GRAFTON
INTEGRATED HEALTH NETWORK

Developmental Gains from Early Engagement to ABA Services

Jason H. Craig, Ed.D.
James Gaynor, CEO/President
Kim Sanders, COO/Ukeru Systems, Inc.
Lisa Marshall, Ph.D.

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Objectives

- AIM – Standardized assessment to identify prime intervention periods for ABA
- Method – Administration of the Developmental Profile 3 (DP-3)
- Results – Positive change effects
- Conclusions – The younger the better, the more standardized the more objective

Story of Ruth Birch

- Educational Services in the 1950s
- Continuum of Progression
  - Early Intervention
  - Applied Behavior Analysis
  - Educational Services
  - Residential Services
  - Psychiatric Residential Treatment Services
  - Adult Services
  - Innovations
  - Consultative Services

Information on Innovations

- Innovative Practices to Reduce the Use of Restrictive Interventions
  - Time Slot 5F

- Using a Data-Driven Approach to Increase Positive Organizational Outcomes
  - Time Slot 4G

Grafton ABA Services

- Adult Service Consultation
- Dedicated ABA Classroom
- Public School Consultation
- **In-Home/Clinic-Based**
- EI through Part C

AIM

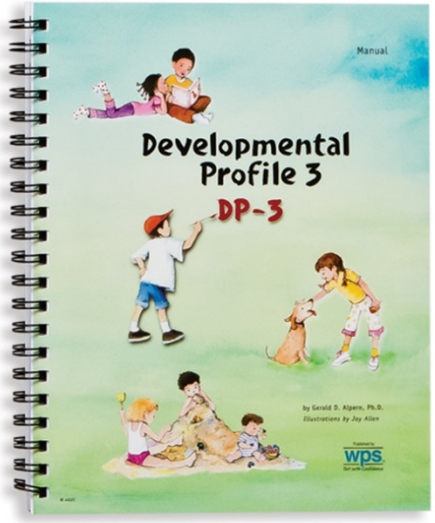
- There is a need for researchers and service providers to utilize a standardized assessment procedure to identify prime intervention periods,
- …in order to close developmental gaps by making chronological gains beyond time served receiving Applied Behavior Analysis (ABA).
- It is important to find the “Sweet Spot” for services to drive an outcomes-based service model

Method

- Upon admission to Grafton's ABA services, parents/ caregivers were provided a Development Profile 3 (DP-3), Parent/Caregiver Checklist
- Follow up DP-3 assessments were completed by the parent/caregiver at various lengths of service to compare developmental gains against chronological time
- **All assessments are caregiver reported, so progress is derived from the perspective of the caregiver.**

DP-3
By Gerald D. Alpern, PhD

- Standardized on a nationally representative sample of 2,216 individuals
- Norm-based standard scores, percentiles, stanines, age equivalents, and descriptive ranges
  - Physical
  - Adaptive behavior
  - Social-emotional
  - Cognitive
  - Communication.
- This study focused on age equivalents



Participants (n=152)

Percentage of Participants	Diagnosis
69.7%	ASD
18.5%	ASD w/ Co-occurring
2.0%	Global Developmental Delay
2.0%	Learning Disorder
0.7%	ID and DD
1.3%	Other
5.9%	None Reported

Positive Change Frequencies

- At time 2
  - 63.2% did not have DP3 data
    - Length of service, age, discharge, etc.
  - Among those who did (n=39)
    - 28.2% (n = 11) exceeded their previous totals on all five DP3 indicators
    - 17.9% (n = 7) exceeded four
    - 12.8% (n = 5) exceeded three
    - 30.8% (n = 12) exceeded two
    - 10.3% (n = 4) exceeded just one.
  - 58.9% exceeded in at least 3 out of 4 indicators

Positive Change Frequencies

- At time 3
  - 75.7% did not have DP3 data.
  - Among those who did (n=20)
    - 5% (n = 1) exceeded their previous totals on all five DP3 indicators
    - 30% (n = 6) exceeded four
    - 30% (n = 6) exceeded three
    - 20% (n = 4) exceeded two
    - 15% (n = 3) exceeded one
  - 65% exceeded in at least 3 out of 4 indicators
  - 5% vs. 28.2% for 5 out of 5

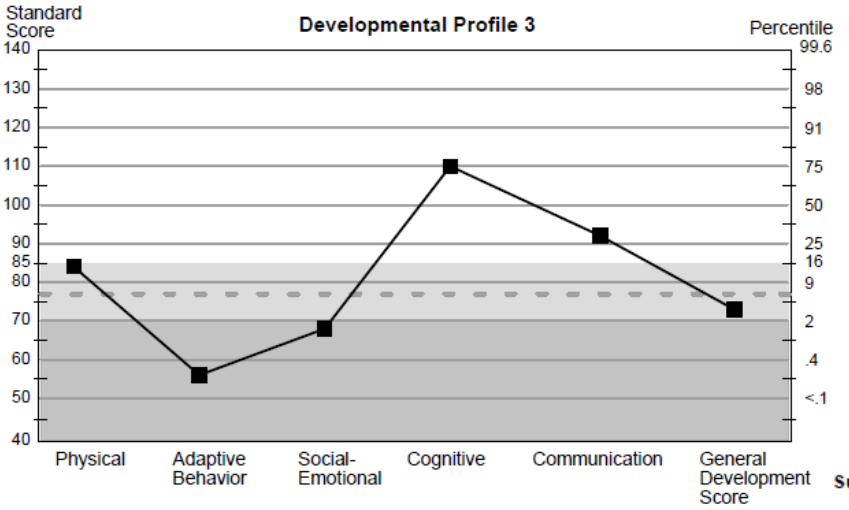
Positive Change Correlations

- Age at first DP3 was negatively correlated with positive change (Time 2), $r = -.297$, $n = 91$, $p < .001$.
  - **Therefore, clients who had their first DP3 at an earlier age had more positive change at time 2**
    - Average age at Time 2 was 5.31 years of age
- Age at first DP3 was negatively correlated with positive change (Time 3), $r = -.397$, $n = 91$, $p = .004$.
  - **Therefore, clients who had their first DP3 at an earlier age had more positive change at time 3**
    - Average age at Time 3 was 5.51 years of age

Results and Conclusions

- Clients who had their first DP-3 at an earlier age had more positive change at the second administration of the DP-3, which was sustained through the third administration of the assessment, but…
- More growth occurs between time 1 and time 2 administration
- Greater developmental gains are experienced by children who begin ABA services at a younger age, and those gains are continued and sustained

Summary of scores	Raw Score	Standard Score	Confidence Interval 95%	Description	Percentile	Age Equivalent
Physical	15	84	78-90	Below Average	14	2-0
Adaptive Behavior	9	56	49-63	Delayed	0.2	1-2
Social-Emotional	13	68	61-75	Delayed	2	1-8
Cognitive	21	110	102-118	Average	75	3-5
Communication	16	92	85-99	Average	30	2-7
General Development	--	73	69-77	Below Average	4	--



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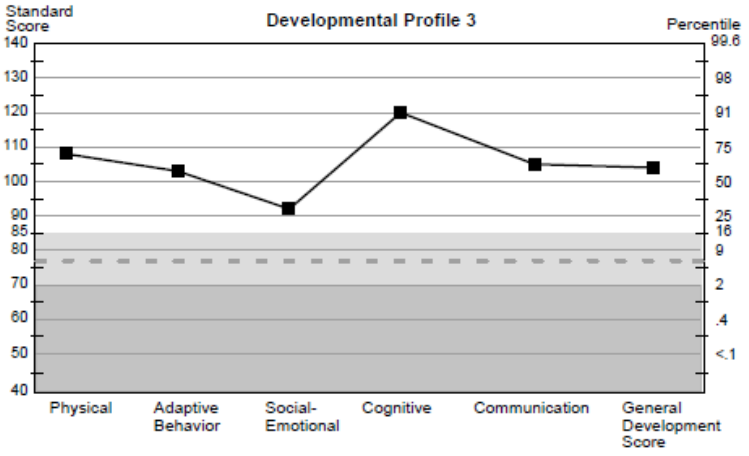
Summary of scores	Raw Score	Standard Score	Confidence Interval 95%	Description	Percentile	Age Equivalent
Physical	23	108	96-120	Average	70	3-6
Adaptive Behavior	18	103	90-116	Average	58	2-10
Social-Emotional	18	92	80-104	Average	30	2-9
Cognitive	25	120	106-134	Above Average	91	4-5
Communication	20	105	93-117	Average	63	3-7
General Development	--	104	98-110	Average	61	--

<u>2-8 Yrs Receiving > 10 Hrs/Wk</u>

11/2013 – 8/2014 (9 months)

- P – 18 months
- AB – 20 months
- SE – 13 months
- C – 12 months
- CM – 12 months



Implications and Considerations

- Further refine the “Sweet Spot”
- Focused Outcome-based Services based on Standardized Assessment Tools
- Cost Savings (www.autismspeaks.com and the work of Dr. David Mandell)
  - ASD cost the US $137 Billion a Year
  - $1.4 – $2.3 million per lifetime
  - Early Start Denver Program paid for itself, on average, after about 8 years