



**DOVE**  
DIAPER Observational Video Event



**Developed for:**

CYFD – Behavioral Health Division – Infant Mental Health Section

**By:**

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## WHAT

The DOVE (DIAPER Observational Video Event) is a suggested 4-6 minute video method used to score the DIAPER (Developmentally Informed Assessment Per Each Relationship) and to observe parent-child dyadic affective states and interactive styles. The video method is typically conducted with caregivers and their infants or young children from 3 months to 5 years of age.

The DOVE accompanies the DIAPER, which is a tool designed to help clinicians observe, decode, and explore the nonverbal as well as the verbal interactions between caregivers and children, and to identify caregiver capacities that facilitate an infant's/young child's developmental progress. The scoring of the DIAPER is based upon reviewing the DOVE video sequence.

The DOVE is administered to one caregiver and child at a time in an effort to observe through play the unique interaction style and familiarity of that particular dyad. Recognizing the cultural range of 'normal' infant-caregiver interactive patterns, the DOVE is used to score the DIAPER without bias, and to identify those dyadic behaviors that facilitate, constrain or constrict an infant's/young child's social-emotional and developmental trajectory. Interaction is bidirectional but a parent has more responsibility in navigating the interaction based on the infant's/child's behaviors (Tronick & Beeghly, 2011).

The DOVE captures a picture or a series of moments in time between a caregiver and infant/child. A new 4-6 minute DOVE is completed each time a DIAPER is clinically required. In this respect, the periodicity of the DOVE matches that of the DIAPER. Each DOVE and DIAPER are not considered a summation of the periodic review period, but rather a videotaped observation of the dyad in a moment-to-moment interaction during differing points in treatment.

The role of the clinician is to assess and assist fragile, vulnerable dyads affected by trauma or maltreatment. By administering the DOVE and DIAPER, the clinician is able to track the relational behaviors of a dyad which predict positive developmental outcomes, and which are expected to expand, change, and reform through the course of treatment.

Interventions based upon the DOVE and DIAPER may include helping the caregiver change her/his role to fit the individuality and behavioral sensitivities of her/his infant/child and/or it may require what Daniel Stern (2009) referred to as 'adultmorphizing' the infant's/child's contribution, by translating the dialogue for the caregiver. The infant's/young child's mode of communication, the thresholds beyond which an infant/young child may withdraw, and the behavioral responses that mark them can be spelled out to help a caregiver understand how to reach her/his particular infant/child and how to facilitate a social-emotional dialogue.

Using the DOVE to accompany the DIAPER allows for the process of creating, supporting and extending potential relatedness between an individual caregiver and infant/child. The information obtained from these observations can then used to develop interactive strategies and activities to support the social and emotional relationship during therapeutic treatment.

The use of the DOVE has the following benefits:

- Increasing awareness of how a caregiver and infant/child interact with each other.
- Scoring the DIAPER to gain a clinical perspective on how to improve the dyadic relationship.
- Recognizing windows of opportunity to encourage and expand potential dyadic relatedness and facilitate development.
- Allowing learning to be personalized and recognizing that each caregiver-infant/child dyad is unique.

### **WHY:**

Studying early caregiver-infant/child interaction is essential for understanding development and psychopathology. Although there are many video protocols and procedures available to study caregiver-child interaction, the DOVE was developed to accompany the DIAPER.

Observations of caregiver-infant/child interaction require the perception and integration of multimodal social signals and behaviors of a dyad simultaneously and dynamically (Leclere et al., 2016). In caregiver-infant/child interactions, multimodal social signals include imitation, gazing, vocalizations, turn-taking, gestures, body

movements, parentese and emotional signals, and interpersonal synchrony (Meltzoff & Moore, 1977; Weisman et al., 2018).

Caregiver–child interactions are based on close relationships and specific communication dynamics associated with a caregiver’s adaptation and an infant’s/young child’s maturation. Studying the quality and dynamics of early interactions is complex and requires the understanding of how two interactive partners synchronize (Feldman, 2007; Tronick & Cohn, 1989).

Better caregiver–child synchrony during interactions with both mother and father is associated with greater familiarity (vs unknown partner), healthy parenting (vs psychopathology), and typical development (vs psychopathological development) (Leclere et al., 2014). Unless an infant or young child has ‘the other’ to witness, create, support and extend potential relatedness even in a seemingly distant or non-communicative child, development is derailed and an opportunity is missed to support an infant’s/young child’s cognition of what is regular, predictable and ‘invariant’ in his or her social interactions (Tortora 2017).

interaction sequences of shared involvement in a reciprocal exchange between a caregiver and infant/young child define intersubjectivity. The development of intersubjectivity begins early in life and newborn infants not only imitate but are also able to initiate communication, which means they are able to participate in reciprocal interactions from the beginning (Trevarthen, 1998). The infant and subsequent child is motivated by his or her innate intersubjectivity and stimulated to become an active social participant in interaction with others, especially with the caregiver.

When caregivers talk about the things that an infant/child is looking at, following the infant’s/child’s pointing gesture or eye gaze, tuning in and creating a mutual feeling of understanding, they also provide an opportunity for the infant/child to grow cognitively. Eye gaze, crying, and reaching for objects are examples of early behaviors through which the infant/child expresses intersubjectivity. Later in development, the child shows intention by requesting things, first by looking from an object to the caregiver and back and even later by linguistically labeling the object of joint attentional focus (Daly, 2014; Papousek, 2007; Trevarthan, 1979; Crossley, 1996).

Table 1. Definition of developmental stages of intersubjectivity based upon Crossley's and Stern's initial Theory.

Stage	Age of Onset	Description
<b>Emerging Intersubjectivity</b>	Birth	Infant imitation and physical involvement in a joined synchronization of behavior patterns and vitality affects. <u>Key Characteristic:</u> Infant Imitation
<b>Physical Intersubjectivity</b>	2-3 months	Neonatal imitation leads to more complex forms of reciprocation and a mutual exchange of behavior patterns and vitality affects. First examples of bidirectional communication and cooperation based on repeated, patterned dyadic interactions. <u>Key Characteristic:</u> Reciprocity
<b>Existential Intersubjectivity</b>	8-10 months	Concrete and affective involvement in a mutual exchange of intentions, feelings, and objects. Formation of a second-person perspective with a triadic structure (me, you and it). Cooperative task performance becomes possible. Important developmental milestone. <u>Key Characteristic:</u> Joint Attention

<p><b>Symbolic Intersubjectivity</b></p>	<p>13-15 months</p>	<p>Mental involvement in a mutual exchange of linguistic or symbolic meaning. <u>Key Characteristic:</u> Language Reception and Expression</p>
<p><b>ToM Intersubjectivity</b></p>	<p>20 months (generally established by 4 years)</p>	<p>Tertiary intersubjectivity concerns third person engagements, involving he, she, it or they; at this level, the self and others become public representations, able to be discussed and judged by other parties. It is this development that Theory Theorists propose indicates that subjects have attained a <i>Theory of Mind</i> (ToM). <u>Key Characteristic:</u> Linguistic Understanding of Other's Beliefs</p>

References: Trevarthan, 1979, 2001; Loots et al., 2003, 2005; Daly, 2014; Tronick, 2017

Through the DOVE and the DIAPER, the developmental stages of intersubjectivity can be recognized in patterns of dyadic interaction. From the start, repeated interactions between the caregiver and infant develop into patterns of expectancies that are generalized and encoded as nonverbal representations. Through these nonverbal ways of knowing and learning about the world, motivated by an innate, primary intersubjectivity, the infant/young child and caregiver begin to develop contingent responses within their nonverbal relational dialogue.

Contingent affectively matched or complimentary interactive social exchanges between caregiver and infant/young child support the development of a strong attachment relationship (Beebe & Lachmann, 2014; Papousek 2007).

Developmentally as the infant gets older, recurring patterns of synchrony and contingent social exchanges give rise to more complex thematic patterns of

interaction and meaning-structures that unconsciously organize subsequent social-emotional and relational experiences (Leclere et al., 2016).

Social-emotional and relational experiences are inseparable from the intersubjective contexts of attunement and misattunement. Matching of affect and facial expressions is an important way in which the emotional state of the caregiver can be transmitted to the infant/child (Beebe et al., 2005).

Developmental trauma originates within a formative intersubjective context where the central feature is misattunement to painful affect—a breakdown of the caregiver-infant/child co-regulatory system, leading to an unbearable, overwhelmed, disorganized state. Painful or frightening affect becomes traumatic when the attunement that the infant/child needs to assist in its tolerance and integration is absent. As a consequence, maladaptive patterns of interaction between a caregiver and infant/child may arise and lead to psychopathology (Stern, 2004, 2000).

The intersubjective experience then is vulnerable to disruptions through traumatic events. Young children that endure overwhelming events may show keen sensitivities to multisensory stimulations that relate to or remind them of a painful or traumatic event. These sensitivities interfere with synchronous and intersubjective patterns of interaction between the caregiver and infant/young child and by consequence affect development and learning (Beebe & Lachmann, 2014).

Observations inform our understanding of the unique interactive style of each dyad, the multimodal social signals of each partner, the developmental stages of intersubjectivity as well as the intersubjective contexts of attunement and misattunement. Each child's development occurs as an interactive process and is not a linear progression. The interactive process results in personal variations of how each infant/child engages with each caregiver and the environment.

The DOVE in conjunction with the DIAPER is an opportunity to observe and understand a dyad's cyclic nature of interaction and intersubjective social-emotional patterns. In turn, the key to change is in finding ways to engage the infant/child and

caregiver in patterns of mutual understanding and shared meaning-making rather than making the problem the focus.

## **WHERE:**

### *The Setting*

The DOVE can be administered in a variety of settings in a space free of distractions when possible. If conducted in a small playroom, a container with toys and a book are made accessible to the caregiver and out of reach of the infant/young child when necessary. A rug area is suggested where the caregiver (if able) can sit and play with his/her infant/child.

When available, the caregiver-child dyads may be observed from behind a one-way mirror with a video camera set up to capture both the caregiver and infant/child's face simultaneously or if two video cameras are available in the room, to have one set on the infant/child and the other on the caregiver.

Ideally, the video recording camera set up within a playroom would have quick response pan-tilt-zoom (PTZ) capabilities. This allows for more detailed visual tracking of caregiver-infant/child interactions. If a one-way mirror is unavailable, the video camera(s) can be set up in the playroom and the clinician briefly enter the playroom to remind parent quietly of the directions if needed.

The DOVE may also be adapted for use in home observations of caregiver-infant/child interaction. The clinician may record with his/her phone or a small hand-held video camera. If videotaping in the home, it is important to emphasize to the caregiver that the clinician will not interact with either caregiver or infant/child during the period of observation. This is important to avoid an infant/child engaging with, speaking and playing with the clinician rather than with his/her caregiver.

It is the clinician's job to move the camera around if possible so that the caregiver and child may do whatever they would like without worrying about the camera. The intent is to have the dyad ignore the camera as much as possible.

Other considerations include trying to select periods for observation and completing the DOVE when the caregiver is free of other commitments and when distractions

have been minimized. Also, a clinician may want to schedule a DOVE around the infant's/child's naptimes or mealtimes.

Research has shown that infants/young children are remarkably unself-conscious in the presence of a video camera or in the presence of an observer. In addition, even though caregivers may be self-conscious, the evidence from research studies suggests that the presence of a video camera or observer does not alter parental behavior in such a way that group differences are distorted (Feldman, 2010).

## **PRE-ADMINISTRATION:**

### *Instructions*

Explain to the caregiver that you wish to learn more about his or her infant/child and their relationship through observing their play interactions.

Inform the caregiver that you will be administering the DOVE video measure every 6 months as a way to track his/her infant's/young child's social-emotional development and the benefits of treatment.

Let the caregiver know that there are many different ways of interacting and playing with an infant/child that are unique to their special relationship. In addition, let the caregiver know that infants get upset and that toddlers may behave in ways that might be distressing to her or him but that it is expected with this age group (PCIT, 2011).

If appropriate, stress to the caregiver that this video will capture the unique relationship he/she has with the infant/child so that you can better support this caregiver with his or her infant/young child in treatment.

Assure the caregiver that there is no right or wrong with how his/her infant/young child plays with the toys. The infant/young child gets to manipulate or play with the toys however he/she likes.

If possible, ask the caregiver to bring a bottle (if not breast-fed) or snack for after the DOVE administration.

### **MATERIALS: Containers/Bags and Book**

Have 3 containers, cloth bags (or another way to organize the toys for the 3 interaction opportunities) and the picture book within reach.

*3 Containers/Bags:*

#### **1<sup>st</sup> Matching container:** *Example*

- 2 Stuffed Animals with 2 baby bottle
- 2 Cars (big enough for her to move)

#### **2<sup>nd</sup> Exploratory container:** *Example*

- Fish
- Plastic bowl with wooden spoon or measuring spoons

#### **3<sup>rd</sup> Movement container:** *Example*

- Push and Pull Frog
- Small Ball

### **Picture Book**

## **TOYS**

The DOVE can be completed with any toys that you have available. The toys listed in the accompanying document are examples and are not required. They merely offer options or choices if in the market for new toys to complete the DOVE or for play.

For each age group of the DOVE with the exception of Birth to 7 months, the recommendation is to have 2 toys available in each category, **matching**, **exploratory** and **movement** in addition to a **book**. Each toy listed on the *Toy* documents then includes the category (matching, exploratory, movement or book) that it would represent.

**Matching toys** means that there are two of the same or a similar group of toys available for possible imitation, manipulation, and participation of both caregiver and child in interactive play (e.g. 2 dolls or 2 stuffed animals plus 2 bottles or match and build soft blocks).

**Exploratory toys** include toys that are likely novel or unfamiliar to the infant/child, and which allow for problem solving and possible request for assistance.

**Movement toys** include toys that offer the opportunity for the child and caregiver to move, reach, stretch, walk or crawl and be active.

**Books** are picture books that do not require the caregiver to 'read' when looking with the infant/child.

## **PROCEDURE:**

The DOVE involves 2 timed situations plus a natural routine:

- Joint Play (4 minutes) and
- Picture Book (2 minutes)
- Followed by a snack or feeding.

**The times are just suggested and the toys are just examples.** When provided with fewer toys in the environment, babies engage in longer periods of play with a single toy.

### **1. JOINT PLAY Observational Period**

#### *Opportunity*

Joint play provides an opportunity to observe the expression of maternal sensitivity, responsivity and warmth in a non-stressful situation plus allows for an assessment of the intersubjectivity and synchronous interactions between caregiver and infant/young child.

#### **For infants Birth - 3 months:** 3-4 minutes

#### *Placement*

- Infants can be held in the caregiver's arms in an *en face* position (having face and front forward; a position in which the mother and infant are face to face) so that eye-to-eye contact is possible and positioned so that the infant is safe and can move his/her arm(s), with head higher than hips. This allows the caregiver's face to be at least 7-8 inches (span of a fully outstretched hand) from the infant's face during feeding or interaction and encourages reciprocal behaviors and contingency which is one of the processes by which behavior is shaped. Alternatively, the infant can be lying on a blanket with caregiver kneeling or sitting in an *en face* position.

*Materials/Toys*

- Container with: 1 colorful rattle, 1 small block with bell inside, 1 small soft musical toy plus accessories to bottle-feed or breast-feed.

*Instructions*

- Communicate freely with your infant and spend a few minutes feeding or engaging in something that you and your infant enjoy.
- Caregivers sometimes talk or play games without toys, sometimes parents just sit with their infants, and sometimes they like to introduce new toys.
- Attend to any needs your infant might have during this time just as you normally would.

**For infants 3 months -7 months:** 3-4 minutes

*Placement*

- Infants can be seated in an infant seat safely placed on a table with the caregiver sitting facing him/her or lying on the caregiver's lap facing up to allow for face-to-face contact or lying on a blanket with caregiver kneeling or sitting in an *en face* position (a position in which the mother and infant are face to face). This position encourages eye contact and is conducive to building an attachment relationship).

*Materials/Toys*

- Container with: 1 teether/mouthing toy, 1 noisy rattle, 1 vibrating toy, 1 small musical toy.

*Instructions*

- Play freely with your infant and spend a few minutes doing something that you and your child enjoy.
- Caregivers sometimes talk or play games without toys, sometimes parents just sit with their infants, and sometimes they like to introduce new toys.
- Attend to any needs your infant might have during this time just as you normally would.

**For Young Children 8-36 months:** 4 minutes

*Placement*

- Caregiver and child are sitting across from one another allowing for face to face contact.

*Materials/Toys (age appropriate) – Please see toy list*

**Container with 3 cloth bags:**

- 2 matching toys in 1st cloth bag – 2 phones, 2 dolls and 2 bottles, or 2 cars
- 2 novel exploratory toys in 2<sup>nd</sup> cloth bag – puzzle, cash register, little toy in screw top container
- 2 movement toys in 3<sup>rd</sup> cloth bag – ball, pull toy, wind up car

*Instructions – (If you feel the caregiver needs to be prompted to transition to the next activity, you can signal them when necessary)*

- Go over the toys with the caregiver and explain their use before you begin.  
**Then go over the following instructions:**
- Take out the 1<sup>st</sup> Matching Container/Bag and empty it out in front of your child.
- Let your child play with these toys until you think she is ready to transition to the next container/bag of toys.
- Put the matching toys away and take out the 2<sup>nd</sup> Exploratory Container/Bag with the 2 novel toys, and empty it out in front of him or her.
- Let the child play with these toys until you think he/she is ready to transition to the last container/bag.
- Put the novel exploratory toys away and take out the 3<sup>rd</sup> Movement Container/Bag with the 2 movement toys and empty it out in front of your child. Please feel free to move around as is comfortable for you and child.
- Attend to any needs your child might have during this time just as you normally would.
- Let the child play with these toys until you think he/she is ready to transition to the picture book.
- *Move Containers/Bags out of the way and get picture book.*

**For Young Children 3-5 years of age: 4 minutes**

*Placement*

- Caregiver and child are sitting across from one another allowing for face to face contact.

*Materials/Toys (age appropriate) – Please see toy list*

**Container with 3 cloth bags**

- 2 matching toys in 1st cloth bag – blocks, Legos, puppets, small dolls
- 2 novel exploratory toys in 2<sup>nd</sup> cloth bag – puzzle, cash register, construction set
- 2 movement toys in 3<sup>rd</sup> cloth bag – ball, bowling pins, wind up car

*Instructions*

- Go over the toys with the caregiver and explain their use before you begin. Then go over the following instructions:
- Take out the 1<sup>st</sup> Matching Container/Bag and empty it out in front of your child.
- Let your child play with these toys until you think she is ready to transition to the next container/bag of toys.
- Put the matching toys away and take out the 2<sup>nd</sup> Exploratory Container/Bag with the 2 novel toys, and empty it out in front of him or her.
- Let the child play with these toys until you think he/she is ready to transition to the last container/bag.
- Put the novel exploratory toys away and take out the 3<sup>rd</sup> Movement Container/Bag with the 2 movement toys and empty it out in front of your child. Please feel free to move around as is comfortable for you and child.
- Attend to any needs your child might have during this time just as you normally would.
- Let the child play with these toys until you think he/she is ready to transition to the picture book.
- *Move Containers/Bags out of the way and get picture book.*

## **2. PICTURE BOOK WITHOUT WORDS Observational Period**

### *Opportunity*

Looking at picture books allows for a connection and closeness between the caregiver and infant/child. Also allows the infant/child to improve language skills by imitating sounds, pointing, recognizing pictures and learning words.

**For infants Birth - 3 months:** 1-2 minutes

### *Placement*

- Infants can be held in the caregiver's arms in a safe, comfortable, propped up sitting or reclining position so that a small book can be held up in front of the child. This allows the caregiver to hold the book about 7-8 inches (span of a fully outstretched hand) from the infant's face.

### *Materials/Toys*

- 1 vinyl, cloth or hardcover infant book

### *Instructions*

- Show the picture book to your infant if he or she is comfortable and in a calm or alert state. If in a fussy or drowsy state, re-position the infant and spend a few minutes feeding or rocking to sleep or engaging in something that you and your infant enjoy.
- Caregivers sometimes talk or play games without toys, sometimes parents just sit with their infants, and sometimes they like to introduce new toys.
- Attend to any needs your infant might have during this time just as you normally would.

**For infants 3-7 months:** 1-2 minutes

### *Placement*

- Infants can be seated in an infant seat safely placed on a table with the caregiver sitting facing him/her or sitting on the caregiver's lap facing out.

### *Materials/Toys*

- 1 vinyl, cloth or hardcover picture book (can be touch and feel picture book or picture book with sounds) for infants.

*Instructions*

- Tell caregiver to get comfortable and to spend a few minutes looking at the picture book with their infant.
- Tell them to attend to any needs the infant may have during this time just as he/she normally would.
- When the caregiver and infant are done with the picture book then transition to snack/feeding.

**For Young Children 8 months – 5 years:** 2 minutes or more

*Placement*

- Child may sit on caregiver's lap facing outward or sit next to the caregiver both with backs against a wall or on chairs or a couch next to each other.

*Materials/Toys (age appropriate) – See Toy List for examples*

- 1 age-appropriate picture book that tells a simple story without words.
- This involves no difficulty for the child and leaves more up to the caregiver's imagination in how to use the opportunity. It also has the advantage that it usually leads to the observation ending on a positive, or at least neutral, note.

*Instructions*

- Give the book to the caregiver. Tell caregiver to get comfortable and to spend a few minutes looking at the book with his/her child.
- When the caregiver and child are done with the picture book then transition to snack/feeding.

\*\* Do not ask the caregiver to 'read' to his/her child. Just instruct caregivers to look at the pictures with their infant/child.

**3. Snack/Feeding Period – Record when possible**

Allow time for the caregiver and infant/child to snack or feed as a way to connect in a natural routine following the DOVE administration.

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