



# Impact of Early Intervention on Developmental Outcomes in Young Children with Autism in Rural Communities



Reality

Theoretical

## Background

- Autism Spectrum Disorder is a neurodevelopmental condition characterized by deficits in social communication and restricted or repetitive behaviors, typically identified in early childhood (American Psychiatric Association, 2022).
- Early identification and intervention especially before age 3 are associated with improved cognitive, language, and adaptive functioning outcomes. Evidence based early intervention can significantly reduce symptom severity and improve developmental trajectories within the first year of treatment.
- Rural areas often have shortages of developmental pediatricians, therapist, and autism specialists, leading to delayed diagnosis and treatment.
- Difficulty navigating complex healthcare systems and limited local resources can create emotional and logistical barriers to accessing care.

## Importance of Issue

- Early intervention for children with Autism Spectrum Disorder improves developmental outcomes, including communication, social skills, and adaptive functioning.
- Families benefit from earlier support, reduced stress, and improved child development.
- Rural communities experience disparities due to limited access to diagnostic and intervention services.
- Nurses play a key role in early identification, education, referral, and care coordination to improve outcomes and reduce delays in care.

## Framework

- **Iowa Model Revised:** Is used as a Quality Improvement (QI) framework to guide evidence based practice changes to improve early identification and intervention for children with Autism Spectrum Disorder in rural communities.
- Standardized tools (ABAS-3, ADOS-2 Toddler module, DAYC-2, clinical observation, and parent/record review) support consistent assessment and early diagnosis.
- It promotes interdisciplinary collaboration, improved referral processes, and pilot implementation of interventions to enhance early intervention access.
- Outcomes are evaluated through improved developmental progress, earlier diagnosis, and reduced delays in care.

## Key Concepts & Outcomes

### Overall Outcome:

The overall goal is to demonstrate that early intervention for young children with Autism Spectrum Disorder leads to improved developmental outcomes and reduced long term health and behavioral complications, particularly in rural populations. Improving early intervention access may enhance language development, adaptive functioning, and overall quality of life for children and families.

### SMART Objective:

- Within one year, young children in rural communities diagnosed with autism who receive early intervention services will demonstrate measurable improvement in developmental outcomes (language, social, and adaptive functioning) compared to those who experience delayed or no intervention, as evidenced by standardized developmental assessments and reduced reported comorbid behavioral or health complications.

## Interventions & Solutions

### Individual Level:

- Administer the Adaptive Behavior Assessment System, 3<sup>rd</sup> Edition (ABAS-3)- to evaluate adaptive functioning in home and daily life.
- Utilize the Autism Diagnostic Observation Schedule, 2<sup>nd</sup> Edition (ADOS-2), Toddler Module to assess communication, social interaction, and play behaviors.
- Use the Developmental Assessment of Young Children, 2<sup>nd</sup> Edition (DAYC-2) to evaluate cognitive, communication, social emotional, and motor development.
- Clinical Observations
- Parent report and developmental history

### Community Level:

- Improve coordination between pediatric providers, therapists, and early intervention programs to ensure timely referrals and follow up.
- Strengthen partnerships with community agencies to increase service access in rural areas.

### Policy Level:

- Establish clear referral pathways from screening tools (e.g., ABAS-3, ADOS-2, DAYC-2 findings) to early intervention services.



## Key Players

Children with autism in rural communities who require early developmental and behavioral intervention services and their families.

### Key Players:

- Healthcare providers
- Speech therapists
- Special Beginnings Teacher
- Redwood Coast Regional Center
- Easterseals



## Evaluation

### Process Evaluation:

- Measure changes in developmental outcomes (language, social, cognitive, and adaptive functioning) within one year of early intervention compared to delayed or no intervention for children with ASD.
- Assess changes in caregiver reported outcomes, including reduced stress and improved understanding of developmental needs, following initiation of early intervention services.

### Impact Evaluation:

- Measure improvement in developmental outcomes within one year of early intervention.
- Evaluate caregiver reported stress reduction and improved understanding of child needs.

## References

- American Psychiatric Association. (2022). *Diagnostic and statistical manual of mental disorders* (5<sup>th</sup> ed., text rev.).
- Hyman, S.L., Levy, S.E., & Myers, S.M.(2020). Identification, evaluation, and management of children with autism spectrum disorder. *Pediatrics*, 145(1), e20193447.<https://doi.org/10.1542/peds.2019-3447>

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