children are falling behind.

Reach Out and Read was born out of this recognition. That being said Reach Out and Read is not a high intensity intervention and by itself is unlikely to completely remove all these disparities. Reach Out and Read is a population-wide opportunity to work with all of these families and level the playing field to some degree.

To do the right type of study, you'd need vast amounts of resources to influence children's long-term course. Let's say you have a child and they have Reach Out and Read and they're in a school that's not well resourced. Reach Out and Read won't solve that. But, if you look at two children who enter a higher-resourced classroom, the one with Reach Out and Read will likely do better.

The studies show that with a fairly limited intervention you can (a) change parent behaviors, and (b) make changes in language development in a way that is likely to set up children to be more prepared to do better in school. From the perspective of thinking about longer term outcomes and trying to measure things like high school graduation rates, that will be very difficult, but the fact that those things haven't been measured doesn't negate the studies that are out there.

**GiveWell:** What specific studies should we look at that link reading to children with their later language development or other development later on?

**Dr. Mendelsohn:** There are studies that are out there that have looked at reading activities and later reading comprehension. The links that have been well-established are between reading aloud, language development and school achievement, and between reading aloud, self-regulation and school achievement.

There are also other studies, one that just came out in the journal Pediatrics about increasing reading activities in a pediatric setting that showed that by increasing reading activities in a program with similarities to Reach Out and Read, they could increase school readiness as measured by understanding of concepts like colors and shapes.

I should also tell you a little about my own work outside of Reach Out and Read. I've been engaged in a large-scale randomized controlled trial (RCT) looking at even further enhancing Reach Out and Read through an add-on intervention called the Video Interaction Project. We videotape the interactions of parents and children together at childcare visits and we rerun the tape and watch it with the parent to further reinforce the type of interactive behaviors we're promoting with Reach Out and Read.

The reason I mention this is that we have a couple of studies looking at outcomes at 6 months. This program starts right after birth and we have an article looking at some fairly large differences at 6 months and that's the age at which Reach Out and Read kicks in. We were able to show that by working with parents and children during childcare visits, we have some evidence that we've increased IQs at the point of school entry. I think this is relevant to Reach Out and Read since it's really an extension of the program and it's an RCT in which we've shown some outcomes through 1<sup>st</sup> grade via a healthcare-based intervention. The data highlights the utility and efficacy of that.

**GiveWell:** What's the relationship between the Video Interaction Project and Reach out and Read?

**Dr. Mendelsohn:** VIP is an enhancement to ROR. I think it's useful to look at the 6-month data because it shows in an RCT that we can make a fairly large difference. We don't have long-term data from our second trial yet, but we have data from a pilot study showing changes in IQ and behavior into first grade. The study goes a long way in showing that working with parents and children in a medical care setting can be an effective way to intervene. A key to this is when you compare Reach Out and Read, which costs say \$15-25 per child per year or something around that, and through Reach Out and Read one can have impacts on child development at the population level. That is compelling to me.

**GiveWell:** Do you know of any other RCTs on Reach Out and Read or plans to do more?

**Dr. Mendelsohn:** It's hard to do an RCT on Reach Out and Read. It's hard to do because there may be contamination where controls receive the intervention. Given that current pediatric guidelines recommend observing and counseling parents regarding their interactions with their children (including reading aloud), it makes it hard to think about a circumstance where some kids get Reach Out and Read and others don't get anything. That being said, Reach Out and Read is now more than 4,500 sites across the United States, but there are many sites where Reach Out and Read would be beneficial but is not presently in place. One might be able to capitalize on this to do a large scale cluster-randomized trial.

The High study is the best RCT of ROR presently. RCTs though, are not perfect in relation to a program like Reach Out and Read. In the end, there are lots of other factors going on and you'd need a huge n to figure them out. Over time, these factors accumulate. Understanding long-term impacts of ROR is not just a matter of comparing outcomes among those who did and did not receive ROR – it would require analysis of the very complex interplay between ROR and all of these factors, including family risk and child's variable exposure to preschool programs of variable quality. Looking at a long-term RCT is not necessarily the right way to go. I think that long-term n of 1 studies in which one studied in detail individual children's exposure to ROR in the context of evolving family risk and educational

experiences might have a better chance of showing impacts that are clearly present. This being said, I think the likelihood is that any study design will tend to under measure the impacts because of the other factors I mentioned.

**GiveWell:** Are there any long-term studies you know of that might control for other factors?

**Dr. Mendelsohn:** We [Reach Out and Read] don't have the long-term studies at the moment, something that could go into school age. If we could do that, I'd think that such a study would be biased against showing outcomes because all of the other factors we've discussed.

The long-term compelling data relate to parent-child interactions and reading aloud. For example, Whitehurst followed 367 low income families enrolled in Head Start and found impacts on reading comprehension in 3<sup>rd</sup> to 4<sup>th</sup> grade. These impacts were indirect through improved language comprehension – better understanding of spoken language allows you to better understand what you can read. The study is illustrative in two regards – first in showing long-term impacts of reading aloud and second in showing that impacts on key school-age outcomes are likely to be indirect.

I think the disparities between lower and higher income families are clear in that they develop early and persist. Language experience as a key factor is well documented and reading is an opportunity to increase language. I think that the data linking reading aloud to language experience to language and social development, to school readiness, and ultimately to long-term educational trajectories including reading skills, are very well established and very strong.

The Reach out and Read intervention data are also very strong as the studies show that you can change parent behaviors clearly associated with language outcomes that then predict key long-term educational achievement. The connection between Reach Out and Read and language development is very well established. The High study is compelling at showing an impact.

My study of Reach Out and Read is not an RCT. We try to adjust to the best extent possible and the results we found, while not an RCT, are compelling in that for the average child in the study we were seeing an enhancement in language skills at age 4. We also performed a second study where we compared children before and after initiation of Reach Out and Read at the control site in the original study, with similar results. Other before and after studies include the Silverstein study showing that even among families that don't speak English as a primary language, providing them with books and counseling is associated with changes in reading behaviors.

The added benefit of Reach Out and Read is that it is reaching everybody, across the board, at the time of greatest importance to brain development.