The Nurturing Care Framework:

Indicators for Measuring Responsive Care and Early Learning Activities

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Chapter 1: The Importance of Responsive Care and Early Learning for Children's Healthy Development

The Nurturing Care Framework (NCF) offers national governments a road map for strategic action to strengthen public policies, programmes and services, to ensure children's good health and nutrition, protect them from threats, support responsive care, and promote opportunities for early learning. These strategic actions are intended to lead to healthy development of young children under three years through the creation of enabling environments for them and for their caregivers (WHO, UNICEF & WB, 2018). The implementation of the NCF requires five key actions: (1) Leadership and investment in early childhood; (2) Focus on addressing the needs of families with young children and their communities; (3) Strengthening child and family services; (4) Monitoring progress; and (5) Using data to improve the access, equity and quality of programmes and services. A Monitoring and Evaluation Framework is needed to support the uptake and implementation of the NCF in diverse global settings in order to hold decision makers accountable for investments, use data to improve access to and quality of services, and track progress for children's health, nutrition, protection, and development, as well as their care.[1] It is important that a monitoring and evaluation framework captures indicators related to implementation as well as impacts: inputs (activities and resources), outputs (programme expected results) and short- and longer-term outcomes for children (Aboud & Prado, 2018). A number of indicators already exist to capture the five domains of the NCF from input to outcome and are widely used at national and subnational levels to track progress in children's health and nutrition services. However, less attention has been given to the domains of responsive care and early learning. In this report, our goals are to:

1. Describe the importance of responsive care and early learning for children's healthy development.
2. Present evidence-informed measures for assessing responsive care and early learning, along with the training assessors need to use these measures. The measures are intended for use in monitoring and evaluating programmes promoting these practices as well as in surveys.
3. Propose recommendations for those who train, supervise and monitor frontline workers on ways to improve where necessary their messaging around responsive care and early learning.

Responsive care and early learning have gained great traction in recent years in global child health (World Health Organization, 2020). The understanding of these terms influences how curricula for parenting and health provider programmes are designed, the approach to training

[1] Work is being undertaken to this effect under the auspices of the World Health Organization and programmatic guidance for monitoring the implementation of the Nurturing Care Framework is expected to become available in 2021.

frontline workers, and the selection of monitoring and evaluation indicators. We expect the indicators to be primarily used by programme developers and evaluators, and for findings to be useful for those who create policies to address Nurturing Care. They are not to be used by practitioners to monitor caregivers. It will be important to build capacity within a health system so that data from these indicators can be used to inform programmes that provide services to support responsive care and early learning.

Definition of Responsive Caregiving and Early Learning Activities[2]

Both of these terms can be applied to many settings where caring for a young child takes place, and they may occur simultaneously in the same caring setting such as play and communication. For example, adults who play with a child may say or do things that are responsive or non-responsive while still sparking learning. However, because they can be seen as conceptually distinct and may occur separately, separate definitions and indicators are provided here, starting with responsiveness because of its unique importance for attachment and language development (Box 1):

Box 1. Definition of Responsiveness

Responsiveness is defined in the Nurturing Care Framework (2018, p14) as "observing and responding to children's movements, sounds, gestures, and verbal requests". The full definition from Black and Aboud (2011, p490), on which we base the indicator, is: "caregiver behaviours are considered to be responsive if they follow a child's behaviour within a few seconds (prompt), are emotionally supportive of the child's needs, show a change from prior behaviour indicating that they are dependent on the child's signal (contingent), and are related conceptually to the child's prior action (developmentally appropriate, not intrusive or controlling). Eshel and colleagues. (2006, p991) similarly outline responsiveness "as a three-step process. (1) Observation: The caregiver (usually the mother) observes the child's cues, such as movements and vocalizations. (2) Interpretation: The caregiver accurately interprets these signals, e.g. realizing that an irritable infant is tired and needs rest or is showing signs of illness. (3) Action: The caregiver acts swiftly, consistently and efficiently to meet the child's needs." Landry and colleagues (2006; 2008; 2012) likewise define responsiveness in terms of the adult responding promptly and contingently to the child's signalling a need or an interest; they also add that the child thereby experiences a predicable consequence to the signal. Given that it is often difficult to observe the "interpretation" step proposed by Eshel and colleagues (2006), indicators focus on the child's cue and the caregiver's response to the intended meaning of that signal. These criteria are consistent with Ainsworth's description of caregiver responsiveness (Ainsworth & Marvin, 1995).

Responsive behaviours occur in many contexts. They are best observed during specific interactions between a caregiver and child; for example, during feeding, playing and talking with the child, and bathing the child. Two contexts fundamental to child development entail communicating and playing, when responsive stimulation is provided to support all domains of mental development simultaneously – cognitive, language, social-emotional and fine motor.

[2] The term *responsive caregiving* is used interchangeably throughout with *responsive care or responsive interaction; early learning activities* is used interchangeably with *early learning*.

Early learning activities extend beyond responsive interactions (Box 2). Playing with objects on one's own is inevitably responsive because objects respond to the child's actions. Playing with peers may be responsive after 18 months of age when children become more interactive with peers. Playing with adults may be responsive, guided, or instructional. Guided and instructional play with adults may also result in learning. Attending to another's activity and instruction is not considered responsive. Children learn their first language mainly through responsive talk with adults and possibly by listening to others' conversations, not through instruction (Zauche et al., 2016).[3]

Box 2. Definition for Early Learning

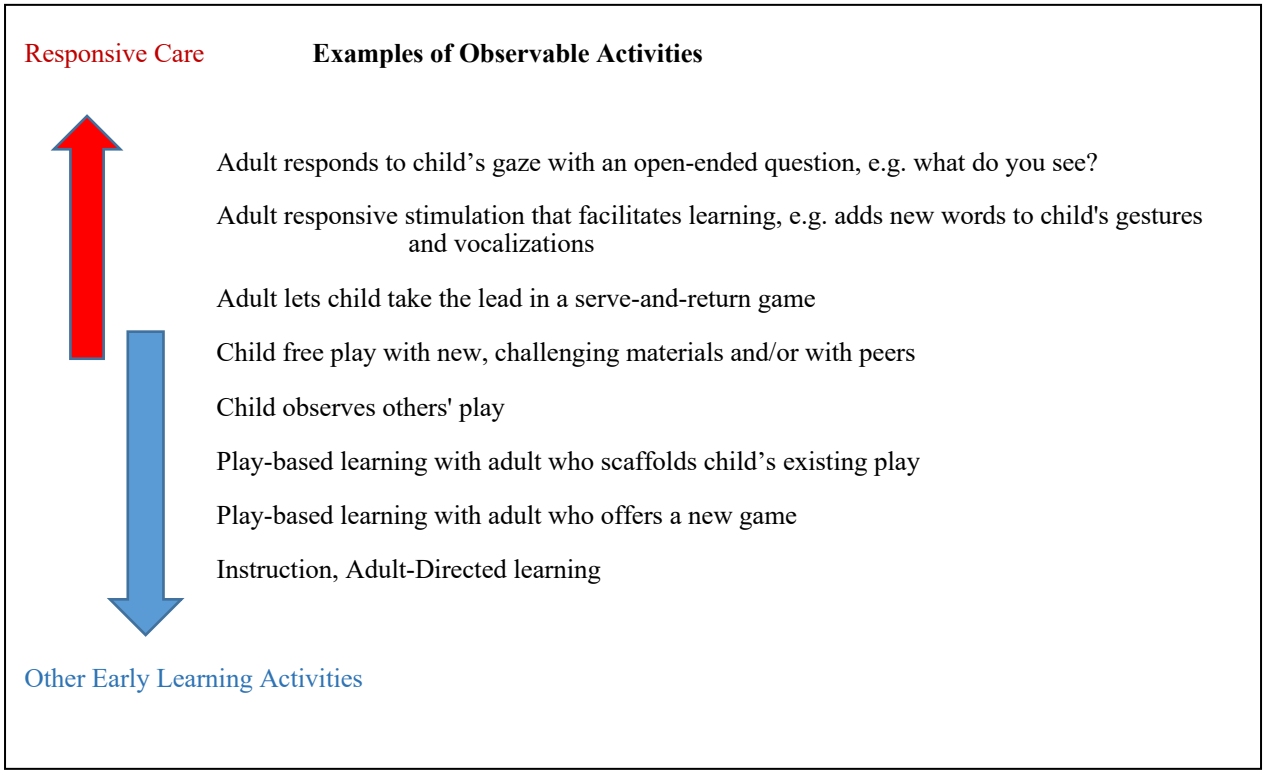
Early Learning Activities encompass many forms of stimulation, experience and exposure that lead to learning something new (e.g., incidental learning, learning through free play, learning through adult-guided play, learning through instruction) (Fesseha & Pyle, 2016). The NCF includes activities such as playing with household objects, talking, singing, imitating, and "simple games like wave bye-bye" (2018, p15). The definition we use is stimulating engagement with objects (e.g., playthings) and/or people (adults and peers) where responsiveness may not occur. The term "engagement" is used rather than interaction because learning can take place with or without social interaction. Early learning may occur under the following conditions:

- Playing with interesting, challenging objects on one's own
- Playing with playmates with/out objects
- Playing with adults with/out objects where the adult guides and scaffolds learning
- Watching or listening to someone whether or not the child imitates
- Instruction; i.e., told what to do, “say this”, “do this”

The most common early learning opportunities provided by caregivers in the home or in an early group care setting involve play with playthings, with peers, and/or with adults. This is the operational definition used by Milner and colleagues (2019) where early learning refers to "homes that have children’s books, children who have support for learning, children have playthings at home and attendance in early childhood education." Early learning activities that are fundamental to child development consist of stimulating communication and play, but with playthings, with peers, and with adults where responsiveness is not expected. Responsiveness is not expected when young children play with playthings or peers. It is not expected when the child is playing a structured game such as hide-and-seek, dancing, singing, and going for a walk with an adult -- in other words activities when people coordinate ritual actions or act reciprocally. However, during this episode, the adult's response to unpredictable, spontaneous cues of the child would be called responsive. Figure 1 shows the distinct and common features of responsive care and early learning.

[3] The term "play-based learning" in the presence of an adult is currently used to mean that an adult scaffolds new learning by extending the child's play into new thoughts and actions -- it may be responsive, but is difficult even for teachers, because it requires a balance between being child-directed and adult-led.

Figure 1: Distinctions and Overlaps between Responsive Care and Early Learning Activities



Cross-Cultural Evidence that Responsive Caregiving and Early Learning Activities are Important for Child Development

Studies from the 1990's in the United States found that responsive maternal behaviours occurred during naturalistic observations of infants at one, 4 and 9 months of age (Isabella, 1993) and during play with children at nine, 13, and 21 months of age (Bornstein & Tamis-LeMonda, 1997; Tamis-LeMonda et al., 1996; 2001). These and other studies found that responsive caregiving in the first year of life was associated with a child's secure attachment to the parent, whereas non-responsive caregiving led to either anxious or avoidant attachment. Secure attachment means that the child feels emotionally supported enough to explore novelty apart from the parent during the second year of life, and enough to feel soothed by the parent's presence after a stressful episode. These studies also found that children's cognitive and language development benefited from responsive interactions with a caregiver.

It was therefore important to know whether parents in other countries, particularly ones with a very different culture from North America and Europe, likewise were responsive. The debate around this question has recently been resolved by two key studies. One of these studies with three-month old infants in urban and rural Cameroon, China, India, and Germany (Kartner et al., 2008) found through naturalistic observation that infants in all cultures received parent

responses contingent on their signals. Distress vocalizations were universally responded to, so the authors compared non-distress vocalizations and non-vocal signals and found that the former received more parental responses. Parental responses were more tactile in some settings, more visual in other settings, and more verbal and distal in others. The second study, based on data from Mali, the Democratic Republic of Congo, the Philippines and elsewhere, concluded that caregivers in many different countries respond promptly to young children's signals, although they may do this in different ways, with a motor or tactile response or with a verbal response (Mesman et al., 2018).

Play with playthings and with peers may also take different forms in different countries. The term "play" as it applies to early childhood is defined as: Active, child-directed, motor activities that involve manipulation of objects and/or interactions with peers; it appears to be engaged in by the child for no apparent reason, other than enjoyment, though it has many developmental functions such as increasing stimulation and learning about the environment (Dailey et al., 2009). The role of parents in promoting play in some countries is to sit on the floor and manipulate items with or for the child (e.g. Tamis-LeMonda et al., 2001), whereas in other countries it may be to provide a time and safe space for the child to play while parents attend from a distance (Vandermaas-Peeler, 2002).

In addition to confirming that responsiveness and early learning play appear across multiple countries and cultures, there is evidence that both are related to child development. Regarding responsiveness, findings from Ethiopia, Bangladesh, and Pakistan are consistent with the conclusion that responsive interaction is positively associated with mental development in children (Aboud & Alemu, 1995; Aboud & Akhter, 2011; Obradović et al., 2016; Rasheed & Yousafzai., 2015). Data, derived from several responsiveness measures to be discussed shortly, are correlated with mental development and are predictable short-term outcomes of effective interventions promoting responsiveness.

Evidence is also consistent with the conclusion that play with playthings and engaging in play activities with family members and peers is associated with children's mental and social development (Eckerman & Whatley, 1977; Eckerman & Whitehead, 1999). One function of the caregiver's presence is to provide sufficient security for the child to initiate exploration of novelty, an activity necessary for mental development. Two subscales of the Family Care Indicators (FCI) that concern the presence of seven types of play materials and six stimulating activities done with family members correlated with language and cognitive development of young children at 12 and 18 months of age (Hamadani et al., 2010).

Finally, the Home Observation Measurement of the Environment (HOME) Inventory, which measures both responsiveness and stimulating play, has been used in both high-income countries (HIC) and low- and middle-income countries (LMIC) for many decades and has been

found to correlate highly with the mental development of children under three years (Bradley & Corwyn, 2005; Aboud & Yousafzai, 2016). Scores derived from the HOME assessment typically show a moderate or strong effect size among caregivers who participate in a responsive stimulation parenting programme. When analysed, HOME scores are found to be a strong mediator of the programme's effect on child development. In some cases, HOME scores change after a parenting intervention even though child development does not; but if the HOME score does not change, then child development is unlikely to be affected (Radner et al., 2018).

More recently, meta-analytic evidence underlying the Early Childhood Development Guidelines (WHO, 2020) confirms that programmes promoting responsive care and early learning activities lead to gains in child development. Given the strong associations of responsive care and early learning with children's development, in different countries, it is critical to have universal tools to use for monitoring and evaluating these aspects of care.

Chapter 2: The Development of an Evidence-Informed Tool for Assessing Responsive Care

The development of an evidence-informed tool for assessing responsive care comprised two phases, described briefly here and elaborated below. First, we conducted a review of the constructs measured in tools commonly used in research studies to assess responsive caregiving interactions with children under three years (see also a review by Gladstone, Lucas, & Bozicevic, in preparation). Second, we followed a systematic process of mapping and short-listing constructs of responsive care captured in these tools to identify a core set of measurable constructs of responsive care. In this review we focused on items assessing responsive interactions rather than general care which could be observed in both naturalistic and structured observations. Selection criteria for the desirable tool included a live real-time observational measure, universal constructs, open access and feasible for programme monitoring and evaluation (Box 3). Our goal was to have a tool that is applicable and easy to use in both a HIC and a LMIC setting. The following provides a summary of the existing literature and tools to measure responsive care.

Box 3. Criteria for a Responsive Care Tool

- Uses real-time observation of a caregiver-child interaction
- Play and communication contexts sufficiently structured to provide opportunities for caregivers to be responsive
- Universal constructs of responsiveness are operationalized
- Dimensions of responsiveness are exhaustive
- Responsiveness can be differentiated from caregiver actions that are not responsive but may be positive or negative
- A caregiver's observable acts, sounds, and gestures are coded
- Short and easy to administer in both HIC and LMIC settings
- Feasible for programme monitoring and evaluation
- Open access

An Overview of Common Measures of Responsive Care in High, Middle- and Low-Income Countries

Since the mid-1990's researchers have developed and used observational tools to assess caregiver responsiveness to children under three years of age in HIC settings. All use observation of a naturalistic or play/book reading context, the latter providing play items to the mother-child dyads (Isabella, 1993, Tamis-LeMonda et al., 1996, Landry et al., 2006). Within the past decade, several tools have been developed in the LMIC setting to measure responsiveness, specifically in Bangladesh (Aboud, 2007) and Pakistan (Rasheed & Yousafzai., 2015), which have been adapted and applied in other countries including Kenya (Knauer et al., 2020) and Rwanda (Betancourt et al., 2020). Unlike the HIC setting, these tools can be utilized in a much shorter time period of approximately five minutes with stimulus materials adapted to the setting. This allows the tools to be used efficiently to monitor and evaluate a programme. The ages and details of administration

for each tool are presented in Table 1.

Each tool's identification of behaviours considered to be responsive varied slightly by tool and setting. Isabella (1993) measured mothers on three overall dimensions: sensitive responsivity, rejection, and activity, utilizing 10 different rating scales. Mothers were then given an overall sensitivity score (overall sensitivity = sensitive responsivity – (rejection + activity)), and a cumulative index of sensitivity (the combined sensitivity indices at 1-, 4- and 9-months). Tamis-LeMonda et al. (1996) built on the work of Isabella (1993) and measured maternal responsiveness in the contexts of language and play. Maternal responses were coded if they were within five seconds of the child's signal. In 2001, Tamis-LeMonda and colleagues measured maternal responsiveness in six different domains: affirmations, imitations, descriptions, questions, play prompts, and exploratory prompts. In 2006, Landry and colleagues measured maternal responsiveness on four domains: contingent responsiveness, emotional-affective support, responses to infant foci of attention, and quality of language input.

Table 1: Summary of Tools to Assess Responsive Care

Title	Authors	Age Group	Details of administration/toys given
Responsive Parenting in the Second Year: Specific Influences on Children's Language and Play	C. S. Tamis-LeMonda, M. H. Bornstein, L. Braumwell, A. M. Damast	**1996 study 1-** 13 months and 21 months	**1996 Study 1- Semi-structured:** during play sessions mothers were asked to remain with their child and act in their usual manner, a standard set of toys **provided by observer** included a teapot and lid, doll, spoons, cups and saucers, toy telephone, book, ball, nesting set and toy vehicle, was placed on the floor in front of child and mother at each observation period.
		1996 study 2- 13-14 and 21-22 months	**1996 Study 2- Semi-structured:** children provided with a set of toys including a doll, tea-set, brush, blanket, sponge, and blocks, and videotaped during solitary play; mothers then joined their child's play using a similar but new toy set **provided by observer**.
		2001 study 9 months and 13 months	**2001 Study- Semi-structured:** mother and child asked to play on the floor with a standard set of toys **provided by observer;** mothers were asked to use only the **observer**'s toys during the play session.
Origins of Attachment: Maternal Interactive Behaviour across the First Year	R. A. Isabella	**1993 study** 1, 4, and 9 months of age	All but one of nine observations were **fully naturalistic**; the second 9-month visit involved a relatively structured observation setting [this report only focuses on the eight naturalistic observations]

Title	Authors	Age Group	Details of administration/toys given
Responsive Parenting: Establishing Early Foundations for Social, Communication, and Independent Problem-Solving Skills	S. H. Landry, K. E. Smith, P. R. Swank	**2006 study** 6-10 months of age	**Semi-structured:** 15-min naturalistic living room situation in which mothers were requested to do what they would typically do with their infants; books, toys, magazines, and other items found in a typical living room were **provided by observers**. The second context, the toy play situation, mothers were provided with age-appropriate toys and asked to play for 10 minutes with one or more of the toys with their infant.
Mother-child picture-talk	F. E. Aboud	**2011 study** 8-20 months, 2007 study-2.5-4 years	**Semi-structured: observers provided mothers** a laminated 2-sided page of pictures and said they wanted to watch the child talk with her about the pictures as they normally would.
OMCI Observation of Mother-Child Interaction	M. Rasheed & A. K. Yousafzai	**2015 study** 12-24 months of age	**Semi-structured:** mothers asked to play with any toy available at home or if no toys were available, a choice of a ball, stuffed toys or picture book was **provided by observers**.
Infant/toddler HOME Inventory	B.M. Caldwell & R.H. Bradley	Under 3 years of age	**Naturalistic** observation of caregiver-child interaction and **interview** with the parent on other items in a relaxed, non-judgmental and friendly way. Child should be in the same place doing his/her usual activities

In the LMIC setting, Rasheed & Yousafzai (2015) developed the Observation of Mother-Child Interaction (OMCI), which was based on the conceptual framework presented by Landry and colleagues (2006) and utilizes the same domains: contingent responsiveness, emotional-affective support, support for infant foci of attention, and quality of language inputs. However, the sub-indicators within each OMCI domain differ from Landry's and allow for the behaviours to be observed within a much shorter timeframe. Another tool that measures responsive care in a LMIC setting is the Mother-Child Picture Talk (and Puzzle Play), which was developed and used in Bangladesh by Aboud (2007, 2011). Mother's responsive behaviours were then categorized into one of three dimensions: negative, directive, or responsive. Similar to the OMCI all behaviours are coded on a frequency scale over the five minutes of mother-child observation.

The HOME has also commonly been used in the LMIC setting, which includes select aspects of observed naturalistic and responsive interaction (Caldwell & Bradley, 2003). Since the HOME Inventory was designed to measure the quality and quantity of stimulation and support available to the child in the home environment, it includes an eight-item subscale called warmth/responsivity. Further, the HOME collects information about the variety of social and material stimulation in the child's home environment, which are both observed and caregiver-reported, but are not responsive.

One tool with a responsiveness dimension, which is not listed in Table 1, is the Parenting Interactions with Children: Checklist of Observations Linked to Outcomes tool (PICCOLO). The main reason for its exclusion is limited access to the tool and its application to children starting at 10 months of age. The PICCOLO is an observational measure of positive parenting interactions with young children (Roggman et al., 2009; 2013), using four domains: affection, responsiveness, encouragement, and teaching. Each domain includes a list of seven to eight behaviours that are scored as none, some, or lots (0, 1, and 2, respectively). In addition to limitations due to access and age, the PICCOLO tool has limited applicability as a responsive care indicator: only 4 out of the 7 behaviours included in the responsive domain actually fit our definition, it requires a number of materials, uses a 0 to 2 scoring, and has so far been used in no low-income countries. However, its administration seems to be similar to the Tamis-LeMonda measure [see Table 1] in that a number of playthings are given to the caregiver and child to play with while their behaviours are observed and scored.

Method and Results of Mapping and Short-Listing Items for a Proposed Tool to Assess Responsive Care

In order to design a common and universal indicator for measuring responsive care, data were synthesized from the six tools presented in Table 1 (Isabella 1993; Tamis-LeMonda et al., 2001; Landry et al., 2006; Aboud et al., 2011; Rasheed & Yousafzai 2015; Caldwell & Bradley, 2003). First, data for each tool were mapped by the name and number of dimensions or broad categories of behaviours included (e.g. responsive, acceptance, restrictive, language facilitation), and the dimension measurement (e.g., video, direct observation, caregiver report). Within each dimension are specific indicators that include caregiver behaviours to be observed and measured in order to quantify the dimension. Indicators included variables such as positive affect, stimulation, sensitivity; along with their indicator definitions (e.g. positive affect was defined by one tool as mother displays smiling, laughing and facial animation), and indicator measurement such as frequency counts, ratings. Common dimensions and items across tools were then systematically grouped together. The original dimensions were positive affect, praise, sensitivity, response to child, stimulate/point, question, scaffolding/focus, restrict child's movements, negative affect, scolding, positive touch, and negative touch. We then discussed similarities and discrepancies and refined the mapping over several iterations. Eventually we combined the indicators into three short-listed dimensions: responsive behaviour, non-responsive stimulation, and negative behaviour. These dimensions were intended to be exhaustive of most behaviours seen in the context and mutually exclusive:

- The responsive behaviour dimension contains responsive positive affect/praise and responsive stimulation indicators.
- The non-responsive stimulation dimension contains caregiver-initiated actions and

caregiver-initiated affect indicators.

- The negative behaviour dimension contains the negative affect and restrictiveness indicators, which may have followed a child's signal but contradicted the intended meaning of the signal in a way that was hurtful or unnecessarily restrictive.

By the third iteration of the mapping exercise, it was clear that coding would be made easier if observed behaviours were stratified by verbal and non-verbal behaviours. Even if a spoken phrase and a non-verbal gesture occurred together, they would each be separately meaningful to the child and so were coded separately. Definitions and universal examples were provided for each indicator (Table 3 and Annex).[4]

The inclusion of the non-responsive stimulation dimension, not labelled as such by most of the reviewed tools, was retained in order to quantify stimulating interactions that were not responsive but potentially beneficial (may have been called scaffolding or labelling in other tools). The negative dimension was included to code behaviours that were hurtful or unnecessarily restrictive and ignored the meaning of the child's signal. These behaviours may be in response to a child's action, such as hitting someone with the toy, where the caregiver threatened the child and took the toy away, instead of stating the rule about not hitting. Other subjective and redundant indicators and examples were removed; subjective refers to interpretations of the caregiver's motivations or intentions, such as "mother interprets" or "mother wants to". We also decided in order to prevent skewed data due to a continuous caregiver behaviour, scoring should occur within one-minute intervals and be capped at 10 per minute for a single ongoing behaviour.

Using the penultimate mapping, we then piloted five caregiver-child videos from Tanzania to ensure that all of the dimensions, and indicators within each dimension, were mutually exclusive. In the first piloting session, three mother-child videos were purposely selected in order to capture each age group of interest (i.e. an 8-month child, a 12-month child, and a 20-month child). Each video was approximately four minutes long. EH observed each video and scored using a frequency tally. FA, AY and EH reviewed the piloted videos. After this first piloting session, EH piloted two additional mother-child videos, which included a 6-month child and a 17-month child. The same discussion and review processes were applied. Because the responsive interaction procedure adopted here has been used in several countries, but with slightly different coding schemes, we have some experience distinguishing the behaviours in these contexts and some understanding about the level of inter-rater reliability, validity, and proportion of responsive behaviours (Aboud, 2007; 2011; 2013; Betancourt et al., 2020; Knauer et al., 2019; Rasheed & Yousafzai 2015; Yousafzai et al., 2014). The final proposed tool comprises 12 total items (see Table 2 with examples of behaviour definitions for each item).

[4] Appendices are available for those who want more examples of the indicators.

Table 2. Indicators for responsive, non-responsive and negative dimensions

Dimension	Indicator	Sub-indicators	Examples of Definitions	Frequency tally
Responsive behavior	Positive affect/ praise	Verbal	Caregiver responds positively to the child's activity/vocalizations or praises the child	
		Non-verbal	Caregiver exhibits positive facial animation to child's cue	
	Responsive	Verbal	Caregiver repeats, builds on, or expands on child's talk, or verbally responds to child's activity, question	
		Non-verbal	Caregiver allows child take the lead and follows their lead	
Non-responsive stimulation	Caregiver-initiated affect	Verbal	Caregiver praises the child or conveys positive tone of voice at child in a nonresponsive way	
		Non-verbal	Caregiver interrupts child's activity to touch child positively or caregiver demonstrates positive affect to the child not as a response to the child	
	Caregiver-initiated action	Verbal	Caregiver commands, directs or instructs child to engage in an activity regardless of what the child is currently doing	
		Non-verbal	Caregiver controls activity and the materials that child and caregiver are engaged in or re-directs child's attention from an activity child is currently engaged in	
Negative behavior	Negative affect	Verbal	Caregiver scold's child for child's behavior, which might involve using aggressive or abusive language	
		Non-verbal	Caregiver is off-task or shows disinterest or negative facial animation or gestures to the child	
	Restrictive ness	Verbal	Caregiver commands child to stop engaging in activity they are interested in, if activity is also safe and productive	
		Non-verbal	Caregiver abruptly moves child, handles child roughly, pushes, shakes or hits child or physically removes play object	

Scoring. The items are intended to be scored through observation (live or video-recorded). Each observation (video or in-person) should be separated into one-minute time intervals. Each behaviour is tallied within the appropriate code and within the one-minute time interval. If a behaviour is continuous within a one-minute period, a maximum score of 10 can be made. The one-minute interval is only approximate and has been introduced here in order to set an upper limit on frequencies of behaviours that might be continuous. At the end of the observation, a responsive

score, a non-responsive score and a negative behaviours score is calculated. The indicator of interest is the responsive score, namely the sum of all behaviours in the responsive dimension divided by the sum of all behaviours. The non-responsive score is the sum of all of the behaviours in the non-responsive stimulation dimension divided by the sum of all behaviours. A negative behaviour score can also be calculated by dividing the sum of all behaviours in the negative behaviour dimension by the sum of all behaviours. Responsiveness, however, is the main focus of this tool. [Appendix 2]. The scores are intended to be used as continuous scores, in particular to note changes as a result of participating in a programme. No threshold of "responsive care" is considered. To be realistic, we expect that responsive behaviours might constitute 10% to 50% of the interaction. Initially, they might inform the need for a programme to enhance responsive care and could serve as a baseline to note whether improvement was seen after a programme.

Play and picture materials. Stimulus material is provided to the caregiver and child for their interaction while the observer records the responsive, non-responsive stimulation and negative behaviours of the caregiver. The stimulus material should have an appropriate level of complexity and novelty. Specific levels of novelty and complexity for stimulus materials are important in order to arouse a comparable level of exploration and stimulation among children; whereas using the child's own familiar toys might lead to boredom or to a feeling of familiarity that leaves little opportunity for the mother to engage. The proposed stimulus materials were specifically chosen to be universally appealing and age appropriate, with the understanding that in-country materials with comparable levels of complexity and novelty should be used. As with the use of manipulatives from any developmental assessment tool, the play and picture materials used for responsive care should be wiped in between uses with an anti-viral, anti-bacterial cleaner if sufficient copies are not available for single use. We expect that both the toy and the picture interactions would be observed, but if only one is used then the priority should be talking about pictures because it would be acceptable to more parents (Figure 2):

- For children lying down (aged 0-6 months) and sitting (6-12 months), a novel toy is provided. It is recommended that this toy be soft, manipulative, colourful, movable, and make a sound. For example, an animal doll with lots of things to squeeze, pull, swing, and shake so that it makes different motions, sounds and colours depending on where you touch/squeeze it. The manipulability of the toy will arouse exploration in the child and allow the caregiver and the child to play together. Additionally, the toy must be safe clean, robust, and should not break when used.

- For children sitting (aged 12-24 months) a more advanced toy, such as a cup with stones, sticks, and pieces of coloured cloth is recommended. These materials can be combined in multiple ways, such as to make patterns or put things in and on. The cup with stones, sticks, and pieces of coloured cloth allows both the caregiver and child to engage in the activity together, and they are items that are universally found in most homes.

- For children lying down (0-6 months) and children sitting (6-12 months) a series of simple pictures of mothers and babies, animals, birds, and flowers on one or two laminated sheets is recommended. This picture page should not have any text, as text draws literate caregivers into reading the book, instead of engaging in the activity with their child in a responsive way. A good source of pictures can be found on the global storybook website: https://globalstorybooks.net/.

- For children (12-24 months), a similar set of pictures or scenes with people, animals, landscape, and without text is recommended.

Figure 2: Illustrative Examples of Toys and Pictures

0-6 months

6-12 months

12-18 months

18-24 months

Note: Stimulus materials used during the observed interaction should be locally made or purchased.

Guidance for Training Assessors to Collect Data Using the Tool for Responsive Care

Assessors in field studies can have a range of educational backgrounds from high school graduates to degree holders. Key characteristics of good assessors are personable and comfortable in the setting for the data collection and working with children and families, good observational skills, and good organizational skills.

Prior to training:

- A local team should review the form and provide translation to the local language (as spoken). A review of the comprehension of the translation should take place ensuring the examples are appropriate. An independent back translation should be completed to ensure the items have retained their conceptual integrity.
- A series of local videos of caregiver-child interactions should be taped (n=8-12). These should be naturalistic interactions over five minutes using the stimulus materials recommended for the responsive care tool. The range of videos should include younger (0-6 months and 6-12 months) and older (12-24 months) children with both pictures and toys. The caregiver-child dyads should be representative of the community to be assessed.
- All trainers should have a timer (e.g., sand timer, stopwatch, timer on their mobile phone).

The following sequence should be followed for training:

1. A review of the items with the assessment team to ensure a common understanding. The trainer may want to demonstrate some behaviours from each category to check everyone's understanding.
2. An observation exercise and scoring of a video with one younger child and one older child using a toy, and one younger child and one older child using the picture. Following each video observation, an item by item review and discussion should take place.
3. Once a common understanding of scoring criteria is reached, the remaining videos can be used to practice real-time scoring.
4. Once assessors are obtaining reliable scores against the trainer's scores (e.g., Kappa ≥ 0.7), field practice in pairs can take place. Assessors can work in pairs to score 4-6 caregiver-child dyads. After each observation they can discuss their scores. This is an opportunity for assessors to practice giving the instructions to caregivers and learning to position themselves to be able to make an accurate observation without being visually intrusive or interfering during the caregiver-child interaction.
5. Once a high inter-observer reliability is reached, assessor's skills can be tested with the trainer. At least three consecutive scores with good inter-observer reliability should be reached before beginning data collection.
6. During field data collection, it is recommended that a sub-sample of assessments are recorded (or visits supervised) for inter-observer reliability checks in order to maintain quality assurance.

Chapter 3: The Development of an Evidence-Informed Tool for Assessing Early Learning

An Overview of Common Measures of Early Learning in High-, Middle-, and Low-Income Countries

In developing a tool for early learning activities, five commonly used measures were considered: three are variations of the HOME (Caldwell & Bradley, 2003; Aboud, 2007; Weber 2019), and two are variations of the Family Care Indicator (FCI) (Hamadani et al., 2010; UNICEF Multiple Indicator Cluster Surveys, Version 6 (MICS6)).[5] All include items relevant to the two dimensions of stimulating playthings and stimulating activities with people.

The 45-item HOME has been used in many countries including Thailand and Chile; the HOME modified for LMIC has been used in Bangladesh, Pakistan, Uganda, Ethiopia, Rwanda and Kenya (Aboud & Yousafzai, 2016; Obradović et al., 2016). Some items are observed and rated during the interview; for example, playthings and the caregiver-child interaction, and other items regarding discipline and stimulating activities are caregiver-reported. Although the HOME has six subscales, items do not always cluster into six separate factors. So, one should not consider the responsivity subscale as a stand-alone measure of responsiveness, and the learning materials subscale as a stand-alone measure of early learning activities.

The 13-item FCI is a more recent development, but it is now commonly used as a short parent-report measure. During the initial development and validation of the FCI in Bangladesh, strong correlations with mental development of children 18 months of age were found. It also correlated highly with the HOME ($r=.72$, $p<.001$) (Hamadani et al., 2010). Sources of play materials, an indicator also on the MICS, did not correlate as highly with the HOME and not at all with mental development, and therefore were dropped from our consideration. The GSED version of the HOME includes only two items on play materials, whereas the original HOME has ten. Consequently, we worked from the original FCI and the original HOME. The FCI has recently been used to evaluate changes in stimulating play after parenting programmes and shown to have moderate to strong effect sizes (Jeong et al., 2018). It does not, however, measure responsiveness and so is incomplete as an evaluation of a responsive parenting programme.

A Summary of the Mapping and Short Listing of Items for the Tool to Assess Early Learning

The definition of early learning activities used was stimulating engagement with objects (e.g., playthings) and/or people (adults and peers) where responsiveness may not occur. This included play with objects that were cognitively and socially stimulating and play with peers and

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adults that was not necessarily responsive. This definition does not require observation of a caregiver-child interaction. All items from the five measures related to the dimension of playthings were listed as were the items related to play/stimulating activities. There was considerable overlap between the FCI and the HOME (Caldwell & Bradley, 2003) and LMIC-revised HOME found in the literature. Therefore, the FCI was used as the basis for the new indicator with several substitutions. Two playthings were considered more appropriate for children over three years old, namely "things for learning shapes and colours" and "things for drawing and writing," but they could be combined as "things with different shapes and colours, or for drawing shapes and colours" even if they were not "for learning about". Also added was "designated and accessible place for child's playthings" because it was found in the three HOME inventories and reveals a secure and accessible place for child-protected playthings. Three new play activities were included in place of two FCI activities about "naming/counting/drawing", and "playing with your child's playthings". They were taken from the HOME Inventories: playing structured social games (with adults or peers), talking with the child when busy with housework, and giving the child a new plaything (Table 3).

Table 3. Early learning play materials and activities

Early Learning Question	Yes=1, No=0
Things for moving around (balls, wheels, push & pull)	
Things for role-playing, pretending (eg. dolls, household items, plane, cars)	
Things to manipulate: to fill, stack, construct, build (blocks, sticks, stones)	
Things that produce sound (e.g. drum)	
Child has picture book (not textbook, can be collection of pictures)	
Things with different shapes and colors, or for drawing shapes, colors	
Is there a designated and accessible place for child's playthings?	
In the past 24 hours, did you read or look at pictures in a book, calendar or magazine with the child?	
In the last 24 hours, did you take your child out to visit friends, family or to shop?	
In the last 24 hours, did you tell stories or rhymes to the child?	
In the last 24 hours, did you sing songs or lullabies with the child?	
In the last 24 hours, did your child play any structured games with people, like circle games, clapping, singing or ones with objects**?**	
When you are busy with housework, in the last 24 hours, did you talk with your child**?**	
In the past week, did you give your child a new plaything? (what?)	

The method of administering the 14-item Early Learning Activities should be to ask the caregiver to show what the child plays with, ensuring that the caregiver understands this to mean played with alone or with others, from whatever source (purchased from a store, an everyday item at home, or homemade), while the enumerator ticks the type of toy. Items from the Play/Stimulating Activities dimension should be included in an interview to be answered by the caregiver, using the time frame of 24 hours [Appendix 4]. Because a great deal of data is available from both the FCI measure and the HOME Inventory adapted to LMIC, we feel confident that the Early Learning indicator will be feasible, reliable, and valid in most contexts. No threshold score is proposed at this point; rather it is expected that improvements will follow the implementation of a nurturing care program, where early learning activities are intended to enhance child development.

Chapter 4: Training and Monitoring Providers to Encourage Responsive Play and Talk with Young Children

The goal of this section is to provide recommendations for training providers to be able to effectively deliver responsive care messages to caregivers of young children in the context of play and talk. It is intended to support trainers and supervisors with additional tools to strengthen skills of frontline workers who will be coaching caregivers in responsive care. This builds on the concepts and skills introduced to frontline workers who have received a basic training using evidence-based packages with a focus on responsive care or generally building caregiver-child interactions through play and communication (e.g., Care for Child Development, Reach Up, Responsive Parenting). It can also support programmes where monitoring and evaluation data indicate that the practice of responsive care can be improved among beneficiaries suggesting frontline workers need a refresher training or supervisors need additional checklists/guidance that allows them to offer constructive feedback to their team.

Note for Trainers

This module concerns training of service providers on how they can engage caregiver-child dyads to interact responsively during play and talk episodes. We concentrate on play and talk episodes because they are times when children naturally develop. Responsiveness is the essential ingredient in these episodes. Other practices related to health, hygiene and nutrition may be integrated in the delivery agent's workload. Providers will become responsive to caregivers during the encounter, just as they support caregivers to be responsive to their children. The following module outlines the training of providers to be responsive to mothers, and to demonstrate with them how to be responsive in play and talking interactions with their children. Training and monitoring providers, whether during a home/clinic visit with an individual family or during a group session, is provided here.

Training Providers for Individual Encounters during Clinic Appointments or Home Visits

The trainer may first demonstrate the following provider-caregiver-child encounter with a colleague acting the role of the caregiver and holding a doll as the child. This allows the trainer to stop and explain each action in the sequence. Thereafter, videos of caregiver-child interactions, and provider-caregiver-child interactions can be shown, stopping at each point to discuss what the provider is doing, what the child is doing, what the caregiver is doing. Appropriate behaviour on the part of the provider and caregiver should be identified. Thirdly, providers may arrange themselves in groups of three, each person taking a different role in order to practice specifically the skills of the provider, while the other two take the roles of caregiver and child. Finally, in pairs, trainees can practice with a caregiver-child dyad, one trainee manages the encounter while the other makes notes of what was done well and what needs more work by the trainee provider. In

the third and final step of training, trainees will receive coaching and feedback as needed from their peers and from the trainers.

- The purpose of using play and communication as two critical interactions should be explained, i.e. they are important activities for a child's mental development.
- The purpose of responsive caregiver actions should be explained; many providers will mistakenly assume that caregivers should be instructive, and children should be responsive. The concept of a responsive caregiver may be new to providers.
- The concept of child development should have been discussed also; namely that in addition to health and growth, children need responsive care and early learning activities from birth because their brains are ready and wired to take in language, visual input, and tactile, sensory stimulation.

The following encounter will first be role-played by the trainers followed by field practice.
Introduce yourself to the caregiver and to the child. Let the child approach you when he/she is ready, e.g. looking, smiling, vocalizing, leaning toward.

- **Observe caregiver-child interaction during a brief talk and play interaction.**
  - Have playthings and pictures on the table.
  - Ask the caregiver if the child would like to look at pictures or play with a plaything. If the child shows a preference, see if the mother follows the child or selects something different.
  - Ask trainees: *What would be the responsive thing to do? [Let several trainees answer. The trainer may then repeat the best answers and ask why they were good answers.]*
  - Regardless, continue without interrupting their interaction, but make a mental note of child cues and caregiver responses.

- **Structured Responsive Picture Talk**
  1. <u>Watch and Listen:</u> If the caregiver or child are reluctant or need encouragement, suggest they watch how the child looks at pictures with her. Let the caregiver and child interact while looking at the pictures and talking about them. While this happens, the provider should remain apart from the caregiver-child interaction and may jot a few notes of things to praise the caregiver and child.

  2. Below are some examples of a child's gestures and sounds, and some examples of what the caregiver might do. *During the training discuss what each child cue might communicate. Are there child cues missing from this list, and what might they communicate?*

Child (C) Cues	*Caregiver/Parent (P) Responses*
• Looks at mother • Looks at pictures • Looks at provider • Looks elsewhere • Fusses/cries • Self-soothes • Points at mother • Points at pictures • Points at provider • Points elsewhere • Vocalizes	• Caregiver returns the look and socializes. • P asks what the child likes in the picture. • P says "I see you like the X. It's a X." • P verbally names/describes what the C looks at. • P points to whatever captures C's attention. • P appreciates whatever captures C's attention. • P soothes fussing C. Tries different ways to soothe. • P appreciates self-soothing. • After P responds, she lets C take a turn or encourages C to take a turn. • None of the above occurs after C cue. • The P initiates all actions from the start; the C is passive. [non-responsive]

3. Let their interaction go for several minutes without interruption.

4. Comment on and Praise Child cues and Caregiver's responses. *Using the above grid of child cue → caregiver response, the provider might say:*

   - *"I noticed that [name] looked at/ pointed at/ said and you followed up on that. That showed you were attentive to [name] and [name] liked what you did. That will surely help your child develop in a good direction."*
   - *"You noticed your child looking at the cow and you pointed at the cow and said, "You like this brown cow."*
   - *"You heard your child make sounds, and you imitated the sound and then make a word out of the sound. "*
   - *"You noticed that your child was fussing, so you put the picture down on the table and spent time helping your child to soothe before going back to the pictures. "*

5. Then point to one missed opportunity. "*I noticed that [child's name] did X. What could you do the next time if your child did that?"* Either praise or coach a responsive action. The attitude should be: *"Your child is so alert; let's show him/her that you can talk together, that you are ready to talk with her, like in a 2-way conversation. What is he/she trying to tell you when he/she …….? How can you answer that?*

   Demonstration: If the Caregiver understands, then let her replay that event with you re-enacting the child's cue or let her do another child interaction with a plaything. If the Caregiver is puzzled, then the provider can demonstrate with a pretend child or with the Caregiver. Then let the Caregiver replay the event.

6. Ask the Caregiver if she wants to look at some more pictures with her child, or if she is comfortable enough with the Serve and Return (2-way) dialogue – Child serves – Caregiver returns; Child serves – Caregiver returns.

- **Structured Responsive Toy Play**

1. Watch and Listen: If the caregiver and child are reluctant or need encouragement, suggest they watch how the child wants to play with her. Let the caregiver and child interact while playing with the object. While this happens, the provider should remain apart from the M-C interaction and may jot a few notes of things to praise the mother and child.

2. Below are some examples of a child's actions and sounds, and some examples of what the mother might do. *During training, discuss what each child cue might communicate. Are there child cues missing from this list, and what might they communicate?*

Child (C) Cues	***Caregiver/Parent (P) Responses***
• Points/Looks at mother • Points/Looks at toy • Points/Looks at provider • Points/Looks elsewhere • Fusses/cries • Self-soothes • Picks up toy • Manipulates toy • Vocalizes • Shows pleasure	• P returns the look and socializes. • P asks if C likes the toy. • P says "I see you like the X. It's a X. You can do X with it." • P verbally names/describes what to do with toy. • P points to whatever captures C's attention. • P appreciates whatever captures C's attention. • P soothes fussing C. • P appreciates self-soothing. • After P responds, she waits for C to take a turn or encourages C to take a turn. • None of the above occurs after C cue. • The P initiates all actions from the start; the C is passive. [non-responsive]

3. Let their interaction go for several minutes without interruption.

4. Comment on and Praise Child cues and Caregiver's responses. *Using the above grid of child cue → caregiver response, the provider might say:*

- *"You noticed your child was reaching for one of the play pieces and you said, "Do you want to play with this stick? Here, what are you going to do with it?"*
- *"I noticed that [name] looked at/ pointed at/ moved the object and you followed up on that. That showed you were attentive to your child and your child liked what*

you did. That will surely help your child develop in a good direction."

- *"You saw your child shaking the plaything, and you smiled, so he continued."*
- *"You noticed that your child was putting sticks in a row and you said you would copy her pattern with the sticks."*

5. Then point to one missed opportunity. *"I noticed that [child's name] did X. What could you do the next time if your child did that?"* Either praise or coach a better responsive action. The attitude should be: *"Your child is so alert; let's show him/her that you can play together, that you are ready to play with her, like in a 2-way game. What is he/she trying to tell you when he/she …….? How can you answer that?*

   Demonstration: If the Caregiver understands, then let her replay that event with you re-enacting the child's cue or let her continue with that/another toy. If the Caregiver is puzzled, then the provider can demonstrate with a pretend child or the Caregiver. Then let the Caregiver replay the event.

6. Ask the Caregiver if she wants to continue playing with her child, or if she is comfortable enough with the Serve and Return (2-way) game – Child serves – Caregiver returns; Child serves – Caregiver.

7. Extend what you have taught the caregiver to other forms of play using at-home materials. For example:
   - Rolling a ball at bottles lined up. Stand farther away as the child gets proficient. Let the child start by throwing the ball while the caregiver throws it back for another turn.
   - Making simple patterns with sticks. Add more sticks and bottle caps as the child gets good. Let the child make patterns that the caregiver copies.

Training Providers to Deliver Group Sessions to Caregivers with a Child

Groups often include 10 to 18 mothers with children 6 to 24 months of age. Because trainers normally train a large group of Community Health Workers (CHW) at one time, they may ask the trainees to take the role of caregivers in a group session. The trainer thereby takes the role of a group facilitator, simultaneously training CHWs and taking the role of a CHW conducting a group session with caregivers. During training, trainees may pretend that they have a young child with them, or they may practice in pairs with one taking the role of the caregiver and the other taking the role of a child. Always ask trainees to start by pretending they have a child from 0 to 12 months of age; then they can do it again pretending they have a child 12 to 24 month of age. That way, they will learn how to adapt their remarks to caregivers in the group with infants who do not yet talk and are somewhat uncoordinated, and older children who are starting to say words and

more mature in play. Videos of caregiver-child interactions would also be very helpful in identifying for trainees which interactions are responsive, non-responsive but stimulating and negative.

Introductory and concluding remarks should be addressed to trainees outside of the role-playing activity.

Introductory Remarks

- Introduce the topic of children's play by saying: All children like to play, and they learn from play. They play with people and they play with objects. The brains of all children are wired at birth to learn from play and to learn the language spoken by their caregivers. Their brains at birth find caregivers very attractive and stimulating, especially their faces, speech, song, colour and movement.
- Children from birth want and need some time every day with a caregiver who plays with them and talks with them.
- Tell trainees that you are now going to take the role of a group facilitator and they will take the role of caregivers attending a group session with their child of 3 to 12 months of age first and then their child of 12 to 24 months.
- The group facilitators must come prepared with a locally available set of pictures and home available playthings.

➢ **Responsive Talk with a Child**

1. "Take a few minutes now to talk with your child in any way you usually do." Let them talk and take note of how they do it with infants of different ages. After a minute, ask everyone to watch while a few trainees (caregivers) show how they talk (non-judgmental). Start by asking the mother with the youngest child in the group (3-6 m) to show how she talks with her child. After about 30s point out to the group a few things that were good, e.g. the mother was attentive to the child, she provided vocal stimulation, she provided visual stimulation, she provided tactile stimulation, she changed her tone of voice when the child lost interest, she sang a song with words. Then ask another mother who seemed to enjoy talking with her child of 12-18 m. Again, watch and then describe to the participants what were the good features of their verbal interaction. Take note of times when the caregiver changed course on the basis of her child's gestures and actions: "Oh, I see that you were making sounds to answer my questions. Do you like talking with me? We can pretend we are having a conversation."

2. Now comment on some of the problems that you saw among trainees or ones you expect to see among caregivers.
    - "I saw that some of you made sounds like "CoCo" or other baby talk."

- "Some of you said a few words but had trouble making conversation."
- "Some of you rocked your baby and sang a soothing lullaby."

Children want to hear conversation in full sentences. Let me guess why most of us have trouble talking with children. We think that children don't understand us so why talk to them. Let's discuss this now. Is that why we don't talk to infants? [Let audience discuss.]

3. "Here are two things to remember about talking to children. One is that this is the way they learn language. They will learn to understand some words at 3 month of age and more as they age. Second children want to have a two-way conversation with you. They want you to watch their signals of interest – their eyes, smiles, vocalizations, hand waving, legs kicking – so you can make conversation around their signals. This is responsive talk." Let trainees practice again with a child of 3 to 12 months of age. Comment on instances of responsive talk, where the caregiver says what signals she notices in the child and how she adjusts her talk accordingly.

4. "Now pretend you are with a child of 12 to 24 months and you are walking outside the home. Remember to comment on signals of the child's interest that you note and respond in short but full sentences." Again, discuss good examples that trainees used and some missed opportunities that they did not. For example, what happened when the child was not interested in the flower being described by the caregiver? Did she ask the child what he/she was interested in? Even children who do not talk can point to what interests them. What happened when the child wanted to destroy the flower? Did the caregiver respectfully tell the child that they should not hurt flowers, just feel them gently. Did caregivers require children to repeat certain words after them? This kind of instruction is unnecessary; children will learn to say things in their own time.

5. Now ask trainees to talk with their child about a picture (from a magazine, calendar, or brochure). "Pretend you are talking with your child about pictures. These may be picture books where you are looking at the pictures or simply pictures. Remember to be responsive to your child: start by asking your children to point to what interests them or watch what your child is looking at in the picture. Talk about that (don't read if it is a book)." After a few minutes, discuss with trainees some good examples and some poor examples. Demonstrate a good sequence of two-way talk about pictures for all to see and then have trainees practice again. Coach individually the trainees who need feedback; praise those who show responsive talk.

6. Discuss with trainees how to have a discussion with caregivers about their difficulties in talking with children in this two-way manner. Be non-judgmental in hearing about their

difficulties. Ask others to suggest solutions. This may be done when the group returns after being given homework to talk with their children.

In conclusion, it is important to give caregivers some information about two-way talk and why it is important; demonstrate how to do this with infants, with older children, and with pictures; praise and coach caregivers as they practice with their children.

Responsive Play with Children

1. "Take a few minutes now to play with your child in any way you usually do." Let caregivers play and take note of how they do it with infants of different ages. After a minute, ask everyone to watch while a few trainees (caregivers) show how they play. Start by asking the mother with the youngest child in the group (3-6 m) to show one way that she plays with her child. After 30s point out to the group a few things that were good, e.g. the mother was attentive to the child, she provided vocal stimulation, she provided visual stimulation, she provided tactile stimulation, she changed her play actions when the child lost interest. Then ask another mother who seemed to enjoy playing with her child of 12-18 m. Again, watch and then describe to the participants what were the good features of their play; take note of times when the mother changed course on the basis of her child's gestures and actions.

2. "Children like to play with parents and they also like to play with playthings. When infants are under 3 months, a caregiver's face is like a plaything: it has different colours, it moves, and it makes sounds. So, playing with a new-born just involves putting your face close, imitating the child's sounds and facial gestures, and talking. But that's not enough after 3 months. So, let's talk about play materials you have at home for your child to play with; we won't mention store-bought things, only things that are readily available in your home. For example, I have seen children playing with cups and spoons. Does anyone here let their child play with cups and spoons?" Let parents each describe one thing their child plays with at home. Make sure they mention different things.

3. "Children need a time to play and a place to keep their playthings. Let's talk about the times during the day when your child plays with you, plays alone, and plays with others." Make clear at the end that children all need lots of playtime, and they especially need time to play with their parents. Siblings are fun but they are not sufficient. Also, children need a place like a play bag or playbox to keep things they like to play with. Ask caregivers if they can arrange for this.

4. Show caregivers (trainees) some sticks and bottle caps you have brought as playthings.

"What happens when you give a child sticks to play with?" Give sticks to a young child (under 12 m) and to an older child (12-24 m) and let everyone watch what they do. Then give their mothers sticks and bottle caps and ask them to "play with their child: try copying the child and add something new; try showing something that the child might like to copy. If your child doesn't want to do what you do, then how can you fit into the child's play activities? Think about this as your child plays." Watch how caregivers (trainees) play with their child. Here are some play activities that children might do and how the caregiver might respond:

- A child under 12 m might like to hit the sticks together or wave it; might like to hit it on the ground or poke it into the bottle cap. Does the parent copy this? Does the parent hit the sticks together to make a beat or move the cap around using the stick?
- A child over 12m might put the sticks on the ground and roll them or line them up. Does the parent copy this? Does the parent line them up to make an X- or a T-shape? Older children might like to make shapes that the parent can copy; the parent can add complexity by putting a bottle cap into the shape.

5. Give all parents a few sticks and bottle caps to play with their child for 5 minutes. Walk around and praise them for good play and coach responsive play if caregivers are too instructional or directive.

6. Discuss with trainees how to have a discussion with caregivers about their difficulties in playing with children responsively, especially providing playthings and following the child's lead. Be non-judgmental in hearing about their difficulties. Ask others to suggest solutions. This may be done when the group returns after being given homework to talk with their children.

In conclusion, it is important to give caregivers some information about responsive play and why it is valuable; demonstrate how to do this with infants, with older children, and with playthings; praise and coach caregivers as they practice with their children. Repeat the three things to remember about play:

- Children need lots of time to play: to play with you and play with things.
- Children need things to play with and a place to keep these things: things from home. They need new things every week, so add new things to their play bag.
- Children need a responsive parent, one who notices and fits into their interests, abilities and activities. Don't think you have to teach them something new and that they have to copy you; if you copy them and add something new, then they may want to do it too. Play is not like school; children play as they wish not when you force them.

Monitoring Providers for Responsiveness

Note on the use of these monitoring tools:

- The supervisor might watch from a distance one uninterrupted contact between the provider and the caregiver-child dyad. Do not provide coaching or feedback to the provider until the caregiver has departed.
- After the contact with the caregiver and child, the supervisor might let the provider complete the monitoring form as a self-appraisal. Providers thereby learn to conduct an honest appraisal of their own performance and make corrections for the next contact.
- The supervisor might go over the monitoring ratings or identify one or two top priority behaviours to discuss with the provider.

The following eight tables indicate areas for monitoring the quality of the provider's contact with the caregiver and child:

When initially watching a caregiver talk or play with a child, the provider:	
Low score	**High score**
Provides no object or picture to talk about	Provides an object or picture for them to select to talk about
Physically is within the caregiver-child space during their interaction	Maintains a respectful distance from the caregiver and child as they proceed
Talks to caregiver/child during interaction, or looks disinterested, distracted	Watches and listens with obvious interest, while mentally noting cues and responses
Interrupts the interaction early	Let them continue undisturbed for 3-5m
Does not thank the caregiver.	Thanks the caregiver for being a caring person.

When talking with the caregiver about the observed play/talk interaction and before demonstrating a practice, the provider:	
Low score	**High score**
Does not mention an observed positive interaction	Describes a child cue and the caregiver's good response to it
Fails to praise the caregiver	Praises the caregiver for being attentive to the child and for responsiveness
Fails to mention the child's enjoyment of the caregiver's response	Points out how the child enjoyed the caregiver's response
Fails to focus on a specific cue of the child	Describes a child cue that the caregiver did not appropriately respond to
Does not ask the caregiver if a demonstration is desired or how to conduct the demonstration	Asks the caregiver how he/she wants you to demonstrate several possible responses: mother practices on provider, provider shows with child

When demonstrating responsive talk to a caregiver with a child, the service provider:	
Low score	**High score**

Provides no object or picture to talk about	Provides an object or picture to talk about
Talks about something of no interest to the child	Talks about something of interest to the child based on child's attention or gestures
Is directive in terms of telling the child what to look at or to say	Is responsive in following child's lead, repeating child's vocalization, asking for more
Uses single words or names	Replies to child in conversation mode

When demonstrating responsive play to a caregiver with a child, the service provider	
Low score	**High score**
Uses play material bought/brought by worker	Uses play material available to the family
Tells the caregiver how a child of this age might play (no showing)	Shows the caregiver how a child of this age might play with it and several options for how the caregiver might respond.
Continues to play with the child while mother watches	Immediately lets caregiver play with child
Encourages caregiver to instruct/correct child's mistakes	Shows caregiver how to praise, let child take the lead, and/or adjust to child's abilities.

When coaching a caregiver as she/he enacts a new behaviour with the child, the service provider:	
Low score	**High score**
Does not praise for what is done well.	Praises for what is done well.
Speaks in a critical or belittling tone.	Speaks respectfully, gently.
Makes more than 2 suggestions on further improvements	Makes 1 or 2 comments at most on further improvements, as needed
Tells him/her what to do without showing.	Shows or lets another person show if caregiver is not able to adopt new practice.
Does not give a second opportunity to do it	Gives him/her an opportunity to do it again.

When closing the play/talk episode by discussing problems faced by the caregiver that are barriers to enacting previously taught practices, the service provider:	
Low score	**High score**
Does not encourage open, honest report. Does not listen with interest.	Encourages open, honest report by listening, expressing understanding & acceptance
Speaks in a critical or belittling tone.	Speaks respectfully, gently.
Presents as if there is only one correct way.	Encourages generating many solutions
Only provider presents solutions	Lets caregiver generate own solutions.

When information is presented about a new practice, its causes or consequences, the provider:	
Low score	**High score**
Provides too much information	Provides information tailored to caregiver
No description or preview is given; the provider simply enacts the responsive behaviour without explanation or warning	Short description is given before provider enacts the responsive behaviour
Many negative consequences for not enacting practice are offered	Positive consequences for performing are offered, e.g. child enjoys, loves, attends
Information is provided in a didactic manner using jargon and complex grammar	Information is provided in an engaging way with practical actions, materials
Provider assumes that information is correct and so should be accepted and understood	Caregiver acceptance of information is gauged

In order to facilitate caregiver's memory for a new practice, the service provider:	
Low score	**High score**

Introduces too many messages	Keeps to at most 3 new pieces of information
Repeats 2 or fewer times the word/actions	Repeats the words/actions associated with it
No visual reminders of practices to be kept at home	Provides caregiver with a visual reminder to keep at home
Caregiver has 0 or 1 time to say/do the new practice	Caregiver has 2+ opportunities to say/do the new practice

Chapter 5: Summary and Key Next Steps

This report presents the rationale and the systematic process for creating indicators to assess responsive care and early learning. The final indicators are informed by conceptual and operational definitions which describe responsive care and early learning as two distinct concepts that can be inter-related. The existing measures to capture these concepts did not adequately distinguish between the concepts of responsive care and early learning. For example, HOME includes items that capture responsive care and early learning, but data generated from this measure often cannot delineate the two constructs; therefore, programmes do not know whether they need to strengthen early learning promotion or support for responsive care. Measures can also be misinterpreted. For example, while adult engagement in play and talk with the child is important, it should not be mislabelled as an indicator of responsiveness. Caregiver-child interactions can be responsive, non-responsive and negative. There was an urgent need to have measures which helped programmes distinguish among these different types of interactions and different ways to support early learning (through interaction with play materials, caregivers and other children). Without distinct, conceptually and operationally defined measures, programmes are left without adequate information to make decisions on areas of the NCF that require improvement. This approach also captures the diversity of parenting curricula -- many promote interaction between caregivers and children (which may be responsive or non-responsive but stimulating), others focus on early learning activities, while other curricula require both as part of their theory of change.

With respect to the next steps, a toolbox can be created with the brief training guide and materials, tools, and score sheets. Such a toolbox could be supplemented with a globally representative sample of videos to support classroom training prior to field practice. While such a toolbox, complemented with dissemination, is useful, it is critical to be considered only as Version 1 fostering a common understanding of responsive care and early learning; their overlaps and distinctions. In order to create a Version 2, an investment is required for piloting and opportunistic testing in order to assess the reliability and validity of the indicators. Opportunities to align with GSED field testing is one possibility. To assess the quality of data collectors, we would advise the use of inter-rater reliability scores, such as kappa coefficient, to ensure that the assessors are consistent with an expert. Validity could be determined through convergent validity with a measure such as the HOME Inventory. As an evaluation tool, the Indicator measure should be used at baseline and end line of a home visiting or group session program (and possibly midline), or at the last clinic visit expected for immunization or growth monitoring. It should not be used on an ongoing basis to evaluate the caregiver. Regular monitoring should be of service providers to ensure that they are adequately trained and delivering services as intended.

Longer term follow-up work with these indicators might focus on how systems use the data from indicators to inform programmes and policy; how indicators are related to contextual variables such as refugee status and adversity; how responsive care and early learning are related

or differentially improved with different parenting curricula; how the methodology for the observation of responsive care might be adapted to a population survey format using vignettes or audio recordings.

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Annex. Responsive Care and Early Learning Tools

Instructions for coder: Provide the caregiver and child with a toy and/or picture corresponding to the age of the child. Code the frequency of all meaningful interactions within each 1-minute time interval. Do not count the behaviour any more than 10 times. If the caregiver engages in the behaviour over 10 times mark the frequency as 10.								
ID								
Age of Child (m)								
Responsive score (responsive behaviours/total behaviours) %								
Non-responsive stimulation score (non-responsive stimulation/total behaviours) %								
Negative behaviour score (negative behaviours/total behaviours) %								
Dimension	Indicator	Sub-indicators	Definition	0min-1min	1min-2min	2min-3min	3min-4min	4min-5min
Responsive behaviour	Positive affect/ praise	Verbal	Caregiver responds positively to the child's activity/vocalizations or praises the child					
			Caregiver's tone of voice conveys positive feelings towards child's activity or vocalization's					
			Caregiver imitates child's affect					
		Non-verbal	Caregiver exhibits positive facial animation to child's cue					
			Caregiver imitates the child's affect					
			Caregiver demonstrates positive touch as a response to child's cue					

	Responsive	Verbal	Caregiver answers child's question or request appropriately					
			Caregiver repeats, builds on, or expands on child's talk, or verbally responds to child's activity					
			Caregiver responds to child's cue with an open-ended question					
		Non-verbal	Caregiver imitates child, responds directly to child's activity, or helps child to engage further in the activity					
			Caregiver allows child to take the lead and follows their lead					
			If child is disinterested in activity, caregiver does not force child to play with activity any longer. Caregiver permits child to play freely, does not inhibit child's play because of mess or noise					
Non-responsive stimulation	Caregiver-initiated affect	Verbal	Caregiver praises the child or conveys positive tone of voice at child in a nonresponsive way					
		Non-verbal	Caregiver interrupts child's activity to touch child positively or caregiver randomly demonstrates positive affect to the child not as a response to the child					
	Caregiver-initiated action	Verbal	Caregiver commands, directs or instructs child to engage in a					

			[different] activity regardless of what the child is currently doing [if child is not currently doing anything, caregiver tries to interest child in any activity] or controls the activity that caregiver and child are currently engaged in					
		Non-verbal	Caregiver controls activity and the materials that child and caregiver are engaged in or re-directs child's attention from an activity child is currently engaged in					
Negative behaviour	Negative affect	Verbal	Caregiver scold's child for child's behaviour, which might involve using aggressive or abusive language					
			Caregiver raises voice and shouts at child					
			Caregiver threatens punishment or criticizes child					
		Non-verbal	Caregiver looks away and seems off-task to what the child is engaged in					
			Caregiver exhibits negative facial animation to child's cue					
	Restrictive	Verbal	Caregiver commands child to stop engaging in activity they are interested in, if activity is also safe and productive					

		Non-verbal	Caregiver abruptly moves child, handles child roughly, pushes, shakes or hits child					
			Caregiver prevents child from engaging in the activity they're interested in by physically taking the object from the child or preventing them from playing with the object in some other way					
NOTES								

Instructions for assessor: Ask the caregiver each question and score 1 if Yes, and 0 if No. Items 1 to 6. Ask if the child plays with such an item (home available or store made). If the answer is yes, ask to observe it or ask for a description that is sufficient to score.	
Early Learning Questions	Yes=1, No=0
Things for moving around (balls, wheels, push & pull)	
Things for role-playing, pretending (eg. dolls, household items, plane, cars)	
Things to manipulate: to fill, stack, construct, build (blocks, sticks, stones)	
Things that produce sound (e.g. drum)	
Child has picture book (not textbook, can be collection of pictures)	
Things with different shapes and colours, or for drawing shapes, colours	
Is there a designated and accessible place for child's playthings?	
In the past 24 hours, did you read or look at pictures in a book, calendar or magazine with the child?	
In the last 24 hours, did you take your child out to visit friends, family or to shop?	
In the last 24 hours, did you tell stories or rhymes to the child?	
In the last 24 hours, did you sing songs or lullabies with the child?	
In the last 24 hours, did your child play any structured games with people, like circle games, clapping, singing or ones with objects**?**	
When you are busy with housework, in the last 24 hours, did you talk with your child**?**	
In the past week, did you give your child a new plaything? (what?)	