



Snapshots

Pediatricians' Appraisals of a Universal Checklist for Making Early Intervention Referrals

Carl J. Dunst, Carol M. Trivette, Anne Gramiak, and Glinda Hill

Abstract

Results from a survey of pediatricians' assessments of the usability and applicability of a universal checklist for identifying infants and toddlers who may be eligible for early intervention are presented. The universal checklist was developed at the Tracking, Referral, and Assessment Center for Excellence in collaboration with the American Academy of Pediatrics. The largest majority of study participants judged the checklist as useful for eligibility determination and referral purposes. The need to tailor the checklist to each State's specific eligibility criteria is noted.

Introduction

This *Snapshots* includes the results of a survey of pediatricians' appraisals of the value and use of a checklist for making early intervention referrals. The checklist was developed, evaluated, and field-tested at the Tracking, Referral, and Assessment Center for Excellence (*TRACE*). The major goal of *TRACE* is to identify and promote the use of evidence-based practices for improving child find, referral, early identification, and eligibility determination of infants, toddlers, and preschool children with disabilities or developmental delays eligible for IDEA Part C early intervention or Part B (619) preschool special education (Dunst & Trivette, 2004; Dunst, Trivette, Appl, & Bagnato, 2004). This goal is being accomplished by the conduct of practice-based research syntheses; studies investigating the characteristics and consequences of child find, referral, early identification, and eligibility determination practices; and the development of methods and procedures for facilitating child find and enrollment in early intervention and preschool special education.

IDEA stipulates the conditions that make a child eligible for early intervention where States have considerable latitude in terms of how broad or narrow they define eligibility criteria (Shackelford, 2006). The *TRACE*

Universal Checklist includes those categories or conditions that would encompass a broad eligibility definition. The checklist was specifically developed so that it can be customized and include only those conditions and concerns included in a State's eligibility definition (Dunst & Trivette, 2007). The checklist includes both conditions that would make a child immediately eligible for early intervention without the need for any additional evaluations (e.g., Down syndrome) and concerns that would necessitate further developmental assessments (e.g., suspected developmental delay).

Method

Participants

The survey respondents were 69 pediatricians who were all members of the American Academy of Pediatrics (AAP). The respondents reported their primary employment setting as private practice (60%), medical school or university (24%), hospital or community health center (10%), and other (6%). The primary settings were located in urban (45%), suburban (39%), and rural (16%) areas. The largest majority of study participants (87%) had 10 or more years of experience with more than half of the respondents having more than 20 years of experience.

Referral Checklist

The checklist was developed by *TRACE* staff in collaboration with both AAP staff and the *TRACE* Project Officer.¹ The checklist includes conditions that would

¹ Feedback from staff at the University of Wisconsin Waisman Center was also used as part of the checklist refinement.

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make an infant or toddler eligible for early intervention, depending on a State's eligibility criteria. The conditions were organized into four categories: identified conditions, developmental delays, at-risk conditions, and other concerns. The specific conditions within each category are ones that have a high probability of being associated with poor developmental outcomes without early intervention. The original version of the checklist was intentionally over-inclusive to be sure it contained the most commonly occurring reasons a child might be eligible for early intervention (Scarborough, Hebbeler, & Spiker, 2006; Scarborough et al., 2004). The Appendix includes the revised version of the referral checklist based on study participant feedback.

Survey

The survey had three sections. Section 1 included five statements that respondents were asked to rate on a 5-point scale from *not at all true* to *definitely true* (e.g., "The checklist includes the largest majority of conditions or concerns that precipitate a referral for early intervention."). Section 2 included three yes/no questions about the applicability of the scale for general use (e.g., "Would you likely use the checklist to make referrals to early intervention?"). Sections 1 and 2 also included open-ended questions asking for additional respondent comments and feedback. Section 3 included questions about the background characteristics of the survey respondents. The survey was completed online using Survey Monkey (www.surveymonkey.com).

Results

Table 1 shows the number and percentage of study participants who rated the four main survey items *mostly true* or *definitely true*. The largest majority (81% to 96%)

Table 1

Study Participants Responding Mostly True and Definitely True to Different Statements about the Referral Checklist

Checklist Statements	Number	Percent
Includes the largest majority of conditions or concerns precipitating a referral	66	96
Would be easy to complete to identify eligible infants and toddler	62	91
Checklist organization makes identification of a child's condition or concern easy	62	91
Professionals would find the checklist easy to use	55	82
I would recommend the checklist to my colleagues	54	81

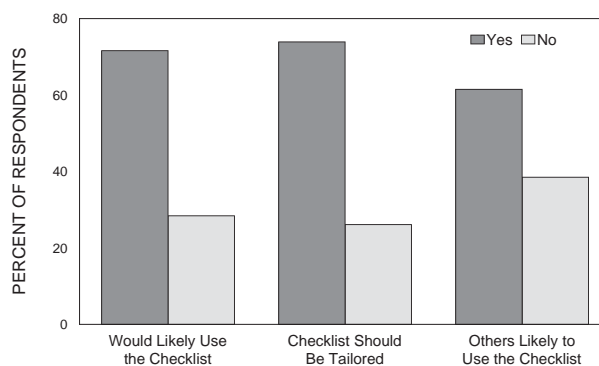


Figure 1. Percentage of respondents endorsing different uses of the TRACE Universal Checklist.

of the participants strongly agreed with the four statements about the referral checklist. More specifically, the survey respondents indicated that the checklist included the largest majority of conditions and concerns that would warrant a referral to early intervention, and the checklist organization would make it easy to identify potentially eligible children. The respondents also indicated that the checklist would be easy to use and that they would recommend the checklist to their colleagues. It is of interest to note that the particular respondents who did not strongly endorse the use of the checklist were mostly pediatricians who already "had a system in place" for identifying and referring eligible children.

About three-quarters of the respondents indicated that they would use the checklist if it was tailored specifically to a State's eligibility definition (Figure 1), which became the basis, in part, for having State-specific versions of the checklist (Dunst & Trivette, 2007). About two-thirds of the respondents indicated that others would likely use the checklist. Again, the particular respondents who did not indicate "Yes" to these statements tended to be pediatricians who already had an established mechanism for making referrals.

Discussion

Taken together, the findings from the survey of the *TRACE Universal Checklist* indicated that it was judged a useful tool for facilitating early intervention referrals. The one overriding concern raised by survey respondents was the fact that the checklist would need to be tailored to each State's eligibility criteria to make the checklist most useful to primary referral sources.

As part of field-testing the *TRACE Universal Checklist*, staff at the University of Wisconsin Waisman Center developed a *Wisconsin First Step* early intervention program version of the checklist (see www.waisman.wisc.edu/birthto3/EIChecklist.pdf; www.waisman.wisc.edu/birthto3/may07.pdf; Early intervention referral check-

list for healthcare providers, 2007). The checklist was customized and tailored to reflect Wisconsin's "way of thinking" about early intervention program eligibility. The interested reader should compare the *TRACE Universal Checklist* with the Waisman Center Checklist to see how the key features of the checklist can be maintained while at the same time making it applicable specifically to one State's eligibility criteria.

Research has found that promoting primary referral sources referrals to specialty care is best accomplished using a variety of methods and procedures (Clow, Dunst, Trivette, & Hamby, 2005; Dunst & Gorman, 2006; Dunst & Hamby, 2006; Faulkner et al., 2003; Grimshaw et al., 2005; O'Brien et al., 2001; Shaw et al., 2005). The most successful approaches are ones that are easily incorporated into existing program practices and "ways of doing business." The *TRACE Universal Checklist* is intended to be used as one way of promoting primary referral sources' understanding of the conditions and concerns that make a child eligible for early intervention and for recognizing conditions and concerns that should precipitate a referral.

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References

- Clow, P., Dunst, C. J., Trivette, C. M., & Hamby, D. W. (2005). Educational outreach (academic detailing) and physician prescribing practices. *Cornerstones, 1*(1), 1-9. Available at http://tracecenter.info/cornerstones/cornerstones_vol1_no1.pdf.
- Dunst, C. J., & Gorman, E. (2006). Practices for increasing referrals from primary care physicians. *Cornerstones, 2*(5), 1-10. Available at http://tracecenter.info/cornerstones/cornerstones_vol2_no5.pdf.
- Dunst, C. J., & Hamby, D. W. (2006). Tailoring printed materials for improving child find. *Cornerstones, 2*(4), 1-11. Available at http://tracecenter.info/cornerstones/cornerstones_vol2_no4.pdf.
- Dunst, C. J., & Trivette, C. M. (2004). Toward a categorization scheme of child find, referral, early identification and eligibility determination practices. *Tracelines, 1*(2), 1-18. Available at http://www.tracecenter.info/tracelines/tracelines_vol1_no2.pdf.
- Dunst, C. J., & Trivette, C. M. (2007). A universal checklist for identifying infants and toddlers eligible for early intervention. *TRACE Practice Guide: Referral, 2*(1).
- Dunst, C. J., Trivette, C. M., Appl, D. J., & Bagnato, S. J. (2004). Framework for investigating child find, referral, early identification, and eligibility determination practices. *Tracelines, 1*(1), 1-11. Available at http://www.tracecenter.info/tracelines/tracelines_vol1_no1.pdf.
- Early intervention referral checklist for healthcare providers. (2007, May). *Birth to 6 Events, Issue 56*, 16.
- Faulkner, A., Mills, N., Bainton, D., Baxter, K., Kinnersley, P., Peters, T. J., & Sharp, D. (2003). A systematic review of the effect of primary care-based service innovations on quality and patterns of referral to specialist secondary care. *British Journal of General Practice, 53*, 878-884.
- Grimshaw, J. M., Winkens, R. A. G., Shirran, L., Cunningham, C., Mayhew, A., Thomas, R., & Fraser, C. (2005). Interventions to improve outpatient referrals from primary care to secondary care (Review). *Cochrane Database of Systematic Reviews*, Issue 4. Art. No. CD005471.
- O'Brien, M. A. T., Oxman, A. D., Davis, D. A., Haynes, R. B., Freemantle, N., & Harvey, E. L. (2001). Influence of educational outreach visits on behavioral change in health professionals (Cochrane Review). *Cochrane Library, Issue 4. Oxford: Update Software*.
- Scarborough, A. A., Hebbeler, K. M., & Spiker, D. (2006). Eligibility characteristics of infants and toddlers entering early intervention services in the United States. *Journal of Policy and Practice in Intellectual Disabilities, 3*(1), 57-64.
- Scarborough, A. A., Spiker, D., Mallik, S., Hebbeler, K., Baily, D. B., Jr., & Simeonsson, R. (2004). A national look at children and families entering early intervention. *Exceptional Children, 70*, 469-483.
- Shackelford, J. (2006, February). State and jurisdictional eligibility definitions for infants and toddlers with disabilities under IDEA. *NECTAC Notes*, (No. 20.), 1-16. Chapel Hill: National Early Childhood Technical Assistance Center, University of North Carolina.
- Shaw, B., Cheater, F., Baker, R., Gillies, C., Hearnshaw, H., Flottorp, S., & Robertson, N. (2005). Tailored interventions to overcome indentified barriers to change: Effects on professional practice and health care outcomes. *Cochrane Database of Systematic Reviews, 4*.

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Appendix

Early Intervention Referral Checklist

This checklist is used to determine if an infant or toddler, birth to 3 years of age, has a condition or concern that may make the child eligible for early intervention. *The checklist can be used by a professional (physician, nurse, social worker, child welfare worker, and so on) or any other practitioner to make a referral for early intervention.* If you are concerned that a child has one or more of the conditions listed, you should consider referring the child to an early intervention program.

Child's Name _____ Date of Birth _____ Age _____

Parent/Caregiver Name _____ Telephone Number _____

Address _____ City _____ State _____ Zip Code _____

<p>This checklist includes many but not all of the conditions or concerns that may make a child eligible for early intervention. If a child has any condition or concern that has a high probability of being associated with a developmental delay or poor behavioral outcome, the child should be referred for early intervention services.</p>																			
Identified Conditions	<table border="0"> <tr> <td><input type="checkbox"/> Chromosomal anomaly (e.g., Trisomy 13, 18, 21)</td> <td><input type="checkbox"/> Musculoskeletal disorder (e.g., spina bifida)</td> </tr> <tr> <td><input type="checkbox"/> Chronic disease</td> <td><input type="checkbox"/> Pervasive developmental disorder (e.g., autism)</td> </tr> <tr> <td><input type="checkbox"/> CNS disorder (e.g., cerebral palsy)</td> <td><input type="checkbox"/> Physical abnormality/abnormal movement</td> </tr> <tr> <td><input type="checkbox"/> Congenital disorder/anomaly (e.g., anencephaly)</td> <td><input type="checkbox"/> Seizure disorder (e.g., epilepsy)</td> </tr> <tr> <td><input type="checkbox"/> Cranial disease (e.g., microcephaly)</td> <td><input type="checkbox"/> Speech impairment</td> </tr> <tr> <td><input type="checkbox"/> Degenerative disorder (e.g., muscular dystrophy)</td> <td><input type="checkbox"/> Visual impairment/blind</td> </tr> <tr> <td><input type="checkbox"/> Hearing impairment/deaf</td> <td><input type="checkbox"/> Other (e.g., Prader-Willi syndrome, Cornelia deLange syndrome)</td> </tr> <tr> <td><input type="checkbox"/> Metabolic disorder (e.g., phenylketonuria)</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Other (Please describe) _____</td> <td></td> </tr> </table>	<input type="checkbox"/> Chromosomal anomaly (e.g., Trisomy 13, 18, 21)	<input type="checkbox"/> Musculoskeletal disorder (e.g., spina bifida)	<input type="checkbox"/> Chronic disease	<input type="checkbox"/> Pervasive developmental disorder (e.g., autism)	<input type="checkbox"/> CNS disorder (e.g., cerebral palsy)	<input type="checkbox"/> Physical abnormality/abnormal movement	<input type="checkbox"/> Congenital disorder/anomaly (e.g., anencephaly)	<input type="checkbox"/> Seizure disorder (e.g., epilepsy)	<input type="checkbox"/> Cranial disease (e.g., microcephaly)	<input type="checkbox"/> Speech impairment	<input type="checkbox"/> Degenerative disorder (e.g., muscular dystrophy)	<input type="checkbox"/> Visual impairment/blind	<input type="checkbox"/> Hearing impairment/deaf	<input type="checkbox"/> Other (e.g., Prader-Willi syndrome, Cornelia deLange syndrome)	<input type="checkbox"/> Metabolic disorder (e.g., phenylketonuria)		<input type="checkbox"/> Other (Please describe) _____	
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