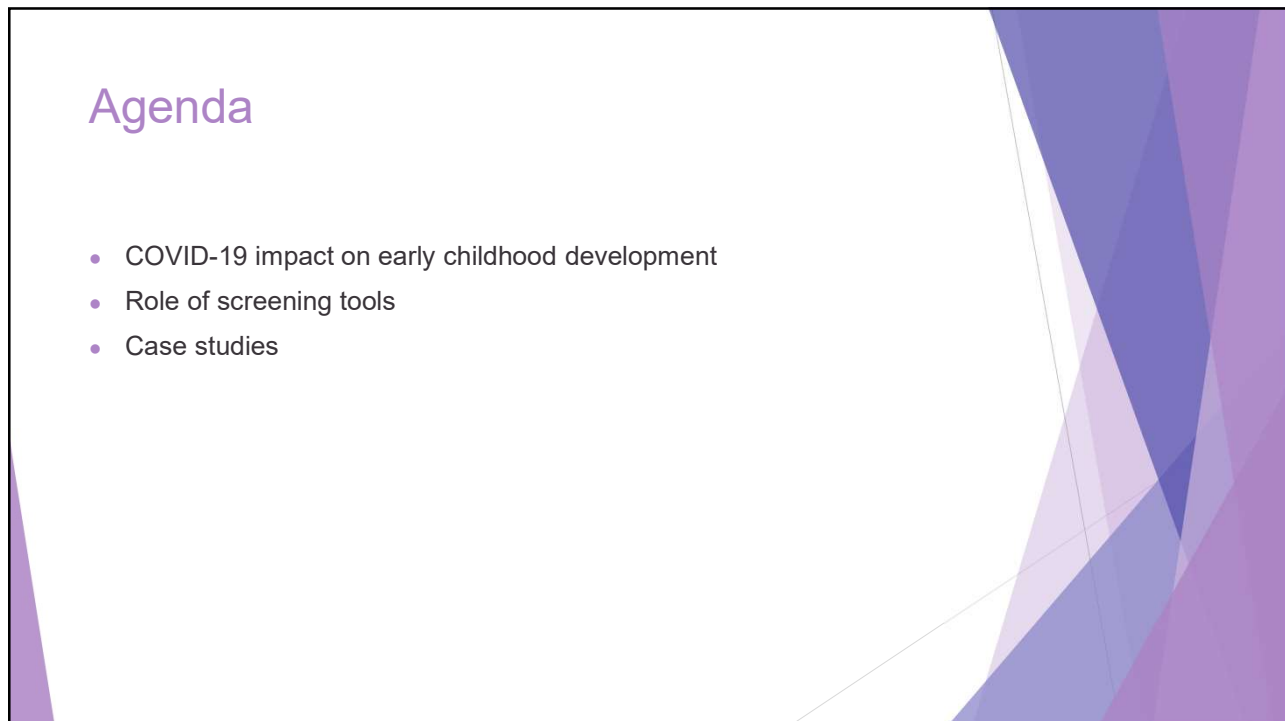


1



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## COVID-19 Impact on Early Childhood Development

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## Pandemic Impacts on Infants and Babies

- Reduced exposure to family members and family friends outside of immediate households
- Lack of exposure to older generations of their family
- Parental depression and family stress may have altered the home environment
- Human faces may have been observed half-masked, instead of learning from full-face smiles to which babies are naturally drawn
- Some babies were immediately quarantined away from birthing parent, which may have impacted breast-feeding success and duration and other important elements of parental-infant bonding
- Increased family togetherness

Mulkey, S. B., Bearer, C. F., & Molloy, E. J. (2023). Indirect effects of the COVID-19 pandemic on children relate to the child's age and experience. *Pediatric Research*, 1-2.

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## Pandemic Impacts on Toddlers

- Significant increase in screen time
- Children under the age of 2 years do not learn well from screen watching; benefit most from in-person interactions
- Early development in language and social domains require in-person experiences and peer play time
- Preschoolers with  $\geq 2$  hours of screen time a day have been observed to have more behavioral problems, delayed developmental milestones, and lower vocabulary knowledge than children with lower amounts of daily screen time
- Screen time at age 3 is predictive of anger, temperament, and frustration at 4 years
- Impact on eyes – fatigue, blue light exposure disrupting sleep

Mulkey, S. B., Bearer, C. F., & Molloy, E. J. (2023). Indirect effects of the COVID-19 pandemic on children relate to the child's age and experience. *Pediatric Research*, 1-2.

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## What do we expect (are currently seeing)?

- Increased rate of referrals
- Parent/caregiver concerns regarding development
- Daycare/preschool teacher observations of differences in developmental patterns, behaviors

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## Role of Screening in Early Childhood

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## Benefits of Screeners

- Efficient method of gathering objective data about development in a wide range of areas
- Allow us to make data-based decisions about the child's development and the need for comprehensive evaluations, interventions
- Reduce caregiver anxiety from the unknown
- Provides strengths and weakness data

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## Screener Selection

- Quick administration
- Wide age range
- Large number of domains in single, co-normed assessment
- Flexible administration and response modalities

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## BDI-3 Developmental Screening Test

Measures 5 areas of developmental milestones:

- Social Emotional
- Communication
- Adaptive
- Motor
- Cognitive

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## BDI-3 Key Features

- Age range of birth through 7 years, 11 months
- Flexible administration options
  - Structured Assessment
  - Observation
  - Interview
- Multi-point scoring
  - Allows for documentation of emerging skills
- Broad examiner qualifications
  - Preschool Teachers
  - Head Start Teachers
  - Kindergarten Teachers
  - Special Education Teachers
  - General Education Teachers
  - Educational Diagnosticians
  - School Psychologists
  - SLP/OT/PT
  - Trained Paraeducators

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## BDI-3 Developmental Screening Test

- Birth to 7 years, 11 months
- 100 test items from the BDI-3 Developmental Complete
  - ~2 items each for 8 age levels across the 5 domains
- Provides **overall score, domain-level scores, and skill-level mastery descriptors**
- Primarily used to determine the need for further assessment

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# Case Studies

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## Case study: Melissa (Age: 4 years, 11 months, 9 days)

Domain	Raw Score	Standard Deviation (-2.0, -1.5, -1.0)	Cut Score	Pass/Refer
Adaptive	10	-1.5	20	REFER
Social-Emotional	18	-1.5	18	REFER
Communication	26	-1.5	21	PASS
Motor	12	-1.5	22	REFER
Cognitive	8	-1.5	20	REFER
Domain	Raw Score	Standard Deviation (-2.0, -1.5, -1.0)	Cut Score	Pass/Refer
<b>Total Screening Score</b>	<b>74</b>	<b>-1.5</b>	<b>107</b>	<b>REFER</b>
Age Equivalent				
<b>20 Months</b>				

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## Case study: Melissa – Next Steps (Age: 4 years, 11 months, 9 days)

- BDI-3 Developmental Complete with multi-disciplinary team
  - Comprehensive evaluation for eligibility determination
  
- Results will likely indicate global developmental delay

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## Case study: Henry (Age: 2 years, 10 months, 26 days)

, Henry		DOB: 12/19/2020		Score Report	
<b>Table of Scores</b>					
Domain	Raw Score	Standard Deviation (-2.0, -1.5, -1.0)	Cut Score	Pass/Refer	
Adaptive	15	-1.5	13	PASS	
Social-Emotional	15	-1.5	13	PASS	
Communication	10	-1.5	13	REFER	
Motor	16	-1.5	15	PASS	
Cognitive	15	-1.5	14	PASS	
Domain	Raw Score	Standard Deviation (-2.0, -1.5, -1.0)	Cut Score	Pass/Refer	
<b>Total Screening Score</b>	71	-1.5	75	REFER	
<b>Age Equivalent:</b>					
19 Months					

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## Case study: Henry

(Age: 2 years, 10 months, 26 days)

, Henry		DOB: 12/19/2020		Score Report	
<b>Table of Scores</b>					
Domain	Raw Score	Standard Deviation (-2.0, -1.5, -1.0)	Cut Score	Pass/Refer	
Adaptive	15	-2.0	12	PASS	
Social-Emotional	15	-2.0	11	PASS	
Communication	10	-2.0	10	REFER	
Motor	16	-2.0	13	PASS	
Cognitive	15	-2.0	13	PASS	
Domain	Raw Score	Standard Deviation (-2.0, -1.5, -1.0)	Cut Score	Pass/Refer	
Total Screening Score	71	-2.0	68	PASS	
<b>Age Equivalent:</b>					
19 Months					

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## Case study: Henry – Next Steps

(Age: 2 years, 10 months, 26 days)

- BDI-3 Developmental Complete with multi-disciplinary team
  - Comprehensive evaluation for eligibility determination
- Referral to SLP for communication evaluation
  - Communication domain from BDI-3 Developmental Complete
- Results will likely indicate speech/language delay

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### Case study: Jessica (Age: 5 years, 8 months, 9 days)

, Jessica		DOB: 03/05/2018		Score Report	
<b>Table of Scores</b>					
Domain	Raw Score	Standard Deviation (-2.0, -1.5, -1.0)	Cut Score	Pass/Refer	
Adaptive	21	-1.5	25	REFER	
Social-Emotional	27	-1.5	22	PASS	
Communication	28	-1.5	24	PASS	
Motor	32	-1.5	27	PASS	
Cognitive	21	-1.5	23	REFER	
Domain	Raw Score	Standard Deviation (-2.0, -1.5, -1.0)	Cut Score	Pass/Refer	
<b>Total Screening Score</b>	129	-1.5	127	PASS	
<b>Age Equivalent:</b>					
3 years, 7 months					

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### Case study: Jessica (Age: 5 years, 8 months, 9 days)

, Jessica		DOB: 03/05/2018		Score Report	
<b>Table of Scores</b>					
Domain	Raw Score	Standard Deviation (-2.0, -1.5, -1.0)	Cut Score	Pass/Refer	
Adaptive	21	-2.0	23	REFER	
Social-Emotional	27	-2.0	19	PASS	
Communication	28	-2.0	22	PASS	
Motor	32	-2.0	24	PASS	
Cognitive	21	-2.0	22	REFER	
Domain	Raw Score	Standard Deviation (-2.0, -1.5, -1.0)	Cut Score	Pass/Refer	
<b>Total Screening Score</b>	129	-2.0	115	PASS	
<b>Age Equivalent:</b>					
3 years, 7 months					

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## Case study: Jessica (Age: 5 years, 8 months, 9 days)

, Jessica		DOB: 03/05/2018		Score Report	
<b>Table of Scores</b>					
Domain	Raw Score	Standard Deviation (-2.0, -1.5, -1.0)	Cut Score	Pass/Refer	
Adaptive	21	-1.0	28	REFER	
Social-Emotional	27	-1.0	27	REFER	
Communication	28	-1.0	27	PASS	
Motor	32	-1.0	30	PASS	
Cognitive	21	-1.0	26	REFER	
Domain	Raw Score	Standard Deviation (-2.0, -1.5, -1.0)	Cut Score	Pass/Refer	
<b>Total Screening Score</b>	129	-1.0	145	REFER	
<b>Age Equivalent:</b>					
3 years, 7 months					

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## Case study: Jessica – Next Steps (Age: 5 years, 8 months, 9 days)

- BDI-3 Developmental Complete with multi-disciplinary team
  - Comprehensive evaluation for eligibility determination
  
- Results will likely indicate cognitive and adaptive delays
  - Intellectual Disability or Developmental Delay (if available)

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## Summary

- Unprecedented experience of the pandemic impacted every part of our lives; significant impact on the growth and development of children, particularly the youngest
- As we face the resulting increase in referrals, screeners allow us to efficiently determine which children require a comprehensive evaluation
- Results of the screener, in conjunction with other sources of data, will drive next steps in evaluation, routing children to necessary interventions during critical developmental periods