# How Well Are Children Screened Being Identified As At Risk For Delays?

## The Value of Benchmarks in Assessing Screening Service Quality

Office of Child Development

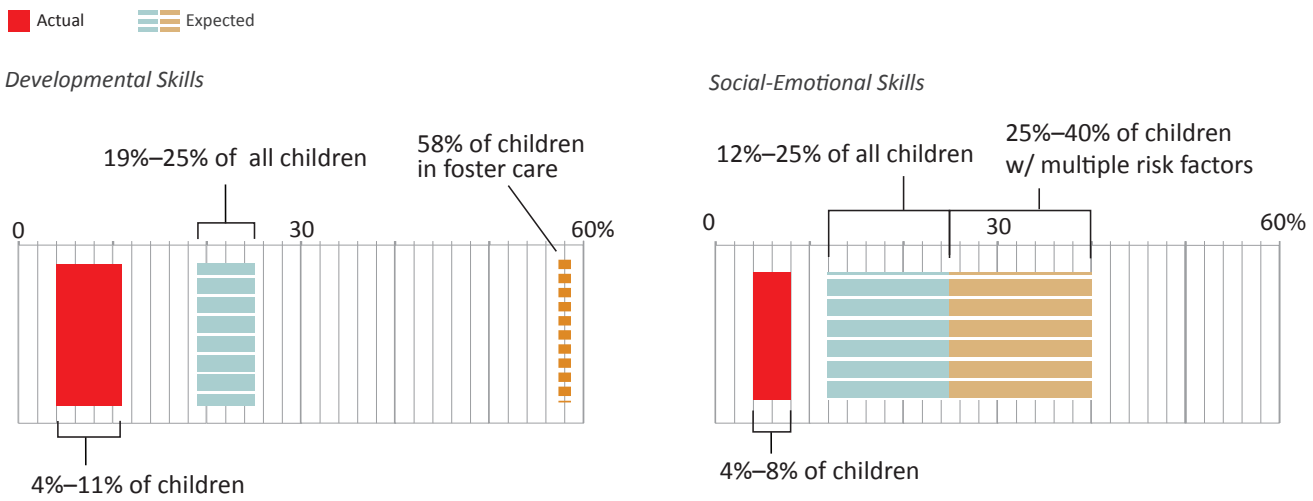
Housed within Allegheny County is a large network of community-based programs that primarily serves low-income, single-parent, minority families with children between the ages of 0–5 years. As a means of supporting the healthy development of children served through this network, screenings are administered to better identify children who are at risk for developmental and social-emotional delays.

The Office of Child Development's Division of Applied Research and Evaluation partnered with this network to evaluate their screening service. Initial findings revealed that out of 1,341 children screened, approximately 4–7% were identified as at risk for developmental delays. Although this identification rate appeared low, we could not gauge its accuracy since we lacked information (i.e., a benchmark) about what identification rate one should expect among this population. To assess the accuracy of this rate and therefore understand how well the program staff identified children at risk for delays, we analyzed existing screening data and set out to identify a benchmark for this population. FIGURE 1 depicts expected screening identification rates suggested by expert opinion and research studies compared to the actual identification rate among children screened through this network.

In our search for a benchmark, we looked to the Ages and Stages manuals (ASQ-2nd edition and ASQ-SE) which provide data on a national sample of children screened with these measures. Using these manuals, we calculated developmental identification rates ranging from 19–25%, and social emotional identification rates ranging from 12–25% (depending on the age of children in the sample). Because these test manuals lack a specific benchmark for a population facing multiple risk factors, we consulted Jane Squires, Ph.D., the lead test developer, who indicated that in this population, one would expect to identify 25–40% of the children screened as at risk for social-emotional delays.

Limited availability of research on screening identification rates expanded our search for a benchmark to also include literature on diagnostic rates of developmental delay in populations facing multiple risk factors. Literature reveals that among 2-year-old children living below 100% of the Federal Poverty Guideline, 17.9% are developmentally delayed compared to 12.7% of children living above the poverty line[1]. Among youth served through the child welfare system, 33% of children between the ages of 0–2 years and 36% between the ages of 3–5 years are developmentally delayed[2] while 58% of children in foster care placement are at risk for delays[3].

*FIGURE 1. Expected vs. Actual Screening Identification Rates*



# How Well Are Children Screened Being Identified As At Risk For Delays? (continued)

Office of Child Development

Based on our review of the aforementioned resources, we arrived at a conservative estimate of identification for children screened using the Ages and Stages questionnaires. We expect that at least 22 % of the children screened through this network should be identified as at risk for developmental delays and at least 18% should be identified as at risk for social-emotional delays.

Further analysis of existing data from the community-based network's database system revealed an ASQ identification rate ranging from 0–20% across program sites and a mean identification rate of 11% across the network[4]. ASQ-SE identification rates ranged from 0–19% across program sites with a mean identification rate of 8% across the network[5]. Although some program sites identified children at closer to expected rates, far more fell short.

Therefore, in response to the question of how well staff across the network identified children at risk for delays, children screened through this network were under-identified as at risk for developmental (11% of 911 children, compared to 22% expected) and social-emotional (8% of 432 children, compared to 18% expected) delays.

Despite answering the question of how well staff identified children, the analysis could not explain why children screened through this network were under-identified. The causes of and solutions to this problem remain unknown at this time. In addition, it remains unclear to what extent under-identification of this nature occurs among other professional communities (e.g. Early Care and Education, child welfare) that also screen children.

Although we arrived at an expected identification rate that made sense for children screened through this network and against which we compared the actual rate of children identified, it is imperative that 1) screening benchmarks are throughly identified and documented for children across a range of risk factors; 2) programs, communities, and other networks identify the actual rate of identification among children they screen; and 3) these actual rates of identification are measured against expected benchmarks that make sense for their population of children. Having such measures in place enables programs to better understand the quality of their screening identification rate as well as the opportunities for improvement.

*The next brief in this series examines other factors affecting the ways in which staff in this network use screenings to identify and refer children who are at risk for delays to early intervention services for further evaluation.*

## References and Notes


[1] Rosenberg, SA, Zhang, D, Robinson, CC. Prevalence of developmental delays and participation in early intervention services for young children. Pediatrics. 2008; 121: e1503-e1509

[2] Zimmer, MH, Panko, LM. Developmental status and service use among children in the child welfare system. Archives of Pediatric and Adolescent Medicine. 2006; 160: 183-188

[3] Jee, SH, Szilagyi, M, Ovenshire, C, Norton, A, Conn, A, Blumkin, A, and Szilagyi, PG. Improved detection of developmental delays among young children in foster care. Pediatrics. 2010; 125: 282-289


[4] These figures represent data available from 18 program sites.

[5] These figures represent data available from 17 program sites.

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