



Snapshots

Status and Trends in the Number of Infants and Toddlers Served in the IDEA Part C Early Intervention Program (1994-2002)

Carl J. Dunst, Deborah W. Hamby, and Jill Fromewick

Abstract

State-by-state analyses of the percentage of birth to 36-month-old children served in the IDEA Part C Early Intervention Program between 1994 and 2002 were the focus of this report. As of 2002, only nine states were serving an estimated 3% of the infant and toddler population with disabilities or delays. Twelve states served or were projected to serve 3% of the birth to 36-month-old population by 2004, and an additional 11 states were projected to reach this criterion by 2010. Six states and the District of Columbia would never reach the 3% criterion based on patterns of participation between 1994 and 2002. Implications for research and practice are discussed.

Introduction

Since 1994, State Lead Agencies for the Individuals with Disabilities Education Act (IDEA) (1997) Early Intervention Program have reported the number of birth to 36-month-old children served by their early intervention programs on December 1 of each year. These numbers are included in the annual reports to Congress prepared by the U. S. Department of Education, Office of Special Education Programs. This *Snapshots* includes findings showing state-by-state patterns of participation in the IDEA Part C Early Intervention Program during the nine years (1994-2002) for which data were available at the time this report was prepared.

Population estimates indicate that between 2% and 3% of infants and toddlers birth to 36 months of age have an identified disability or delay (Bowe, 1995; McNeil, 2001). These estimates are based on the U.S. Census Bureau's Survey of Income and Program Participation (SIPP), a household survey that includes several questions asking respondents whether an infant or toddler in a household had a developmental delay or a condition that limited a child's ability to use his/her arms or legs. This 2% to 3% figure underestimates the percentage of

birth to 36-month-old children with disabilities because it does not include infants or toddlers with other conditions associated with disabilities or developmental delays (Larson et al., 2001). Based on available prevalence data, an estimated 3% to 4% of the birth to 36-month-old population would have an identified disability or have a developmental delay that would make a child eligible for IDEA Part C Early Intervention Program participation. A figure of 3% is used as the criterion in this report to ascertain the status and trends in the percentage of infants and toddlers receiving early intervention.

In this summary report, we present data on the status and trends in the percentage of infants and toddlers served by Part C early intervention programs in all 50 states and the District of Columbia. We show the percentage of the infant and toddler population served state-by-state as of 2002 (the most recent available reporting period), the trends in state increases (or decreases) in the percentage of children served during the nine-year period 1994 to 2002, and report the year states were projected to serve 3% of the birth to 36-month-old population based on these trends.

Method

The number of children enrolled in Part C early intervention programs per 100 children birth to 36 months of age was used to ascertain patterns of between and within state changes for the nine reporting periods. The number of children served are those reported annually by states to the U.S. Department of Education, Office of Special Education Programs, as part of IDEA reporting require-

Snapshots is a publication of the Tracking, Referral and Assessment Center for Excellence (TRACE) funded by the U.S. Department of Education, Office of Special Education Programs (H324G020002). Opinions expressed in this publication are the responsibility of TRACE and are not necessarily the views of the U.S. Department of Education. TRACE is a major initiative of the Center for Improving Community Linkages, Orelena Hawks Puckett Institute, www.puckett.org. Copyright © 2004 by the Orelena Hawks Puckett Institute. All rights reserved.

ments. The number of children birth to 36 months of age living in a state during the three years corresponding to each reporting period is based on the U.S. Census Bureau (2004) yearly estimates. These estimates included all births minus deaths plus net migration. The number of infants and toddlers reported by states divided by the population estimates was used to calculate the percentage of birth to 36-month-old children served during each year between 1994 and 2002.

The percentage of children served in 2002 was used to group states into six categories ranging from states serving less than 1.5% of the birth to 36-month-old population to states serving more than 4% of the birth to 36-month-old population. A 6 Between Group X 11 Year ANOVA was used to ascertain similarities and differences in patterns of changes across time using the percentage of children served in each reporting period as the dependent measure.

Hierarchical linear modeling (HLM; Bryk, Raudenbush, & Congdon, 1996) was used to ascertain patterns of increases or decreases in the percentage of infants and toddlers served in Part C early intervention programs for the nine reporting periods. The main focus of analysis was the slopes (trends) in the percentage of birth to 36-month-old children served by states between 1994 and 2002. The year-by-year percentages and slopes were used to calculate the projected year that 3% of the infant and toddler population would be served by each state. The reliability estimates for the yearly percentages (intercepts) and slopes (trends) were .95 and .89 respectively (Bryk et al., 1996).

Results

Status

Table 1 shows the states ordered by the percentage of infants and toddlers served in 2002. States are grouped into six categories according half a percentage point increments. Just over half the states (53%) were serving the 2% target set by the U.S. Department of Education, Office of Special Education Programs (U.S. Department of Education, 2001). Only 18% of the states were serving at least 3% of the estimated number of birth to 36-month-old children with disabilities or delays (Bowe, 1995; Larson et al., 2001; McNeil, 2001). The percentage of infants and toddlers served by individual states ranged from less than 1% (Nevada) to more than 9% (Hawaii).

The six between state groups by nine reporting period ANOVA showed that patterns of increases in the percentage of children served were not the same in the different groups, $F(40, 360) = 4.64, p < .0001$. Figure 1 shows the year-by-year increases for each of the six

groups of states. States that were serving the largest percentage of children in 1994 showed the largest percentage increases across the nine reporting periods (Groups 5 and 6). In contrast, states that served the smallest percentage of children in 1994 showed little (Group 2) or no (Group 1) increases across reporting periods.

Trends

Table 1 also shows the state-by-state trends (slopes) in increases (or decreases) in the percentage of children served during the nine reporting periods. These data are interpreted as the average percentage point change per year across time. For example, Hawaii showed a quarter of a percentage point increase each year, on average, between 1994 and 2002. In contrast, several states showed no appreciable changes during the nine-year reporting period (Georgia, South Carolina, Louisiana, District of Columbia, and Utah). In several cases, states showed a small decrease in the percentage of children served (Nevada, Colorado, North Carolina, and West Virginia).

The relationship between the percentage of children served by states in 2002 (status) and the year-by-year changes (trends) was assessed by a six between state groups ANOVA with the trend (slope) data as the dependent measure. Figure 2 shows the mean percentage increase for the trend data for the six groups of states. Results showed significant between group differences, $F(5, 45) = 15.35, p < .0001$, as well as a significant linear relationship between the groups of states measure and the year-by-year percentage changes in the number of children served, $F(1, 49) = 73.42, p < .0001$. States serving the smallest percentage of infants and toddlers in 2002 are the same states showing the smallest percentage change across reporting periods. In contrast, the states serving the largest percentage of children in 2002 are the same states showing the largest percentage change across time.

Projections

The HLM results were used to estimate the year each state would likely serve 3% of the birth to 36-month-old population based on the year-by-year percentage of children served and the trends in increases across time. Table 2 shows these projections for the states organized according to those who reached or would reach the criterion by 2004 and those that would serve 3% of the birth to 36-month-old population between 2005-2010, 2011-2020, 2021-2030, or beyond 2030. Based on the patterns of participation for the nine reporting periods, five states (Colorado, Georgia, Nevada, North Carolina, and West Virginia) and the District of Columbia would never reach the 3% criterion.

Table 1

Percentage of the Birth to Three-Year-Old Population Served by States in 2002 (Enrollment) and the Average Per-Year Increase in the Percent of Infants and Toddlers Served (Trend) Between 1994 and 2002

State	2002 Enrollment	Trend	State	2002 Enrollment	Trend	State	2002 Enrollment	Trend
<i>Group 1</i> (< 1.50%)			<i>Group 3</i> (2.00%-2.49%)			<i>Group 5</i> (3.00%-3.99%)		
NV	0.91	-.02	IL	2.00	.09	CT	3.06	.19
GA	1.00	-.01	OK	2.03	.10	VT	3.10	.19
SC	1.03	.01	AK	2.12	.12	DE	3.29	.08
AL	1.18	.06	NJ	2.12	.15	WY	3.44	.12
LA	1.25	.00	ID	2.22	.09	RI	3.50	.15
DC	1.27	.00	SD	2.28	.15	IN	3.67	.29
MO	1.33	.04	TN	2.32	.10	<i>Group 6</i> (> 4.00%)		
AZ	1.36	.08	MD	2.46	.09	NY	4.79	.44
VA	1.40	.10	KS	2.49	.18	MA	5.87	.33
OH	1.42	.05	<i>Group 4</i> (2.50%-2.99%)			HI	9.38	.26
OR	1.42	.06	NM	2.54	.03			
MS	1.44	.17	AR	2.59	.09			
CO	1.45	-.04	WI	2.62	.13			
WA	1.48	.07	PA	2.64	.16			
<i>Group 2</i> (1.50%-1.99%)			FL	2.66	.13			
NC	1.62	-.03	KY	2.67	.22			
NE	1.62	.07	ME	2.78	.16			
MN	1.72	.04	NH	2.82	.13			
CA	1.72	.08	WV	2.85	-.02			
IA	1.78	.10						
MT	1.81	.05						
UT	1.86	.03						
ND	1.88	.12						
MI	1.90	.13						
TX	1.93	.12						

NOTE: The trend statistic is based on the nine reporting periods for all states except OH and DE. These two states showed an initial downward trend followed by an upward trend. The trend statistics for OH and DE are based on five and six years of data, respectively.

Discussion

Findings reported in this *Snapshots* show considerable between state variations in both the percentage of the birth to 36-month-old population served in the IDEA Part C Early Intervention Program and progress toward serving 3% of the estimated number of infants and toddlers with disabilities or delays (Bowe, 1995; Larson et al., 2001; McNeil, 2001). Taken together, the different sets of data and accompanying analyses show that certain states have made considerable progress in reaching and serving eligible children and that certain other states have had considerable difficulty making advances in reaching and serving eligible children.

Results have a number of implications for research and practice. Factors associated with, and reasons for the large discrepancies in the percentage of children served in low compared to high performing states, could be discerned by conducting case studies (Yin, 2002) to determine if the child find, early identification, or eligibility determination practices used by the states account for the differences reported in this *Snapshots*. This type of study is currently being planned by TRACE investigators. The study will include the examination of state-level policy and practice with an explicit focus on the manner in which child find, early identification, and eligibility determination practices in the low and high performing states are related to variations in enrollment rates.

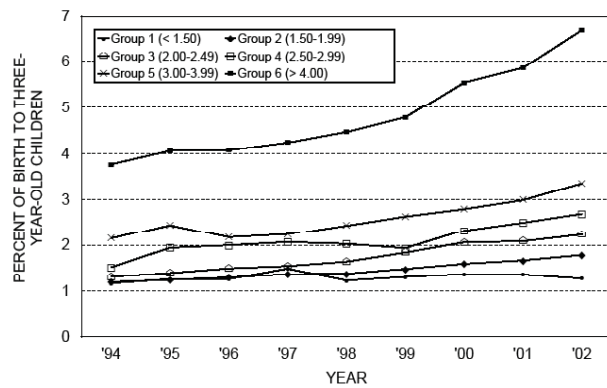


Figure 1 Percentage of birth to 36-month-old children served during the nine-year reporting periods for six different groups of states.

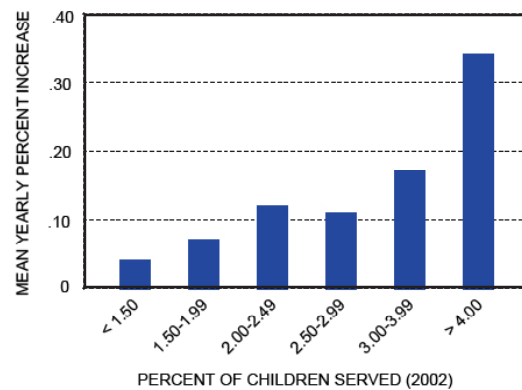


Figure 2 Average per-year percentage increase in the birth to 36-month-old population served by states according to 2002 reporting data.

Findings can be used for practice by working with those states that have had the most difficulty making progress toward reaching the 3% criterion and by providing them technical assistance to identify where changes need to be made to improve child find, early identification, or eligibility determination practices. These states would be ones that currently serve the smallest percentage of the birth to 36-month-old population *and* that have shown little or no change (trends) across time in terms of serving the expected percentage of infants and toddlers with disabilities and delays. One goal of TRACE is to provide this type of assistance to states regarding their child find, referral, early identification, and eligibility determination practices.

Studies like the one reported in this *Snapshots* can be useful for identifying similarities and differences in how states are performing in relationship to U.S. De-

partment of Education (2001) established benchmarks. Additional analyses of the state status and trend data reported in this *Snapshots* will focus on factors associated with variations in enrollment patterns.

Acknowledgements

Appreciation is extended to Tharesa Owenby and Jules Caruso for typing, Teresa Imfeld for editing, and Kaki Roberts for final layout of the manuscript.

References

Bowe, F. G. (1995). Population estimates: Birth-to-5 children with disabilities. *Journal of Special Education*, 28, 461-471.

Table 2

Year States Served or Are Projected To Serve Three Percent of the Birth-to-Three-Year-Old Population

1993-2004		2005-2010		2011-2020		2021-2030		2031-3000		Unreachable	
State	Year	State	Year	State	Year	State	Year	State	Year	State	Year
HI	1993	FL	2005	ID	2011	MT	2021	AL	2031	CO	■
MA	1994	KS	2005	TN	2011	NE	2021	OH	2031	DC	■
NY	1998	ME	2005	ND	2012	AZ	2022	UT	2037	GA	■
IN	2000	PA	2005	TX	2012	NM	2025	MN	2038	NV	■
CT	2001	SD	2006	OK	2013	WA	2025	MO	2041	NC	■
RI	2001	AK	2008	IL	2014	OR	2026	SC	2161	WV	■
DE	2002	AR	2008	IA	2017			LA	2892		
WY	2002	MS	2008	VA	2018						
KY	2003	MD	2009	CA	2019						
VT	2003	NJ	2009								
NH	2004	MI	2010								
WI	2004										

- Bryk, A., Raudenbush, S., & Congdon, R. (1996). *HLM: Hierarchical linear and nonlinear modeling with the HLM/2L and HLM/3L programs*. Chicago: Scientific Software International.
- Individuals with Disabilities Education Act [IDEA] Amendments, 20 U.S.C. §1400 *et seq.* (1997).
- Larson, S. A., Lakin, K. C., Anderson, L., Kwak, N., Lee, J. H., & Anderson, D. (2001). Prevalence of mental retardation and development disabilities: Estimates from the 1994-1995 National Health Interview Survey disability supplements. *American Journal on Mental Retardation, 106*, 231-252.
- McNeil, J. (2001). Americans with disabilities: 1997. *U.S. Bureau of the Census, Current Population Reports, P70-73*. Washington, DC: U.S. Department of Commerce.
- U.S. Census Bureau. (2004). *Population estimates: Terms and definitions*. Retrieved December 9, 2004, from www.census.gov/popest/topics/terms/states.html.
- U.S. Department of Education. (2001). *Office of Special Education Programs goals for infants and toddlers with disabilities--IDEA Part C*. Washington, DC: Author.
- Yin, R. K. (2002). *Case study research: Design and methods*. Thousand Oaks, CA: Sage.

Authors

Carl J. Dunst, Ph.D., is Co-Principal Investigator of the Tracking, Referral and Assessment Center for Excellence (TRACE) and Research Scientist at the Orelena Hawks Puckett Institute in Asheville, North Carolina (dunst@puckett.org). Deborah W. Hamby, M.P.H., is a Research Analyst at the Orelena Hawks Puckett Institute (dhamby@puckett.org). Jill Fromewick, M.S., is a Research Associate at the Orelena Hawks Puckett Institute (jfromewick@puckett.org).