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What Have We Learned from the Design and Delivery of Remote and Hybrid Early Childhood Development Services During the Pandemic?[a]

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Abstract. This report provides an in-depth analysis of the efforts that various early childhood programs made to provide hybrid services during the COVID-19 pandemic, efforts that were designed, adapted, implemented, and/or evaluated with the technical and financial support of the Inter-American Development Bank (IDB) in six Latin American and Caribbean countries (Brazil, Colombia, Ecuador, Jamaica, Panama, and Uruguay). It also presents the findings and lessons learned from implementing these services. While the methods used and the information collected are heterogeneous, taken together they provide a relatively broad picture of how these services were implemented. We found that: (i) hybrid approaches made it easier for populations living in remote locations to access services; (ii) the most popular channels were multimedia messages sent via WhatsApp, due to their versatility, followed by video calls, which allowed interactive communication with families; (iii) families and facilitators highly valued maintaining contact every week or every other week, especially at the beginning of the pandemic; (iv) video calls and in-person visits were the strategies used most often to follow up on service quality; (v) play activities that could be integrated into household routines had the highest uptake; (vi) in countries where toy kits were provided, cost and logistical aspects made it necessary to keep them to a minimum; (vii) virtual tools made it possible to individualize services and prepare plans for each child according to their age and level of development; and (viii) in all six countries, facilitators consistently appreciated having materials and a list of suggested activities, although they requested additional training. This report aims to identify aspects of these service delivery approaches that can complement in-person early childhood services at scale in a cost-efficient manner, both for future emergencies and as a way to close gaps in service coverage and other inequities.

JEL codes: I00, I20, I25, I38, J13

Keywords: remote services, virtual services, hybrid modalities, COVID-19, early childhood services, Latin America and the Caribbean, child development, parenting practices.

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b. Social Protection and Health Division, Inter-American Development Bank.

1. Introduction

The COVID-19 pandemic will have an unprecedented effect on children's development, one disproportionately detrimental for children in economically and socially vulnerable households. During the pandemic, Latin America and the Caribbean (LAC) saw a sharp increase in poverty and inequality, as well as a major disruption of education services at every level. Widespread closures of childcare centers, kindergartens, preschools, schools, and parenting programs resulted in learning losses (Blackman et al., 2020; World Bank, 2021; Abufhele et al., 2022). In the face of lockdowns, mobility restrictions, and temporary suspension of in-person work and schooling in 2020 and much of 2021, parents found themselves solely responsible for their children's development, with limited access to their usual support networks and with multiple sources of stress (Hincapié, López-Boo, & Rubio-Codina, 2020). To help families cope with this significant challenge, several governments in the region adapted their early childhood development (ECD) services—both parenting programs delivered via home visits or group sessions and childcare and preschool services—to the new situation, moving to fully virtual or hybrid approaches. Such strategies inevitably required parents and at-home caregivers to take an active role in delivering these services—that is, ECD services, including childcare and preschool services, were directly mediated through families.

When the pandemic began, the services' immediate response focused on maintaining regular contact with families and meeting basic requirements, such as monitoring the health status of family members; providing basic health products and deliveries of nutritional food for pregnant women and children at risk of malnutrition; facilitating access to financial support, in coordination with social protection services; and identifying, preventing, and responding to situations of abuse and maltreatment. Furthermore, programs provided families with educational resources through digital channels such as SMS messages, WhatsApp messages, calls, video calls, mobile apps, and digital platforms with content libraries; or via mass media, such as radio, television, and social media. The common goal of these efforts, which we compiled into a single webpage during the pandemic, was to ensure the continuity of service delivery in order to minimize COVID-19's negative impacts on child development and learning. However, implementing these remote strategies revealed stark digital and connectivity gaps, which are closely linked to poverty and related factors, and which could limit their effectiveness (Hincapié, López-Boo, & Rubio-Codina, 2020).

In view of the pandemic's prolonged duration and the risks of digital exclusion, services quickly identified the need to transition to new service strategies that made use of multiple delivery channels—often combining virtual and face-to-face approaches—and that could be implemented on a longer-term basis. When adapting content, they made sure to include play activities that parents with low levels of education in rural areas could easily understand and developed new content focused on supporting children and caregivers' social and emotional needs. Programs took innovative steps to identify new channels and delivery mechanisms that could serve diverse populations in different contexts, including those in remote areas, with content customized for

these channels. Services experimented with community-based communication channels such as local radio stations, loudspeakers, megaphones, and bulletin boards in strategic locations, and they explored ways to deliver toy kits and play activity cards to families. They also studied strategies to ensure families' buy-in and commitment to the interventions, as well as strategies to remotely train and support facilitators to implement the interventions. As a result, there has been an unparalleled explosion of innovative ideas and new approaches to ECD service delivery.

The pandemic has shown how critical and irreplaceable in-person educational services are, especially for very young children. Indeed, researchers estimate that pre-primary education closures will result in average productivity losses of around two percentage points of GDP in the region (López-Boo, Behrman, & Vázquez, 2020). As the health crisis has been brought under control—largely thanks to vaccination campaigns—ECD services have gradually returned to in-person operations. However, the pandemic demonstrated that these services can be provided remotely, and this experience can lay the groundwork for designing and implementing hybrid service approaches that are more cost-effective and that reach users who were previously underserved due to their geographic location or coverage limitations. These innovations can help close gaps in services and reduce inequalities.

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It is therefore important to analyze these hybrid service initiatives, together with their implementation strategies and evaluation results, most of which are either qualitative or based on administrative data, given the difficulty of designing and implementing experimental evaluations or data collection operations during the pandemic. It is critical to determine how effective and viable these initiatives were and to identify aspects that could prove useful for delivering ECD services at scale in future emergency situations, whether health crises, natural disasters, forced displacements, conflicts, or others.

This report describes the different remote service strategies that were designed, adapted, implemented, and/or evaluated with the technical and financial support of the IDB in six countries in LAC, as well as the findings and lessons learned from their implementation. In Boa Vista (Brazil), Ecuador, Jamaica, and Panama, programs already in place were adapted based on the *Reach Up Parent Manual* (Chang-Lopez et al., 2020), which served as a blueprint for designing content for their remote services. Jamaica and Brazil had already planned experimental evaluations of their in-person programs, so these countries instead adapted their identification strategies and methodologies to evaluate remote approaches. The design of both countries' experimental evaluation of remote services is described in this report, although the results are not yet available. However, the report does present the findings of various non-experimental evaluations of hybrid

programs. While the methods used and the information collected are heterogeneous, taken together they provide a solid overview of these services' implementation. This report also includes the experiences of Colombia and Uruguay, which government agencies developed based on proposals that did not include the Reach Up Parent Manual. However, their efforts to evaluate the services' results, in the case of Colombia, and impact, in the case of Uruguay, were supported by the IDB. This work contributes to the limited evidence on the characterization and implementation of the many hybrid service strategies for children 0-5 years old deployed by governments, multilateral organizations, and non-governmental organizations in response to the pandemic. Generally speaking, the existing evidence to date is limited to high-income countries (see Roben & Costello, 2022 for the United States, for example) or to services focused on primary education and above (Barron Rodriguez et al., 2021; Muñoz-Najar et al., 2021).

The remainder of the report is organized as follows. The next section begins with an overview of the various experiences analyzed, followed by a detailed description of each. For each country and strategy, we include a brief description of the pre-pandemic intervention, how it was adapted for remote delivery, efforts to evaluate the adapted approach, and key findings and lessons learned. Where possible, the results are organized into three categories: service coverage and channels, families' participation and perceptions, and facilitators' perceptions. Section 3 then summarizes the main lessons learned and concludes the report.

2. Hybrid approaches implemented in response to the COVID-19 pandemic

The Municipal Government of Boa Vista in Brazil, together with the University of São Paulo; the Ministry of Economic and Social Inclusion (MIES) in Ecuador; the Ministry of Health and Welfare in Jamaica, together with the University of West Indies; and the Ministry of Social Development (MIDES) in Panama based their hybrid intervention for delivering remote services during the pandemic on the parenting manual developed by Reach Up, with support from the IDB (see **Box 1**).

Box 1. ***Reach Up Parent Manual.***

The Parent Manual offers content to support the development of children up to three years of age (Chang-Lopez et al., 2020). It includes selected play and language activities from the Reach Up curriculum (Walker et al., 2018), which is based on Jamaica's successful home visiting program (Grantham-McGregor et al., 1991) that has been shown to have long-term effects (Gertler et al., 2014; Walker et al., 2021; Gertler et al., 2021). The activities are organized in three-month age groups, except for the first age group, which is for a child's first five months of life. There are six play activities and six language activities for each age group. The manual prioritizes activities requiring few or no materials and that can be done as part of everyday routines such as bathing, eating, changing clothes, or household chores. Any toys required for an activity can be easily made from common household items.

The manual has two parts. The first covers its purpose and usage guidelines, general information on how to help children feel safe and happy and on ways to enhance the caregiver's emotional care (self-care), and tables listing the different activities. The second part— written in very simple language, with images—organizes the activities in a format that can be used directly by families, regardless of whether they have participated in parenting programs before. The manual can be printed and distributed to families in its entirety or using cards with just the content for different age groups. Furthermore, it is designed so that programs can adapt the content (activities) and format to their needs and context—taking into account factors like parent literacy and materials typically available in children's homes—and the most appropriate communication channel (radio, social media, messages, calls, etc.). It is recommended that the songs and examples provided be adapted to the cultural context of each country or area. Versions are available in English, Spanish, and Portuguese.

The *Parent Manual* interventions and adaptations were different in each country but had a common goal of ensuring the continuity of ECD services, delivered remotely, in order to mitigate developmental and learning losses, while taking into account pandemic-imposed constraints such as mobility restrictions. In Boa Vista, the Parent Manual content was sent to families via WhatsApp. In Jamaica, the manual was physically delivered along with a package of materials containing books and toys. Ecuador designed its own Virtual and Hybrid Service Protocol (Protocolo para la Atención Virtual y Semipresencial—PAVS), which included guidelines and instructions on how to deliver services through different channels, a booklet of cards with activities adapted from the Parent Manual, and additional content on health and nutrition. In Panama, two different interventions were designed for two different target population groups. The first, for users of the Comprehensive Early Childhood Service Centers (*Centros de Atención Integral a la Primera Infancia*—CAIPIs), consisted of a digital library and a delivery of materials to families at the CAIPIs every two weeks. The second intervention, for families in rural and indigenous communities with no access to ECD services, consisted of backpacks filled with reading activities and games, accompanied by a guide for parents.

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Meanwhile, Colombia and Uruguay did not base their interventions on the Reach Up Parent Manual. In Colombia, the Colombian Institute of Family Welfare (ICBF) and the Ministry of National Education (MEN) developed the *Mis Manos Te Enseñan* (My Hands Teach You) (MMTE) and *Aprender en Casa* (Learning at Home) (AC) programs, respectively, to ensure that all children under age five in the country could receive pre-primary education services. MMTE consisted of a teaching kit, a food basket, and guides for activities to do with children. The AC intervention was based on activity cards and guides. Two interventions were also designed in Uruguay. The first, developed by the University of Montevideo, adapted the *Crianza Positiva* (Positive Parenting) parenting program to the COVID-19 context. This program is a WhatsApp messaging program designed to promote parenting practices informed by behavioral science among families served by the Child and Family Service Centers (*Centros de Atención a la Infancia y la Familia*—CAIFs), which operate under the Ministry of Social Development. The second intervention, *Parentalidades Comprometidas en Casa* (Engaged Parents at Home), was an adaptation of the *Parentalidades Comprometidas* (Engaged Parents) program that added a virtual platform to support families.

TABLE 1: **OVERVIEW OF REMOTE OR HYBRID INTERVENTIONS, BY COUNTRY AND CHARACTERISTICS**

	Country	Hybrid Intervention (Existing Program)	Implementing Institution	Contents of Intervention Package	Delivery Channel/ Approach	Frequency	Ages and Participants
Based on Reach Up	**Brasil - Boa Vista**	**Survive and Thrive, S&T** (Survive and Thrive, S&T)	Prefeitura de Boa Vista, Universidad de São Paolo	*Reach Up Parent Manual*	WhatsApp groups for exchanging videos and messages Video calls Phone calls	Messages once per week 2 calls per month	0–36 months N=4.000[a]
	Ecuador	**Protocolo para la Atención Virtual y semipresencial, PAVS** (Creciendo con Nuestros Hijos, CNH; Círculos de Cuidado, Recreación y Aprendizaje, CCRA; Centros de Desarrollo Infantil, CDI)	Ministry of Economic and Social Inclusion (MIES)	PAVS protocol and implementing instructions Annexes: Booklet with cards; guidelines for different channels; scripts; recommendations for creating videos, messages, etc.	WhatsApp messages SMS messages Video calls Phone calls Home visits	Virtual service: CNH and CCRA weekly; CDI daily Hybrid service: combines virtual service, home visits, and service at the center depending on epidemiological parameters and the service (see **Table A2**)	0–36 months and pregnant women CNH y CCRA N~200.359 CDI N~87.545
	Jamaica	**Early Stimulation Program** (Early Stimulation Program)	Ministry of Health and Welfare, University of West Indies	*Reach Up Parent Manual* Materials (books, games)	SMS messages Phone calls Materials kit	Messages 1-2 times per week 2 calls per month	6–36 months N~1.000
	Panama	**Tu CAIPI en Casa** (Centros de Atención Integral a la Primera Infancia, CAIPI)	Ministry of Social Development (MIDES)	Digital library Materials and guidelines for activities	Families go to the CAIPIs to pick up activities and materials	2 times per month	0–48 months N=1.600
		Mochila CUIDARTE (None)	Ministry of Social Development (MIDES)	Backpack with toys and guide with a selection of Cuidarte activities	Delivery of the backpack to families	1 single delivery	0–48 months N=5.000

TABLA 1: **RESUMEN DE LAS INTERVENCIONES REMOTAS O HÍBRIDAS POR PAÍS Y SUS CARACTERÍSTICAS**

	Colombia	**Mis Manos Te Enseñan, MMTE** (ICBF services)	Colombian Institute of Family Welfare (ICBF)	Instructions via cards/guides Teaching kit Food basket	WhatsApp messages Phone calls	4 to 6 monthly follow-ups	0–60 months N~1.700.000
		Aprender en Casa, AC (MEN preschool services)	Ministry of National Education (MEN)	Printable guides and instructions	WhatsApp messages Phone calls	Depends on educational institution	0–60 months MEN users
	Uruguay	**Crianza Positiva** (Crianza Positiva and Experiencias Oportunas, CAIF)	Ministry of Social Development, Uruguayan Institute for Children and Adolescents (INAU), University of Montevideo	Crianza Positiva curriculum	WhatsApp messages	3 times per week	0–36 months N=348
		Parentalidades Comprometidas en Casa (Parentalidades Comprometidas)	Executive Sub-Secretariat for Early Childhood of the INAU, Uruguay Crece Contigo (UCC - MIDES)	Parentalidades Comprometidas en Casa curriculum	Link to the website WhatsApp messages	Varies, usually 1 time per week	0–36 months N~1.600

[a] Cut-off date: December 2021 (includes pregnant women)

Table 1 summarizes the characteristics of the hybrid interventions. From left to right, the columns indicate the remote or hybrid intervention strategy and existing program name (in parentheses), the implementing institution, the contents of the intervention package, the delivery channel or approach, the frequency of service, and the targeted age group and number of beneficiaries. In the cases of Panama, Colombia, and Uruguay, the two implemented strategies are listed separately. The table shows that all countries except Panama use text or WhatsApp messages as a delivery channel, sometimes in combination with other channels, and that the frequency of service is twice-monthly or even weekly in many cases. Also of note is the size of the interventions in Ecuador and Colombia, listed in the age and participants column. Both are national in scale and cover the entire population regularly served by MIES (Ecuador) and ICBF and MEN (Colombia).

Topics addressed. **Table 2** shows that all the interventions aimed to develop children's cognitive, language, and social-emotional skills, while the interventions in Ecuador, Colombia, and Uruguay also aimed to safeguard children's nutrition and overall health. To this end, food baskets were delivered in Colombia (MMTE) and Uruguay (the CAIF centers), while in Ecuador families

received messages on these topics. In Ecuador, the target population includes pregnant women, who are supported with health information and prenatal care and stimulation.

TABLE 2: **TOPICS ADDRESSED BY INTERVENTION AND COUNTRY**

País	Pregnancy	Cognition	Language	Social-Emotional Development	Health and Nutrition
Boa Vista		*	*	*	
Ecuador	*	*	*	*	*
Jamaica		*	*	*	
Panama		*	*	*	
Colombia		*	*	*	*
Uruguay		*	*	*	*

Virtual service channels. When selecting service channels, it is important to weigh their advantages and disadvantages. One option for real-time communication is video calls—whether via WhatsApp, Facebook, or other platforms. Facilitators and families can use this channel to stay in touch and interact through combined audio and video. Video calls also allow children to be seen and actively participate. The audio-only nature of phone calls, on the other hand, means that children are able to participate very little, or not at all in the case of very young children. However, phone calls have an advantage over video calls in that they only require a phone and phone signal, whereas for video calls, users need an electronic device or smartphone, as well as internet access or a data plan. Multimedia messages are highly useful for asynchronous communication between facilitators and families, allowing users to exchange text, emojis, audio recordings, photos, infographics, and videos. However, these too require an electronic device and an internet connection or data plan. Finally, SMS messages are for sending text only. While most SMS messages have a character limit, which is a drawback, they can be received by any cell phone free of charge.

Table 3 shows the service channels used for each intervention. The majority used WhatsApp calls and messages or SMS messages. Panama stands out as the only country to not use a messaging-based service; instead, materials were delivered in person and follow-up on the service was done by phone. To circumvent the digital divide, Ecuador and Colombia offered in-person meetings for families living in remote areas or areas without internet access.

TABLE 3: **SERVICE CHANNEL BY INTERVENTION AND COUNTRY**

País	Intervención	WhatsApp message	Video call	SMS message	Phone call	In-person visit
Boa Vista	S&T	*	*		*	
Ecuador	PAVS	*	*	*	*	*
Jamaica	Early Estimulation Program			*	*	
Panama	Tu CAIPI en Casa				*	*
Colombia	MMTE	*			*	*
	AC	*			*	*
Uruguay	Crianza Positiva	*				
	PPC	*				

Experimental evaluations and qualitative studies. The interventions included several evaluations to identify areas for improvement. Three of these evaluations are experimental: Boa Vista, Jamaica, and Crianza Positiva in Uruguay (**Table 4**). The first column of **Table 4** describes the evaluation design used before the pandemic. The second column shows how the design was adapted to evaluate the hybrid form of the intervention, following changes to its content and implementation strategy, as occurred in Boa Vista and Jamaica. In Boa Vista, the evaluation sample was a subset of children taken from the control group of the original impact evaluation, while in Jamaica, the treatment and control groups stayed the same. This means that for some families in Jamaica, treatment consisted of a very brief period of in-person services followed by a period of remote services. Meanwhile, in Uruguay, an experimental evaluation was designed to assess the impact of the WhatsApp messaging program.

TABLE 4: **SUMMARY OF THE EXPERIMENTAL EVALUATIONS OF THE HYBRID INTERVENTIONS**

Intervention	Planned evaluation of in-person approaches, interrupted by COVID-19	Evaluation of the hybrid intervention	Evaluation progress as of July 2022
S&T	Experimental evaluation of the home visiting and parent group program based on Reach Up (see **Box 2**)	Experimental evaluation. A subsample of children in the in-person evaluation's control group was randomized into control and treatment groups	In-person intervention baseline (N=12,260) Hybrid intervention baseline (N=600) Endline (In field; N = ~600)

TABLE 4: **SUMMARY OF THE EXPERIMENTAL EVALUATIONS OF THE HYBRID INTERVENTIONS**

Early Estimulation Program	Experimental evaluation of large-scale implementation of Reach Up (see **Box 3**)	Experimental evaluation using the same control and treatment groups as in the in-person evaluation	Baseline (N=600) Endline (In analysis phase; N=300)
Crianza Positiva		Experimental evaluation of the intervention in centers: 21 centers in the treatment group and 18 centers in the control group	Baseline (N=687) Endline (Analysis completed, in results reporting phase, N=687)

Alternatively, the interventions in Boa Vista, Jamaica, Ecuador, Colombia, and Uruguay used non-experimental studies—most of which were qualitative and relied on interviews and focus groups—and administrative data to gain insight into their implementation and the level of buy-in by facilitators and families, among others. **Table 5** details these efforts and the type of evaluation instrument used, with most using a mix of focus groups, semi-structured interviews, and surveys.

TABLE 5: **SUMMARY OF NON-EXPERIMENTAL STUDIES OF HYBRID INTERVENTIONS**

Intervention	Non-experimental studies and number of participants/groups/service units consulted/analyzed
S&T	Interviews with facilitators (N=4) Interviews with caregivers (N=6) Interviews with supervisors (N=2) Registration records (N=42,312)
Early Estimulation Program	Interviews with facilitators (N=25) Interviews with caregivers (N=30) Interviews with nurses (N=10)
PAVS	Focus groups with educators and coordinators from CDI and CNH (N=6) Survey of educators and coordinators from CDI and CNH (N=68) Administrative data on coverage *at the service unit level* (N = ~6,700)
TU CAIPI en Casa	CAIPI staff survey (N=162)
MMTE **AC**	Delphos workshops with families and facilitators (N=4) Interviews with families and facilitators (N=8) Digital ethnography with families (N=4) Survey of families and facilitators (N=1,409)
PPC en Casa	Qualitative and quantitative evaluation of the pilot intervention through surveys of families (N=162) and final survey of facilitators (N=16)

I. Boa Vista, Brasil

In northern Brazil, the municipality of Boa Vista implemented the Survive and Thrive (S&T) program to enhance ECD outcomes and reduce neonatal mortality. Supporting pregnant women from the time of pregnancy until their child is 3 years old, the program ensures access to health, education, and social development services. The S&T curriculum also includes modules for the prenatal, neonatal, and 1-6 month periods, adapting components of the Reach Up home visiting program (see **Table A1** in the Appendix) and its group version developed in Bangladesh (Mehrin et al., 2022). The prenatal and neonatal modules cover from the twenty-first week of pregnancy until the baby's eighth week of life and have a strong focus on health and breastfeeding. They also promote positive parenting practices and early bonding with the child. The new curriculum's implementation included an experimental impact evaluation (see **Box 2**).

In-person home visits began in November 2017 and were discontinued in March 2020 due to the outbreak of the pandemic. To continue supporting families, a contingency plan was developed to pivot to using WhatsApp messages and calls twice a month with each family to continue these interactions.

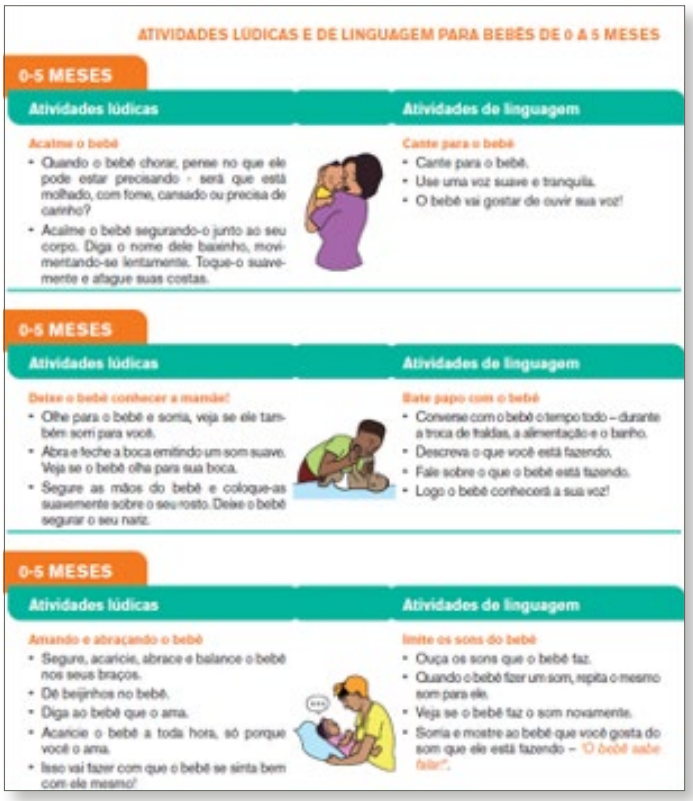
Box 2. **Survive and Thrive (S&T): Experimental evaluation of home visits and parent groups.**

The objective of the evaluation was to assess the viability, impact, and cost-effectiveness of adapting components of the Reach Up home visiting program and its group-based version developed in Bangladesh (Mehrin et al., 2022). The experimental design involved 39 neighborhoods with a high percentage of vulnerable residents. Of these neighborhoods, 25 were randomly assigned to two treatment groups: individual visits and group meetings. The 14 neighborhoods assigned to the control group will begin receiving group meetings in the program's final phase (Brentani et al., 2020). Between late 2017 and mid-2018, researchers conducted a baseline survey of all pregnant women (12,260) in the 39 neighborhoods. The program then invited those who (i) were living in poverty; (ii) were under the age of 20 when they became pregnant; or (iii) had experienced domestic or sexual violence to participate. Once the participants' children turned 2 years old, a follow-up survey would then examine the intervention's impacts on child development and infant mortality, the latter of which would be measured based on municipal vital records.

Hybrid intervention

S&T's remote intervention consists of twice-monthly phone calls or WhatsApp calls/video calls—depending on families' level of digital access—and weekly messages and videos sent via WhatsApp groups containing the Reach Up Parent Manual activities in visual format (see Fig. 1) or videos explaining activities for caregivers to do with their children. Families receive calls every two weeks to maintain the frequency of the in-person visits or meetings, which were structured around one language activity and one cognitive, motor, or social-emotional activity. During the calls, program workers reinforce the importance of play, care, and responsive interactions to encourage positive parenting practices during the difficult pandemic months. The intervention also included questions about health and COVID-19, and it created new records for following up on interactions, with questions on: (i) COVID-19 infections, social distancing, and related stress; (ii) general parental stress; and (iii) stimulation in the home. There is also a recap of the last meeting. The hybrid intervention was launched in mid-March 2020.

Fig. 1. **Sample image with play and language activities for babies**



Experimental evaluation

To assess the remote intervention's impact, a subset of approximately 600 children from the original study's control group was randomly assigned to two new groups: a treatment group and a control group. The 300 children in the treatment group were never exposed to the in-person program (home visits or group meetings), and they began participating in the remote intervention in June 2021. The 300 children in the control group were not exposed to any strategy, either in person or remote. In April 2022, nine months after the remote intervention began, its endline was measured using two instruments: the Caregiver Reported Early Development Instruments (CREDI) and the Regional Project on Child Development Indicators (PRIDI).

Qualitative evaluation

In 2021, researchers conducted several interviews with facilitators, supervisors, and families on the viability and acceptability of the program's virtual version. Specifically, they interviewed four caregivers and two facilitators from the group that had only been exposed to the remote intervention, as well as two caregivers, two facilitators, and two supervisors from the group that started in the in-person intervention and then transitioned to the remote one. All interviews were conducted over Zoom, digitally recorded, and transcribed for analysis using NVivo software. The transcripts were coded using previously defined themes and subthemes.

Main endline findings

The interview and impact evaluation results are not yet available because the field work is still in progress. However, the information from the visit records collected twice a month is available and presented below.

Delivery approach and service channels:

- Depending on each family's characteristics and preferences, the intervention made remote contact via WhatsApp in 70% of cases and by phone call in 30% of cases.
- 80% of families in the in-person study were able to participate in the remote strategy. However, 20% of enrolled families—possibly the most vulnerable in their neighborhoods—could not be contacted either by phone or WhatsApp.

Families' participation:

- The remote meetings helped families continue practice positive parenting and promote interactions and play. The families remained connected to the program for 16 months, despite the lack of in-person interactions.
- Caregivers report doing an average of five activities with the child in the three days prior to the virtual meetings. These include reading, telling stories, singing, playing, taking children outside, and counting or numbering objects.

- In high-stress situations, 10% of the families used negative discipline strategies such as physical punishment.

Facilitator perceptions:

- The team was able to easily adapt to the delivery strategy via WhatsApp or phone.
- Families were given instructions on how to make toys or use household items to carry out the activities.
- The facilitators believe this delivery approach could be adopted in other situations in which in-person visits are a challenge, for example, in isolated areas or in large municipalities where long distances can be an obstacle.
- They attribute the intervention's success to two factors. First, they credit the fact that families were enrolled in the program and receiving home visits or attending in-person meetings before the pandemic, ensuring their commitment to the program and relationships with facilitators. Second, they credit the calls that allowed facilitators to interact with families. In their opinion, the intervention would not have been as well received by the families if interactions were only via messaging (SMS or WhatsApp).

II. Ecuador

The Ministry of Economic and Social Inclusion (MIES) of Ecuador is in charge of providing child development services to children under age 3 and pregnant women in poor, extremely poor, and/or vulnerable households through the Creciendo con Nuestros Hijos (CNH); Círculos de Cuidado, Recreación y Aprendizaje (CCRA); and Centros de Desarrollo Infantil (CDI) programs. CNH and CCRA offer weekly home visits to pregnant women and families with children under 18 months old and weekly group sessions to families with children ages 18–36 months, with both home visits and group sessions led by educators. One difference between the programs is that CCRA operates in areas that are more geographically spread out than CNH. Meanwhile, the CDIs are childcare centers that provide daily services for children ages 12–36 months. The CDI service also counsels pregnant women and families with children under 12 months in sessions scheduled twice a month.

In November 2020, the Virtual and Hybrid Service Protocol (PAVS) for remote services went into effect and was put into practice with funds from the existing budget allocation for in-person services. In September 2021, the PAVS implementing instructions were approved. This implementation manual detailed how to deliver remote services under each different approach, seeking to respond to the needs and challenges identified in the qualitative assessment conducted in March 2021 and described below.

Hybrid intervention

The PAVS and its implementation instructions reached the over 287,000 families served by the CNH, CCRA, and CDI nationwide, teaching them about optimal parenting, care, health, and nutrition practices. Through guides and activity cards that are easy to understand, the documents ensure continuity of services even if in-person services are interrupted. Although the PAVS was developed in response to the COVID-19 health emergency, the plan is to use it in the event of any future emergencies that disrupt in-person services. It is also seen as a possible strategy for expanding coverage among poor and extremely poor families lacking access to such services.

The PAVS is implemented virtually or in a hybrid format according to a traffic light scheme that signals the region's epidemiological phase, as indicated by the country's Emergency Operations Committees (COE). When the traffic light is red, all services switch to virtual channels and are delivered through video calls, phone calls, and/or multimedia or text messages. When the light is yellow or green, services are hybrid, indicating a combination of virtual services and home visits or services at the CDIs, with frequency depending on the traffic light color, the service, and the target population.[1]

Table A2 of the Appendix details each delivery approach's service type, frequency, duration, and form of follow-up. The educator identifies the best virtual channel for each family, taking into account their connectivity options (Wi-Fi access), electronic devices, or available balance on their devices. One way to maximize understanding of the content is to combine channels. For example, services delivered through video calls or calls can be supplemented with short videos, images, or audio messages. To boost family engagement and limit demands on their time, video calls and phone calls are kept to 20-25 minutes in length. Progress monitoring sessions are provided by video call or phone call. Under the hybrid service approach, the home visit allows educators to meet with families face to face and follow up on and monitor their progress.. The home visits last 30 minutes for CNH, 40 minutes for CCRA, and 60 minutes for CDI. When the traffic light is green, CDI also considers in-person services at the center, adhering to the capacity limits defined by the COE.

The implementation materials include specific guidelines and scripts for each service delivery approach and channel; advice on identifying and referring families with physical and social-emotional health problems; instructions on creating and using multimedia and text messages and producing videos; and a booklet containing 144 cards (four for each month of age) with play and language activities for children under 36 months. These activities are based on the Reach Up Parenting Manual and are adapted to the context and services. In addition, MIES developed 36 cards for pregnant women: four for each month of pregnancy. Given that CDI services are provided daily, its weekly activity plan for enrolled children comes with instructions (with examples) for how to do four additional activities to expand on each suggested activity in the card

1. The original plan was to implement the PAVS in regions with yellow and red traffic lights only, with the expectation that in-person services could be resumed once the light was green. However, the pandemic's uncertain trajectory prevented a gradual return to in-person services until January 2022, so the strategy was adjusted to have green indicate hybrid services.

booklet. This gives children an activity for every weekday. For ease of understanding, the cards are written in simple language and include an image representing the activity. The images also reflect the country's ethnic diversity. Each card includes the activity's development objective and its importance, as well as a message about health or nutrition. **Figure 2** shows a sample card.

Fig. 2. **Ejemplo de ficha para la atención virtual de niños y mujeres gestantes**

In August 2021, 240 coordinators were trained on the PAVS protocol. The training was organized into three modules that coordinators first worked through individually on the MIES' Continuing Education platform, followed by two-hour-long virtual Zoom sessions (one session per module) meant to providing participants with a space to strengthen their knowledge, practice modeling delivery strategies for remote services, and have their questions answered. These sessions were limited to groups of no more than 24 people to facilitate interaction, small group work,

and feedback. Due to staff turnover, this training could not be replicated for the intervention educators. However, and despite connectivity issues and low participation or concentration in Zoom sessions, the participants and MIES technical teams gave high marks to the combination of asynchronous individual work on the MIES platform and a synchronous space via Zoom. They requested that more trainings follow this structure.

Qualitative evaluation

In March 2021, researchers formed six focus groups, each with 10-14 educators and CDI and CNH coordinators. Prior to participating in the focus groups, participants completed a Google Forms survey. As a result of the needs identified by the regional teams through these tools, the PAVS implementing instructions were developed to complement the PAVS by providing greater detail on its implementation strategy.

Main findings and recommendations

i. Focus groups

Delivery approach and service channels:

- The educators choose each family's service channel based on their assessment of the region (distance, connectivity) and the family's resources (access to Wi-Fi, phones, device balances).
- Services are generally virtual, especially in urban areas, and center on multimedia messages and WhatsApp calls. Video calls and text messages are used infrequently, as they require more resources from families (a phone plan). Likewise, families do not always read text messages, which also have a character limit.
- For video calls, the day and time is scheduled with the family in advance.
- In rural areas, services are often delivered in person due to poor internet access, with a typical frequency of 1-2 times per week, depending on how far participants live from each other. When possible, activity plans are sent in advance so families have the material and are prepared for the visit.
- In areas where participants are more spread out, services were kept in person due to poor digital access or because families do not have phones.
- For the CDI service, radio was sometimes used as a delivery channel. WhatsApp was also used to create group chats for the families of children in the same class, with general instructions provided to supplement communications with each individual family.
- In general, programs managed to deliver services with the frequency established in the PAVS.
- Follow-up is mainly done in person or by video call. These interactions reinforce the activities that families have not been able to carry out and provide more in-depth health and nutritional advice.

- Offering services to the whole family and not just the child—as they do in the centers—was a significant challenge for the CDIs, requiring them to adapt the PAVS to the context of each CDI service.
- In each session, families are asked about their health and emotional state and are encouraged to revisit the activities they were not able to do or struggled with.

Families' participation

- Generally, when families have trouble with an activity, they communicate via text messages or WhatsApp. They also use these channels to send evidence (photos or videos) of having done the activities.

Facilitator (educator) perceptions:

- They recommend maintaining flexibility in the channels and service delivery approaches.
- The cards explain the activities very well and have been popular with the families, as they find them easy to understand to carry out the activities. They appreciate that they are organized by age, although sometimes the difficulty level has to be increased to match a child's level. They suggest further training and guidance on this.
- The cards are supplemented by how-to videos, photos of the educator carrying out the activity, and messages. Videos help families understand the importance of the activities for the child's development and how to carry them out, but they should be short, or families will not watch them. For this reason, they request guidelines on how to make 2-3-minute videos as well as training.
- They mention that the materials they received lack clear instructions or training on how to work with the families, requesting in-depth training to ensure that all CNHs and CDIs in the country are on the same page.

ii. Survey

Delivery approach and service channels:

- 68% of the CNH educators surveyed deliver virtual services once a week, 28% do so daily, and 4% do so twice a week. Meanwhile, 93% of the CDI educators surveyed deliver virtual services on a daily basis and the remaining 7% do so on a weekly basis.
- These virtual interactions last 15-20 minutes on average.
- The most-used channel is multimedia messages sent via WhatsApp (54%), followed by in-person services (26%). The usage percentages of other channels are below 5%.
- Most educators combine channels to provide virtual services. The most common combination is multimedia messages and photographs with the activity, mainly sent via WhatsApp, together with a follow-up phone or video call.
- Programs organize WhatsApp groups with families to send messages, videos, and photos with the materials and activities. They also send personalized videos to families, but to a lesser extent.

Facilitator (educator) perceptions:

- The main challenges are the lack of connectivity in the workplace, families changing the agreed-upon times, and transmitting information through virtual channels.
- For the activities, they mainly use the card booklet and follow-up cards. They usually sent an adapted version of the card to families, modifying the level of complexity, adding songs or additional material, including extra explanations, and adapting activities so they can be done with household materials.
- Facilitators identify a need for training on how to deliver services based on the protocol and cards, as well as on video creation guidelines.

National administrative records

Existing public administrative data can be used to calculate the percentage of service interactions delivered virtually or in person each month, as well as the service channel used. **Figures A1** and **A2** in the Appendix show this information from February 2021 (PAVS implementation start date) to December 2021 for CDI and CNH services, including data for CCRA. The gradual return to in-person services began in January 2022.

As **Figure A1** shows, virtual services decreased as the circumstances made the return to in-person services more feasible. For CDI, virtual services represented 93% of total services in February 2021 but only 77% of total services in December of the same year. Similarly, for CNH, the average percentage of virtual visits dropped from 81% to 55% during the same period. **Figure A2** shows that the most-used service channel is multimedia messages, accounting for 70% of CDI interactions and 65% of CNH interactions as of December 2021, followed by video calls, which were used in 17% of CDI interactions and 15% of CNH interactions as of the same date. These percentages remained relatively constant throughout the period analyzed, which is why the graph only shows the distribution at the beginning (February 2021) and end (December 2021) of this time frame.

III. Jamaica

Prior to the pandemic, in August 2019, Jamaica's Ministry of Health and Welfare began implementing the Reach Up program nationwide. This intervention, called the Early Stimulation Program, consisted of home visits twice a month to households with children ages 6–36 months. It was designed to be implemented in stages, one district at a time until reaching six of the country's 13 districts, and it included an experimental impact evaluation (see **Box 3**). In September 2020, these six districts began implementing remote interventions.

Box 3. **Experimental evaluation of the in-person Early Stimulation Program.**

In 2019, the Jamaican Ministry of Health and Wellness began the phased nationwide implementation of the Reach Up program in the country's 13 districts. In collaboration with the IDB, three studies were planned to evaluate its processes, costs, and impact, respectively. Each district had between one and seven health centers involved in recruiting participants, and facilitators (community health workers) were instructed to identify at least eight families that met the criteria for inclusion in the impact evaluation sample. Participants were randomly assigned by health district. Each facilitator was assigned eight families, four from the treatment group and four from the control group. The control group was a de facto waiting list, as members of this group would receive the intervention ten months after the program launched. Before the outbreak of the pandemic, the program had been able to train trainers (nurses, nutritionists, and health educators) and facilitators and start implementing activities in six of the 13 districts. The total planned sample was 816 families. However, baseline data had been collected for 507 families by the time the intervention was suspended due to COVID-19. The endline was scheduled for the end of 2020.

Hybrid intervention

The remote intervention of the Reach Up program in Jamaica has three components. The first is the delivery of a print copy of the Parent Manual to families, along with materials: two picture books, six blocks, two crayons, and a puzzle. The second consists of phone calls twice a month by facilitators to discuss the activities planned in the last call, introduce a new play and language activity for the next two weeks, and answer any questions about the Parent Manual. The third component is text messages sent by a phone carrier external to the government and the Ministry. These messages reinforce the activities that parents should carry out based on their child's age.

The intervention facilitators received a manual containing guidance on how to conduct the calls, the activities in the Parent Manual, and the text messages sent to families. They also participated in training on how to conduct the phone calls and were provided with a script describing steps to follow during calls. Each facilitator was assigned four families and provided with prepaid phone credit and a log book to record activities done with each child.

Experimental evaluation

The remote program's main evaluation is part of the randomized controlled trial originally planned to evaluate the in-person approach. The remote intervention kept the 507 families in the in-person program in the original treatment and control groups and used the same baseline information. In June 2021, after eight months of implementing the remote program, researchers conducted a follow-up survey with all families that had also received at least one home visit before moving to the virtual approach. This phone questionnaire had 18 questions about parenting and parenting practices. The data collected is being analyzed and the results will be published in late 2022.

Qualitative study

In addition, researchers conducted a qualitative study in 2021 that gathered the opinions of facilitators, nurses—who trained and supervised the facilitators—and families on the viability and acceptability of the program's virtual version. In April and May of that year, 29 facilitators were interviewed about the manual with guidelines for making calls, the package delivered to parents (manual and toys), the delivery approach, the log book for visits, and their overall thoughts on the intervention. In October, researchers asked 13 nurses—approximately two per district—about their perceptions of these same topics. Finally, in July and August, they interviewed 25 caregivers to learn their opinions on the delivery channels, the Parent Manual, and the toys received, as well as their impressions of the intervention. The interviews lasted 20–55 minutes and were conducted over the phone, digitally recorded, and transcribed for analysis using Nvivo.

Main findings of the qualitative study

Delivery approach and service channels:

- The virtual approaches' flexibility and the fact that the activities can be done from home, without the need to go anywhere, are seen as a benefit. However, more than 90% of facilitators prefer in-person services because they are able to observe the child's development, while virtual strategies force them to rely on the caregiver's reports about the child and her progress.

- Some parents report having reception problems or not being able to receive calls due to work obligations. When parents could not be contacted, facilitators sometimes conducted visits in person.
- Facilitators find text messages to be helpful for reminding parents to do the activities, commenting that the fact that they are sent by an outside carrier bolsters their credibility. The Manual, on the other hand, is a good reference for when parents have questions. Some caregivers agree that the text messages are good at reminding and encouraging parents to play and interact with their child.
- The main technical problem with outsourcing the messaging service is that some caregivers received messages with the incorrect gender for their child.

Family perceptions:

- Remote services have allowed caregivers to feel that facilitators remain interested in their children's development and in maintaining a relationship with them. They also stated that the calls made them feel accompanied and supported in the parenting process, encouraging them to increase and improve their interactions with their child in a way that helped them learn and build a healthy attachment during the pandemic.
- 50% of the caregivers appreciated the materials, but others showed no interest in them. Some caregivers asked for more play materials.
- The Parent Manual is viewed positively for being easy to understand and useful as a guide for activities and making toys.
- Families that were not able to use the material said they lacked time, had work commitments, or found the content of the material similar to that of the text messages. Some parents said they only managed to do the activities on weekends, while others mentioned needing a space to play and do the activities with their children.
- Some caregivers went through the tasks at their own pace and others recommended increasing the activities' level of difficulty to match children's developmental level. The activities with the highest uptake were those that could be integrated into daily routines, such as singing songs, walking around the neighborhood, role-playing, or naming objects.
- Some caregivers suggested increasing interactions with facilitators, especially since the children were not attending educational facilities.

Percepciones de las facilitadoras:

- More than 90% of facilitators viewed the intervention favorably.
- Over half found the materials useful and informative for calls, more than 25% agreed with their structure and organization, and more than half found their design helpful for making calls. However, about 20% stated that they were not provided with sufficient information and that they preferred the curriculum of the in-person home visits.
- One of the challenges they mentioned was adapting the level of difficulty for each child.

- They suggested including more toys/materials, as some parents did not have the materials or time to make the toys themselves.
- Only 10% of the facilitators recorded visit information in the visit log book because it is time-consuming and they have many other responsibilities.
- On a related note, some facilitators mentioned feeling overwhelmed and frustrated by the workload. The use of incentives (for parents as well) is recommended to improve results.
- Regarding supervision, only a few nurses were able to supervise facilitators during the remote intervention, largely due to the other pandemic-related demands on their time.

IV. Panama

In Panama, the Ministry of Social Development (MIDES)—the agency tasked with providing early childhood services for children age four and under—developed two interventions in response to the pandemic: Tu CAIPI en Casa and Mochila CUIDARTE. Tu CAIPI en Casa offers remote learning services for children ages 0–4 enrolled in the Comprehensive Early Childhood Service Centers (CAIPIs), as well as a web platform that is open to the public and offers care and parenting resources. In the Mochila CUIDARTE program, vulnerable families living in rural and remote areas receive a backpack with a guide containing play and language activities, as well as toys and materials to carry out the activities.

Both interventions were designed based on the Cuidarte program's Weekly Guide for Developmental Visits, using the Parent Manual as a reference. The CUIDARTE program supports rural and indigenous families with children 6–36 months old who cannot access institutional early education services. To design the program, the MIDES adapted the Reach Up home visiting program and activity curriculum and ran a pilot project from 2018 to 2019 with support from the IDB. This project is now being implemented on a large scale.

Tu CAIPI en Casa

Hybrid intervention

Tu CAIPI en Casa has two components. First, it has a distance learning service for children ages four and under enrolled in the CAIPIs. This service offers learning activities adapted from the Cuidarte program along with the toys and materials needed to do them, which are prepared by the CAIPI educators. Every two weeks, families go to a CAIPI to pick up the materials and a description of the activities to be carried out until their next visit. During their visit, educators show parents how to do the activities. Every week, the educators call the families to follow up.

The intervention began in August 2020 with five training sessions to present the curriculum and the registration, support, and evaluation tools to all program staff. In 2021, Panama began the gradual and voluntary reopening of the CAIPIs for in-person services, at which point the Tu CAIPI en Casa program tapered off.

The MIDES microsite, developed in collaboration with the IDB and UNICEF, features a digital library and collection of tools and materials to promote communication and bonding through play. There are videos, stories, songs, care recommendations, activities, and links to other downloadable materials available in Spanish and indigenous languages and developed by various organizations, including Sesame Workshop (of Sesame Street). The content is divided into seven categories: Let's read, Let's play, Let's sing, Let's take care of ourselves, Positive parenting, Let's talk about early childhood, and Educators. It also includes nutrition tips, recipes to make at home, and guides to disease prevention and COVID-19 detection and care.

Intervention follow-up information

There are two sources of information about Tu CAIPI en Casa operations. The first is the implementation progress reports, which compile information on the program's coverage and overall performance. In August 2020, the MIDES' Early Childhood Coordination unit surveyed CAIPI staff—including teachers, assistants, and administrators—and parents to assess their satisfaction with the hybrid approach and solicit suggestions for improving its implementation.

Main findings of the progress reports and survey

Coverage:

- As of September 2020, 81% of the country's 98 CAIPIs had implemented the hybrid approach. This figure rose to 92% in December of the same year.

Families' participation:

- In August 2020, at the start of the intervention, the majority (70%) of participating children were ages 3–4; another 20% were ages 2–3.
- 44% of families report having done play and communication activities at home for more than 7 days, 45% for 3-5 days, and the remaining 11% for fewer than 2 days.
- The adults who do the activities with the children in their household are generally mothers (70.3%), followed by grandmothers (16.7%) and fathers (13%).
- According to CAIPI staff, families were highly committed to the program. They emphasized their interest in participating (76%), in collaborating with CAIPI staff (62%), and in attending appointments on time (45%).

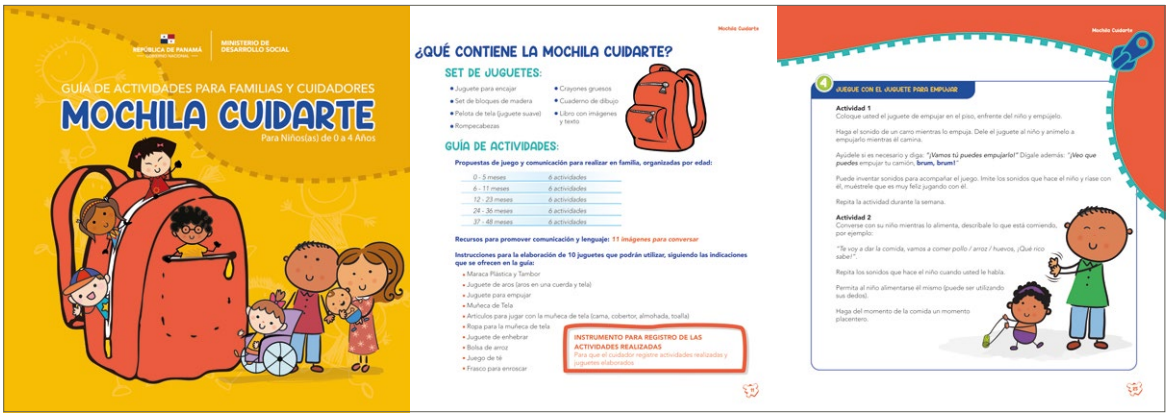
Facilitator perceptions:

- The main logistical needs for implementing Tu CAIPI en Casa mentioned by facilitators were an internet connection, computers, and phones (35%); more resources to build toys and teaching materials (13%); infrastructure and maintenance for the center (8%); and prepaid phone cards for calling families (5%).
- In terms of content, they said the program needs more activities for 4-year-olds, support/instructions for the weekly phone follow-ups and progress evaluations, and training on using the Cuidarte curriculum.
- 53% of facilitators recommend changes to Tu CAIPI en Casa's design and implementation, including more workshops with the children, more-frequent meetings with families, and more activities to develop motor skills. Some educators requested to see the children at least once a month.
- When asked what they liked most about the program, they cited the teamwork, the participation of families, the toy manual, and interacting with the children, even if from a distance.

Mochila CUIDARTE

The Mochila Cuidarte backpack contains toys and books, a guide for making toys at home, and a guide with 30 play and language activities for families, with simple instructions on how to do the activities and how to use the backpack contents. The activities are organized by age and by toy. There are five suggested activities for each age group: 0–5 months, 6–11 months, 12–23 months, 24–36 months, and 37–48 months. The backpack contains fit-together toys, a set of wooden blocks, a cloth ball, a puzzle, jumbo crayons, a sketchbook, and a picture book. The materials are delivered directly to families by trained facilitators who, at the time of delivery, encourage family members to review the backpack's contents and ask questions. These facilitators are also responsible for follow-up, done twice a month through home visits or phone calls. Facilitators usually have a background in social work, outreach, and early stimulation. While most are MIDES staff, some work for non-governmental organizations with which MIDES partnered to implement and follow up on the program in certain regions. **Figure 3** shows the contents of the Mochila CUIDARTE backpack and a sample page from the activity guide.

Fig. 3. **Contenido de la Guía de la Mochila CUIDARTE y ejemplo de actividad**



The MIDES started delivering backpacks in June 2021 and distributed a total of 5,000 to families in rural and remote areas in 12 regions of the country.[2] The MIDES is receiving technical and financial support from UNICEF to develop an evaluation of the intervention, and results will be available in the second half of 2022.

V. Colombia

In Colombia, the Colombian Family Welfare Institute (ICBF) and the Ministry of National Education (MEN) are the main providers of early education and preschool services. They provide these services through childcare centers, parenting services, community homes (ICBF), and preschools (MEN). When the pandemic began, both institutions took very swift action to ensure continuity of care through remote services: the ICBF designed and adopted Mis Manos Te Enseñan (MMTE), while the MEN launched the Aprender en Casa (AC) program. In December 2020, the implementation processes and results of both programs were evaluated with the support of the IDB. **Box 4** outlines the evaluation strategies that were used.

2. 4,563 backpacks were delivered by MIDES facilitators and 437 by facilitators from partner organizations.

Box 4. **Design of the process and outcomes evaluation of MMTE and AC**

Researchers performed a nationwide evaluation of both programs' design and implementation processes, with an emphasis on rural areas and areas with limited connectivity, to study how effective they were in increasing caregiver-child interactions and caregiver participation in children's development process. They used both qualitative and quantitative methods, and the sample had a balanced number of ICBF and MEN service users from a variety of regions, both urban and rural. The exact sample sizes for each evaluation are listed below.

Qualitative evaluation. Delphos workshops, semi-structured interviews, and ethnographies were conducted virtually. The Delphos workshops asked caregivers about their views on care and parenting based on their experiences during the pandemic, while facilitators[3] were asked about their experiences working remotely. Semi-structured interviews helped probe deeper into these topics, and digital ethnographies analyzed audio recordings, photos, videos, and texts.

Quantitative evaluation. Researchers conducted phone surveys with 749 families and 657 facilitators. The questionnaire for families included questions on parenting practices, care, health, and the programs. The questionnaire for program staff varied according to the program and role—teachers; educational agents; community mothers; or pedagogical, psychosocial, and health or nutrition professionals—and asked about their work with families.

	MMTE	AC	Total
Delphos workshops	10 (in 2 workshops)	10 (in 2 workshops)	20
Interviews	4	4	8
Ethnographies	2	2	4
Family surveys	367	z385	749
Surveys of program staff	364	293	657

3. For the sake of consistency among interventions mentioned in this report, we use the term "facilitators." In the case of MMTE, this refers to parents in the community and other educational agents; in the case of AC, it refers to teachers.

Mis Manos Te Enseñan

Hybrid intervention

The main goal of MMTE was "to help families turn the lockdown into an opportunity to spend time together, bond, and make their home the safest place for their children." The strategy had two distinct phases. The initial stage, Contact Without Contagiousness, was implemented between March and April 2020 and focused on continuing teaching processes at home through phone calls to households and ensuring the nutrition of the 1.7 million users of the ICBF's early childhood services through food basket deliveries. Beginning in April, the second phase expanded on the first, adding (i) psychosocial and nutritional support through calls to at-risk participants and (ii) teaching kits and cards revolving around 14 care and parenting practices to help families continue promoting their child's development. Families received up to five calls about care and parenting per month and one call to follow up on their child's development.

Main findings of the qualitative study

i. Delphos Workshop, Interviews, and Ethnographies

Family perceptions:

- Families viewed the intervention topics as useful and relevant. They felt the topics taught about the risks children face in the home and how to reduce or eliminate them, and were useful for improving family coexistence, respect, and communication. They also helped prevent child abuse by showing how to use non-violent parenting practices.
- Families rated the following favorably: (i) the frequent communication between facilitators and caregivers, in person or remotely, which motivated and supported families, answering their questions about children's changes and attitudes or about the activities and topics included in the strategy; (ii) activities such as painting, dancing, and arts and crafts, which capture the children's attention while letting them briefly forget about the lockdown situation; and (iii) the delivery of food baskets and materials for the children, which helped reduce families' expenses.
- Some families complained that the cards' activities and contents were designed for older children.

Facilitator perceptions:

- They believe that families found the topics and activities useful and that they were informative.
- The intensity (frequency) of implementation was sufficient, given caregivers' other responsibilities (including work). Occasionally, older children in the home helped.

- Having a training workshop for caregivers made it easier to understand and implement the strategy.
- Despite the program's efforts, providing rural populations in remote areas with access to the strategy remains a challenge. It is therefore recommended that MMTE be fortified with complementary and non-conventional communication strategies (loudspeakers, radio, bulletin boards).

ii. Survey

Delivery approach and service channels:

- The main channel for communicating with families were cell phone calls (96%), followed by WhatsApp (87%). A smaller proportion (40%) was done through platforms such as Facebook, Google Meet, Zoom, and Microsoft Teams. Even fewer interactions were via landline phones (13%) or alternative community channels (11%).
- The main challenges in communicating with families were their lack of time due to work (63%) and lack of access to phone data or minutes (48%).
- 72% of facilitators reported having received some type of training to change the service approach from in-person to remote. The vast majority indicated that this training was useful, of high quality, actionable, concrete, and timely. 79% of facilitators said that they received support to carry out their responsibilities remotely.

Family participation and perceptions:

- 98% of families reported having received the food basket on a monthly basis and 79% said it was shared with other people in the household. 77% said the basket was adequate and 94% said that the products were of high quality.
- 88% of respondents confirmed that they received the cards and materials (the teaching kit) provided by the ICBF. Almost all families (97%) also received instructions on how to use them and reported having used them extensively. Among the reasons cited for not using them were that the child did not like them (52%) and that they found them difficult (39%).
- Families reported having received advice on pedagogical issues (88%), parenting and care practices (79%), psychosocial issues (68%), and health and nutrition (62%).

Facilitator perceptions:

- For 92.6% of facilitators, the experience of working remotely was very positive, while for 7.4%, the experience it was less favorable.
- Most facilitators contacted each family twice per week (36%) or daily, Monday through Friday (35%). A smaller proportion reported contacting families weekly (14%), every other week, (4%) or once per month (4%). Very few facilitators reported contacting families sporadically (2%) or never (3%).
- 72% of facilitators felt they had everything they needed to do their jobs. The rest cited the lack of a computer (79%), internet connection (50%), smartphone (26%), or tablet (26%) as

obstacles. A smaller proportion indicated that they needed sound equipment (12.3%), cell phone service (11%), a television (9%), landline phone service (8%), or a basic cell phone/non-smartphone (5%).

- Almost all facilitators (97%) rated the teaching kits and cards very highly and reported that these tools helped families participate in their children's learning process. 95% reported that the kits made it easier for children to continue learning from home.
- Most facilitators said their communication with families since the beginning of the pandemic had been good to excellent.

Aprender en Casa

Hybrid intervention

The main goal AC was "to promote and facilitate early childhood learning at home." To this end, the MEN provided all teachers, administrators, and caregivers with access to a series of printable guides for working with children and adolescents. The strategy also included guidelines, instructions, and resources such as guides for creating teaching kits, guides for working at home, printable materials, interactive resources, and other digital content, all of which can be found on the Learn Digital: Content for All platform. This content was adapted by the local Secretariats of Education and implemented by educational institutions and teachers. Educational programs on television, radio, and the internet, made possible through partnerships with national media outlets, were also a part of the strategy. Specifically, the MEN created a children's television programming lineup that included Profe en tu casa (A Teacher in Your Home)—a weekly show promoting home activities for young children—as well as separate, family-oriented show and daily radio content. The MEN also allocated technical and financial resources to local Secretariats of Education in order to provide families and caregivers without internet access with physical materials through educational establishments. Teachers were trained on how to use these materials—which included printed guides and texts—through the local Secretariats.

Main findings of the qualitative study

i. Delphos Workshop, Interviews, and Ethnographies

Delivery approach and service channels:

- The main communication channels were videos sent via WhatsApp explaining activities and topics, as well as regular communication with teachers via phone call, video call, or—less frequently—in person.

- Communication with the families was regular and flexible to adapt to the schedules of families who, due to work, could only communicate in the evenings and on weekends

Family perceptions:

- Families reported that the topics that were covered were relevant and that their children enjoyed them.
- The program increased caregivers' participation in children's education and generated greater closeness between children and caregivers.

Facilitator perceptions:

- They felt most of the proposed activities were well-suited to early education needs, although the motor skills component was a challenge.
- Although the tools developed were adequate, facilitators still have to be very flexible to adapt to families' schedules and needs when implementing them.
- They commended the program's high degree of adaptability, families' involvement in their children's education, and the teamwork when implementing different tools.
- In rural areas, some families lacked the means to access the program, and some dropped out of the program because they left to work in the fields. In addition, some parents were functionally illiterate and struggled to teach their children to read.
- Other difficulties included families' lack of motivation or time to do activities, topics and activities not being age-appropriate, and poor connectivity and internet access.
- Facilitators recommended having a team of nutritionists to follow up on nutritional issues.

ii. Survey

Delivery approach and service channels:

- The main channel used by teachers to communicate with parents was WhatsApp (91%), followed by cell phone calls (81%) and platforms (Facebook, Google Meet, Zoom, Microsoft Teams) (47%). A smaller percentage reported in-person meetings (17%) and calls to landlines (9%).
- The channel considered most effective was WhatsApp (61%), followed by cell phone calls (26%) and, to a lesser extent, in-person meetings and platforms (8 and 3%, respectively). Calls to landlines were not mentioned.
- The main challenges identified included families' lack of access to phone data, minutes, etc. (73%); lack of time due to work obligations (50%); and lack of communication devices (49%).
- 45% of facilitators received some type of training on transitioning children's services from in-person to remote, 18% only received one-time guidance or support, and 32% received no training. 77% of teachers indicated that their educational institution provided them with support or assistance to do their job virtually.

Family perceptions:

- 74% of families received the guides and 70% report using them on a daily basis.

Facilitator perceptions:

- 59% of teachers felt they had everything they needed to do their jobs, while 40% believed they lacked certain items.
- 89% felt the teaching material supported children's learning at home.
- 86% reported that the resources had helped families increase and improve their involvement in their children's educational process and allowed them to work on their children's social-emotional skills.
- 58% of teachers said that the children's learning was the same or better than before the pandemic.
- 61% reported receiving support from caregivers.
- Most teachers rated the quality of communication with caregivers since the beginning of the pandemic—which is daily (on weekdays) in 80% of cases—as good or excellent.

VI. Uruguay

For over 25 years, the Child and Family Service Centers (CAIFs) of the Uruguayan Institute for Children and Adolescents (INAU) and the Ministry of Social Development (MIDES) have served nearly 60,000 children ages 0–3 in Uruguay through workshops for caregivers of children ages 0–2 and full-time childcare centers (for 3-year-old children). Within the CAIFs, the Experiencias Oportunas (EO) program hosts a weekly meeting to discuss parenting topics and promote play and development between caregivers and children ages 0–2. Each multi-family meeting lasts three hours and is divided between three focuses: play, conversation, and nutrition. During the time designated for children to play with their adult caregivers, a space and a variety of materials (mats, balls, fabrics, steps, tunnels, blocks, etc.) are provided. The coordinators largely use free, unstructured play, observing what the child wants to do, where he or she wants to go, what object he or she wants to use, etc. For this reason, the materials have a simple design that can be adapted to each child's interests.

Meanwhile, the Crianza Positiva (CP) preventive program was designed in 2017-2018 to be implemented in 12 CAIF centers over the course of eight sessions or workshops with parents. This brief and focused intervention offered through WhatsApp messages (text and audio) and workshops based on a program-specific curriculum aimed to strengthen parenting. Once the workshops concluded, participating caregivers were sent WhatsApp messages for the next 24 weeks. These messages used tools from behavioral science such as reminders, calls to action, and motivational

and repeated messages to help caregivers strengthen their parenting skills, sustain new practices, and enhance their child's development. Balsa et al. (2021a) used an experimental design to evaluate the workshop and messaging program's first implementation and found more frequent parental involvement and higher quality language interactions between caregivers and children.

Finally, in 2016, the Executive Sub-Secretariat for Early Childhood of the INAU, in a joint initiative with Territorios para Crecer of Uruguay Crece Contigo (UCC - MIDES), designed Parentalidades Comprometidas (PPC). Using a prevention and promotion approach, PPC seeks to support and promote parenting styles that foster the holistic development of children ages 0–3 through a series of eight workshops. In the workshops, participants learn ways to strengthen the parenting skills of family caregivers, promote an equitable division of care and parenting responsibilities between men and women, and envision social co-responsibility in care and childrearing.

Crianza Positiva con familias de CAIF

When the CAIFs closed from late March 2020 until December 2020 due to the COVID-19 pandemic, families could no longer participate in EO meetings or CP workshops. Therefore, between the end of March and June, text and audio messages were designed to maintain contact with families. The messages were sent from July to December to parents of children ages 0–2 who had received services from CAIF centers but had never attended the in-person workshops. These messages aimed to support parents in their role as advocates of their children's development, as well as come alongside them in challenges specific to the pandemic and enhance family and child well-being.

Hybrid intervention

The CP electronic messaging intervention was adapted to the COVID-19 context, with 72 messages sent during the 24-week intervention period. This came to three messages per week, which were always sent on the same days and at the same time. The first message of each week included information on parenting, the second provided tips for implementing hands-on activities, and the third encouraged parents and invited them to reflect. Themes included (i) reducing episodes of domestic violence, (ii) reducing accidents in the home, and (iii) providing emotional support for all household members.

Taking cues from behavioral science, the messages were structured to target cognitive biases such as present bias, inattention, and negative identities. However, the messages sent in 2020 were slightly longer than the 2018 messages, for two reasons. First, since participants had not had the chance to attend in-person workshops, certain concepts from the CP curriculum (attachment, language, and reflection) were included to help contextualize the proposed activities. Second, the intervention was adjusted to address aspects of the lockdowns and uncertain environment caused by the pandemic.

Experimental evaluation

The intervention was evaluated using an experimental design. The sample included 39 CAIFs from across the country, 21 of which were randomly assigned to the treatment group and 18 to the control group. The evaluation involved a total of 689 families. Surveys were administered to parents and CAIF staff, and a video recording of a 10-minute play interaction between the child and his or her primary caregiver was assessed as part of the follow-up analysis.

Main findings of the evaluation

Preliminary analysis of follow-up survey data shows no significant effects of the messages on either child development or on parenting patterns or discipline practices (Balsa et al., 2021b). However, there are positive correlations between more frequent use of WhatsApp by center staff and the quality and quantity indicators of parental involvement. The messages seem to have a greater effect in the absence of other stimuli vying for the receiver's attention, such as, for example, other government campaigns using WhatsApp. They were also found to reduce depression risk in mothers with lower levels of education, although they have the opposite effect on more educated women who work, who may have greater demands on their time due to the need to juggle work and care. The messages have also been found to increase parental stress in overcrowded households, which have been strained by the stay-at-home mandate.

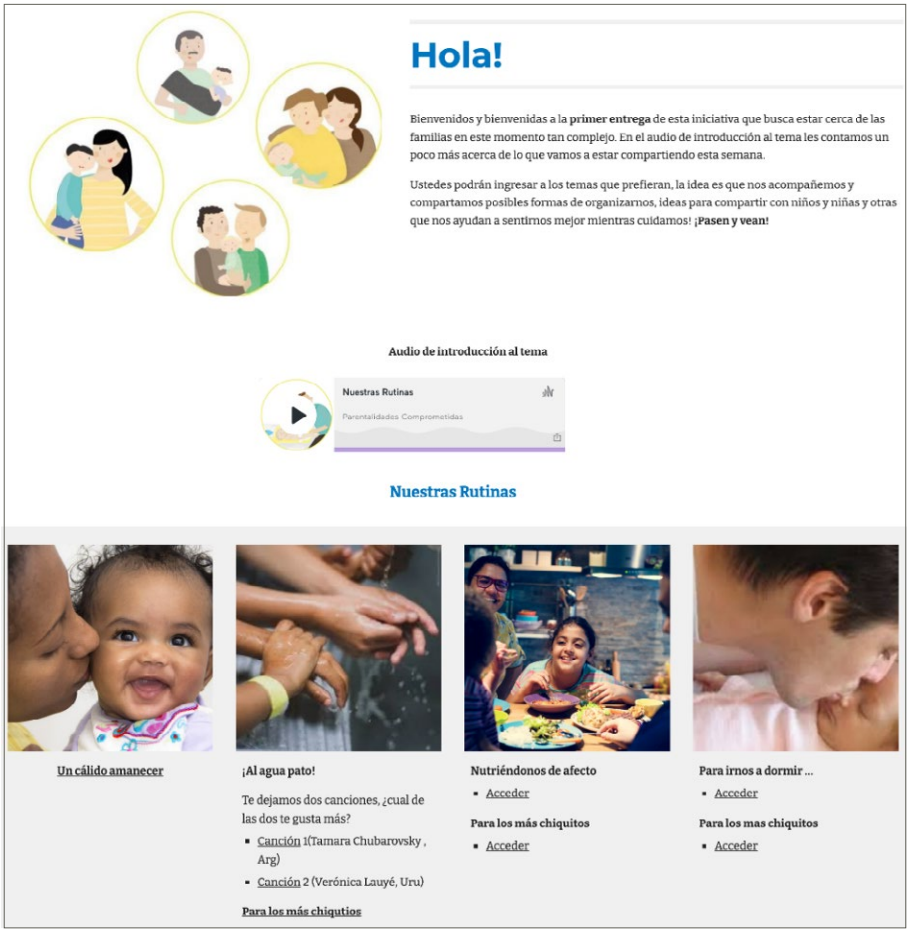
Parentalidades Comprometidas "PPC en Casa"

In 2020, the PPC program was adapted as PPC en Casa, a virtual platform designed to support families remotely. The design, pilot, and first implementation were carried out in coordination with UCC between September and November 2020. PPC en Casa focuses on the importance of routines, bonding, parental self-care, and strategies for regulating emotions, in addition to promoting healthy family environments and spaces for gathering and enjoyment, topics relevant to supporting parents during the pandemic.

Hybrid intervention

PPC en Casa is organized into four installments with the following themes: (i) Routines, (ii) Gathering and enjoying ourselves, (iii) What do I do to take care of myself?, and (iv) Healthy ways to live together. Each installment includes an audio recording to introduce the subject matter, as well as proposals presented in a variety of formats—audio, video, stories, and songs—to make them appealing to different types of families. Each proposal proposes an activity, game, or interaction and may be accompanied by a reflection or guidelines. **Figure 4** shows the content of the first installment.

Fig. 4. **Installment 1: Routines**



There are two approaches to sharing program content with families: (i) sending each family the webpage link so they can browse the activities and select the topics and proposals that they find interesting; or (ii) using WhatsApp to filter content and share only activities the program team considers relevant to each family's particular situation. In 2021, the PPC implementation gradually returned to an in-person format.[4]

The facilitators who support the families received one virtual training session. Thanks to the theoretical and experiential approach used to introduce the tool, facilitators had the opportunity to do some of the proposed activities. To further support facilitators, the core PPC team prepared and sent additional written materials to reinforce the concepts and methods behind each installment.

4. PPC was implemented in early childhood and family service centers (CAIFs, CAPI, SIEMPRE, CCC, and secondary schools). In 2021, 73 centers implemented the tool with more than 1,600 caregivers.

Qualitative study

From September to November 2020, the PPC en Casa pilot was implemented with 73 families in 10 departments in the country. The program was run by 24 UCC outreach teams, and included a qualitative and quantitative evaluation using information collected from the following sources: (i) facilitator follow-up forms, which asked about the materials sent to each family, the channel used, and the frequency of delivery; (ii) family surveys; (iii) the final survey sent to facilitators; and (iv) the closing activity, in which teams and institutional leaders identified the platform's strengths and weaknesses. The facilitator survey was answered by 16 of the 24 teams, while families' responses to the survey fell off over the course of the implementation period.

Main findings of the evaluation

Delivery approach and service channels:

- 83% of the 925 proposals (activities) were shared with participating families.
- In 93% of cases, teams opted to send the installments on a weekly basis.
- 62% of the activities were shared via WhatsApp and the remaining 38% via links.

Family perceptions:

- 95% reported that they found the content of the installments useful for guiding their parenting during the pandemic.
- Families said the tool prompted them to think about the topics and that they incorporated the proposals into their everyday lives.
- The individual activities were highly rated.

Facilitator perceptions:

- They reported high levels of satisfaction, with 75% indicating that they would recommend the tool, and more than half rating it as extremely useful.
- 30% mentioned difficulties with implementation, such as unmotivated caregivers and methodological challenges. Facilitators recommended that the program added in-person support to promote more active family engagement and facilitated support when important emotional issues come up, as fully remote implementation can make it difficult to discuss sensitive issues.
- They suggested expanding the digital distribution channels (WhatsApp statuses, Facebook posts, etc.) and considering additional physical channels (pamphlets, cards, toys that can be assembled, etc.).

3. Lessons learned

When well-designed and properly implemented, ECD interventions—and, in particular, parenting programs—can have major impacts on child development (Britto et al., 2017) that can translate into life-long gains in performance and well-being (Almond & Currie, 2011; Gertler et al., 2014; Walker et al., 2021; Gertler et al., 2021). Evidence shows that one of the main ways in which such interventions work is by improving parenting practices in the home (Walker et al., 2011). Therefore, when the pandemic shut down ECD services, it became vitally important to rapidly transition to alternative service delivery modes that could ensure continuity of care with the highest possible quality. These strategies adapted existing parenting models and directly channeled services through parents and caregivers in the home, regardless of whether the original service focused on support for the entire family or for just the child (via enrollment in childcare centers or preschools, such as the CDIs in Ecuador or the CAIPIs in Panama). In general, the strategies were financed with the resources allocated for the in-person services that had been suspended.

Now we turn to the lessons learned from these remote and hybrid service strategies to see how they can help make in-person services at scale more cost-effective or help design adaptations to close coverage gaps for populations living in sparsely populated and remote areas. This analysis is timely, given the interest of many countries in the region in using hybrid approaches in future emergency situations (health crises, natural disasters, forced displacements, etc.) or as a strategy to expand coverage. Below is a summary of the main findings about the design and implementation of the nine experiences analyzed in six countries in the region—Boa Vista (Brazil), Colombia, Ecuador, Jamaica, Panama, and Uruguay—and the lessons learned, organized by topic.

- **Virtual vs. hybrid approaches.** Compared to fully remote approaches, hybrid approaches make it easier to serve populations living in areas difficult to access, as well as more vulnerable groups, which helps minimize the digital exclusion of potentially more vulnerable families. For this reason, it has at times been necessary—particularly in sparsely populated areas with limited connectivity—to combine virtual services with in-person home visits to ensure that families without access to data plans, internet, or smartphone devices can receive services. Based on facilitator feedback in Boa Vista and Jamaica, where existing in-person services were adapted to hybrid formats when the pandemic started, the key to the hybrid strategy's success was the rapport previously established with families during in-person home visits. In Jamaica, families explicitly stated their preference for in-person visits. Facilitators in Panama requested more interactions with children, while in Uruguay, they emphasized the added value of regular in-person meetings for strengthening ties between facilitators and families. Such interactions are critical both to promote behavioral changes in parenting practices at home and to keep team motivation and family engagement high. Finally, it is very important that facilitators and supervisors be flexible when adapting service delivery approaches to each family's circumstances. Flexibility in the delivery channel is also critical—see the next bullet point.

- **Channels.** In general, the most popular channel was multimedia messages sent via WhatsApp due to the versatile formats it could support: photos, audio recordings, texts with emojis, videos, etc. The second most popular channel was video calls. In addition to combining sound and visuals, video calls allow for interactive communication between facilitators and families, including children, who can actively participate in calls. However, like multimedia messaging, video calls have certain prerequisites (smartphone, internet, data plan). One convenience of SMS messages is that they can be received by any cell phone free of charge, but they can only be used to send text. Furthermore, character limits made it difficult to send information in an easy-to-read format. There seems to be a consensus that phone calls are the least popular channel. All efforts analyzed in this report combined service channels, either to provide services or for follow-up. For example, it was common for an activity to be shared via multimedia text and video message and for the child's progress to be monitored by video call. It is important for facilitators to be flexible when selecting what service channel to use.

  Regardless of the communication channel used, messages' format and content must be adjusted to such channel to maximize their effectiveness. For example, text messages should be short and concise, using simple language free of complicated or technical words. In addition, they should be well structured and written in a respectful but motivating tone. In multimedia messages, the use of emojis, capital letters, exclamation marks, and images can make messages easier to understand. Videos are a useful resource to demonstrate how to do activities, get a specific point across, or provide encouragement. However, they must be short and well organized to hold viewers' attention. To achieve this, intervention staff consider it very important that they be given specific guidelines on designing content for each channel and format, as was the case in Ecuador and Jamaica. In Ecuador and Boa Vista, facilitators were also given guidance on when to send messages to families through individual channels (chats) and when to do so through group channels. While the latter foster a sense of belonging and support among peers, individual messages help build stronger bonds.

Regardless of the communication channel used, messages' format and content must be adjusted to such channel to maximize their effectiveness.

- **Frequency of services.** In all countries, families highly valued maintaining contact with facilitators every week or every other week, especially during the challenging early months of the pandemic. The chances to interact were stimulating and allowed families to feel supported, while the proposed activities motivated them to maintain a healthy parent-child bond and helped promote children's continuous development. However, not all families showed the same level of interest, nor were all families able to answer facilitators' calls or messages, due to work or household obligations. Likewise, facilitators faced considerable demands on their time. This was especially true for those in the health sector, who were less able to implement services due to other pandemic-imposed obligations. This was seen in Jamaica, for example, where the community health assistant was less available to call families or supervise the intervention due to other priorities that arose during the health crisis.

- **Follow-up and monitoring of services.** In-person visits and video calls are the most suitable channels for following up on services and their quality, as they allow direct interaction with families and, critically, with children, which simplifies observation. Sending feedback messages via WhatsApp or SMS is also recommended. When sent regularly and as a follow-up to sessions, such messages help maintain closeness with families and keep them motivated. In some countries, such as Ecuador and Boa Vista, where families were asked to send updates on their progress, photos and videos sent as multimedia messages were found to work well for verification purposes.

- **Materials.** The *Parent Manual* content in its various adaptations (cards, text messages) was very well received by both families and facilitators. The proposed activities and materials were considered appropriate and conducive to quality interactions and play. In general, the activities with the highest uptake were those that could be integrated into household routines—for example, singing songs, walking around the neighborhood, role-playing, naming objects, and talking about daily activities (bathing, dressing, eating). Families in some countries, such as Jamaica and Panama, received deliveries of toys, but teams were forced to keep these actions to a minimum due to their cost and logistical issues. It was recommended that household items be used instead, or that families be encouraged to make simple toys using materials available at home or close by. In these countries, both families and facilitators appreciated the toys but requested more physical materials to help them do the activities. Future interventions could consider toy sets with a few more items than those produced during the pandemic, but with fewer materials than those from pre-pandemic interventions. This approach could reduce the challenges of producing, purchasing, and distributing materials that countries face when scaling up these types of interventions.

  The materials (activity cards) were easy to understand, even by families with low levels of education, which was a key reason for their high uptake. This clarity was achieved by using simple and accessible language, along with images that accurately depicted the proposed activity. The images used in Ecuador also strove to reflect the country's ethnic diversity to help families identify with and feel represented by the images. Using insights from behavioral science, programs made efforts to take into account parents' limited attention, a common issue in highly vulnerable contexts. Therefore, in addition to crafting short, easy-to-read, and appealing messages, programs deliberately chose the best times for delivery—for example, at the end of the day, when caregivers tend to have the most availability. They also picked the optimal messenger. In Jamaica, for example, it was decided that messages would be sent by a phone carrier and not the Ministry of Health and Welfare. All these efforts contributed to a sense of ownership of the intervention and to keep families engaged.

- **Individualization.** The virtual model made it possible to individualize experiences for users of childcare services or parenting services offered through group sessions: planning for each child according to their age and level of development based on existing materials and activities, and not just according to their age group, was now possible. Still, in Ecuador and Boa Vista, among other regions, users considered some activities too easy and felt the material provided insufficient guidance on how to make activities more complex for more advanced children. Facilitators thus requested more specific guidelines for these scenarios. Meanwhile, in Colombia, many felt the collections lacked sufficient materials for younger or less developmentally advanced children.

- **Structured strategy and training.** In all six countries, facilitators consistently appreciated having materials and a list of suggested activities. Some countries, like Ecuador and Jamaica, provided scripts and guidance for calls and video calls, which were also highly valued. A common request was for more frequent and more in-depth training on how to use the materials, as well as guidance on how to implement services via remote channels and strategies for keeping families engaged remotely. In every country where facilitators received training, they had very positive things to say about the training sessions. There is also agreement that additional training and support from program supervisors can help engage less interested parents. However, it was not easy to boost supervisor support, given the difficulties of including supervisors in phone calls and WhatsApp video calls, so much of this work had to be done in person. In Jamaica, for example, when some in-person services were reopened, facilitators shared the office from which they made calls with their supervisors. Although self-care was covered in some countries, including Jamaica, Uruguay, and Ecuador, time constraints and distances made it difficult to adequately address this important topic with program staff.

- **Challenges when evaluating the strategies.** As discussed throughout this report, the evaluations' identification strategies encountered significant challenges given the pressure to provide a rapid response to families' needs for support when in-person services were suspended. As a result of this urgency, it was often impossible to set up control groups. Furthermore, implementation delays meant evaluations had to, for example, change the instrument used to measure child development as the child grew older. The initial results on parenting practices from the Uruguay and Jamaica experiences are expected to be available by the end of 2022; by 2023, results on the service delivery approaches' impact on child development (self-reported via phone calls) from the Boa Vista experience should be available as well. These results will undoubtedly shed light on the true impact this type of intervention can have on children under 5, an area where no data currently exists. While the ongoing experimental evaluations are analyzing intervention impacts without teasing out specific mechanisms or aspects that explain those outcomes, these studies—taken together with the qualitative evidence collected and reported in this publication—will provide insight into key implementation aspects that can be used after the pandemic, such as how hybrid a program should be, which channels and content to use, or staff training needs, among others.

Hybrid approaches have proven less costly and more flexible than in-person services, reducing logistical barriers such as long distances and increasing the amount of time available for services. These benefits are substantial, and the approach allows services to adopt alternative interventions under specific circumstances (different types of emergencies) or contexts that impede in-person access to families, as well as to scale up at a lower cost.

In all six countries, facilitators consistently appreciated having materials and a list of suggested activities. A common request was for more frequent and more in-depth training on how to use the materials, as well as guidance on how to implement services via remote channels and strategies for keeping families engaged remotely.

One of the main disadvantages of these strategies is that they may exclude families with little or no access to internet or phone services or, possibly, more vulnerable families. This limits the strategies' potential to reach populations who were underserved prior to the pandemic. These technical and connectivity hurdles, along with some families' lack of availability or interest, are some of the most frequent challenges. Another is figuring how to provide adequate support and follow-up. Flexibility in combining virtual and in-person sessions and delivering materials directly are two promising alternatives to tackle these issues. Such flexibility could help resolve an inescapable tension that has reared its head in all six countries in this report—namely, the trade-off between offering remote services versus the personalized and closer contact that comes with in-person interactions. There seems to be a consensus that at least a minimal level of in-person interaction helps increase families' buy-in and commitment to the interventions and makes it easier to monitor service quality.

Where possible, further evaluation efforts could help validate these hypotheses and the lessons learned. Clearly, additional process evaluations and rigorous assessments analyzing the impact of hybrid approaches on parenting practices, children's cognitive and social-emotional development, and parents' and facilitators' own mental health are needed to truly understand these approaches' reach. These evaluations must be properly designed to identify which elements of virtual and hybrid approaches are non-negotiable and which could be viewed as optional. Likewise, if researchers evaluate and map out service availability—both for child development and for phone coverage, message delivery (by phone and mail), and other communication channels—this information could help customize interventions with the optimal mix of in-person and virtual interactions and provide a targeted, context-specific way to select delivery mechanisms and channels.

Despite its disastrous consequences, the COVID-19 health crisis has provided an opportunity to transform the delivery of ECD services in the LAC region, as illustrated by the experiences discussed in this report. More research is needed to determine whether these new approaches can modify parenting practices in households and improve child development, thus helping form more equitable societies that are more resilient in the face of future crises.

4. References

Abufhele, A., Bravo, D., Boo, F. L., & Soto-Ramirez, P. (2021). *Developmental Losses in Young Children from Pre-Primary Program Closures During the COVID-19 Pandemic.* Inter-American Development Bank Technical Note IDB-TN-2385, Washington D.C.

Almond, D., & Currie, J. (2011). "Human Capital Development before Age Five." In O. Ashenfelter and D. Card, eds., *Handbook of Labor Economics.* North Holland: Amsterdam, pp. 1315-486.

Balsa, A., López-Boo, F., Bloomfield, J., Cristia, A., Cid, A., Ferro, M.P., Valdés, R., & González, M.L. (2021a). "Effect of *Crianza Positiva* e-messaging program on adult–child language interactions." *Behavioural Public Policy*, 1-37.

Balsa, A., Bloomfield, J., Cid, A., & López-Boo, F. (2021b). T*he Impact of Sending Parenting Messages During the COVID-19 Pandemic.* Mimeograph, Inter-American Development Bank, Washington D.C.

Barron Rodriguez, M.R., Cobo Romani, J.C., Muñoz-Najar, A., & Sanchez Ciarrusta, I. (2021). *Remote Learning During the Global School Lockdown: Multi-Country Lessons.* Washington, D.C.: World Bank Group.

Blackman, A., Ibáñez, A. M., Izquierdo, A., Keefer, P., Moreira, M. M., Schady, N., & Serebrisky, T. (2020). *La política pública frente al COVID-19: Recomendaciones para América Latina y el Caribe* (Vol. 810). Inter-American Development Bank, Washington D.C.

Brentani, A., Ferrer, A.P.S., Bessa, L., et al. (2020). "Survive and Thrive in Brazil: The Boa Vista Early Childhood Program: study protocol of a stepped-wedge, randomized controlled trial." *Trials* 21, 390.

Britto, P. R., Lye, S. J., Proulx, K., Yousafzai, A. K., Matthews, S. G., Vaivada, T., Perez-Escamilla, R., Rao, N., Ip, P., Fernald, L., MacMillan, H., Hanson, M., Wachs, T. D., Yao, H., Yoshikawa, H., Cerezo, A., Leckman, J. F., Bhutta, Z. A., & Early Childhood Development Interventions Review Group, for the Lancet Early Childhood Development Series Steering Committee (2017). "Nurturing care: promoting early childhood development". *Lancet,* 389(10064), 91-102.

Chang-Lopez, S. M., Walker, S.P., Grantham-McGregor, S., Powell, C., López Bóo, F., Rubio-Codina, M., & Ferro Venegas, M. P. (2020). *Manual para padres: Actividades de estimulación temprana para niños de hasta 3 años de edad.* The University of the West Indies, Kingston, and Inter-American Development Bank, Washington D.C.

Gertler, P., Heckman, J. J., Pinto, R., Chang, S. M., Grantham-McGregor, S., Vermeersch, C., ... & Wright, A. (2021). *Effect of the Jamaica Early Childhood Stimulation Intervention on Labor Market Outcomes at Age 31.* National Bureau of Economic Research Working Paper 29292. DOI: https://doi.org/10.1596/1813-9450-9787

Gertler, P., Heckman, J., Pinto, R., Zanolini, A., Vermeersch, C., Walker, S., ... & Grantham-McGregor, S. (2014). "Labor market returns to an early childhood stimulation intervention in Jamaica." *Science,* 344(6187), 998-1001.

Hincapié, D., López-Boo, F., & Rubio-Codina, M. (2020). *El alto costo del COVID-19 para los niños. Estrategias para mitigar su impacto en América Latina y el Caribe.* Inter-American Development Bank IDB-DP-00782, Washington D.C.

López-Boo, F., Behrman, J., & Vázquez, C. (2020). *Costos económicos de las reducciones en los programas preescolares por la pandemia del COVID-19.* Inter-American Development Bank IDB-TN-2000, Washington D.C.

Mehrin, S. F., Hasan, M. I., Tofail, F., Shiraji, S., Ridout, D., Grantham-McGregor, S., ... & Baker-Henningham, H. (2022). "Integrating a Group-Based, Early Childhood Parenting Intervention into Primary Health Care Services in Rural Bangladesh: A Cluster-Randomised Controlled Trial." *Frontiers in Pediatrics,* 10: 886542.

Muñoz-Najar, A., Gilberto Sanzana, A.G, Hasan, IopA., Cobo Romani, J.C., Azevedo, J.P., & Wagner De Akmal, M. (2021). *Remote Learning During COVID-19: Lessons from Today, Principles for Tomorrow.* Washington, D.C: World Bank Group.

Roben, C. K. P., & Costello, A. H. (2022). *Increasing Support for Home Visiting Innovation is Critical for Young Children and Their Families.* Society for Research in Child Development. Retrieved from https://www.srcd.org/research/increasing-support-home-visiting-innovation-critical-young-children-and-their-families

Walker, S. P., Chang, S. M., Walker, S. P., Chang, S. M., Wright, A. S., Pinto, R., Heckman, J. J., & Grantham-McGregor, S. M. (2021). "Cognitive, psychosocial, and behaviour gains at age 31 years from the Jamaica early childhood stimulation trial." *Journal of Child Psychology and Psychiatry.* 63(6):626-635.

Walker, S. P., Chang, S. M., Smith, J. A., & Baker-Henningham, H. (2018). "The Reach Up Early Childhood Parenting Program: Origins, Content, and Implementation." *Zero to Three,* 38(4), 37-43.

Walker, S. P., Chang, S. M., Vera-Hernández, M., & Grantham-McGregor, S. (2011). "Early childhood stimulation benefits adult competence and reduces violent behavior." *Pediatrics.* 127(5): 849–857.

World Bank. (2021). *Actuemos ya para Proteger el Capital Humano de Nuestros Niños: Los Costos y la Respuesta ante el Impacto de la Pandemia de COVID-19 en el Sector Educativo de América Latina y el Caribe.* World Bank, Washington, DC.

ANNEXES

TABLE A1. **SUMMARY OF CONTENTS OF THE STRATEGIES ANALYZED IN THIS REPORT**

Strategy (Country)		Strategy contents	Age
Basados en el Manual para Padres y Reach Up	**S&T (Boa Vista, Brasil)**	**WhatsApp messages.** Phone or video calls to follow up on messages. Short conversation, questions about COVID-19, follow-up on the latest activities, and introduction of the next activities. **Sample message:** *Purpose of the activity: Help the child touch or look for objects by name. Think of objects in the house that the child knows and can easily get. Ask him or her to bring an object to you. Say: GOOD JOB! YOU BROUGHT ME THE SHOE! Repeat with another object.*	0–36 months
	PAVS (Ecuador)	**Virtual guidance using various channels, divided into four parts:** - **First phase:** check in about the physical and social-emotional health of the child and family and review activities from previous session. - **Family play:** explain the virtual card to the adult(s). - **Sharing knowledge:** share messages on health and nutrition or protective environments, as instructed by the card. - **Today we learned:** recap and encourage the adult(s) to do the activity.	0–36 months
	Early Estimulation Program (Jamaica)	**Text messages.** Delivery of **materials:** Book for parents (*Activities we can do at home with baby*) with play and language activities; 6 wooden blocks; 2 crayons; 2 picture books. Calls to encourage parents to do the activities, explain or modify activities, and ask how the child is doing and about the parent-child relationship. **Sample message:** *Bath time! Don't miss this opportunity to talk and play with your baby! Talk to the baby about water. Show baby how to splash water. Let baby have fun in the water.*	6–36 months
	Tu CAIPI en Casa (Panama)	**Virtual library:** featuring videos, stories, songs, care recommendations, activities, and downloadable material. The content is divided into seven categories: Let's read, Let's play, Let's sing, Let's take care of ourselves, Positive parenting, Let's talk about early childhood, and Educators. Every two weeks, families go to a CAIPI to pick up **materials and guidelines** to do the activities. The program then follows up with families via phone calls.	0–48 months
	Mochila CUIDARTE (Panama)	**Backpack with toys:** fit-together toys, wooden blocks, cloth ball, puzzles, crayons, notebook, book, and instructions for making 10 toys with materials in the home. Includes a **guide with a selection of Cuidarte activities** (Panama's version of the Reach Up model), organized by age (0–5, 6–11, 12–23, 24–36, and 37–48 months).	0–48 months
	MMTE (Colombia)	WhatsApp **messages** and phone calls to support and strengthen children's development. Pedagogical, psychosocial, health, and nutritional support. Access to **resource collection and teaching kit** (cards/guides for activities around the house and materials). Delivery of **food baskets** to households.	0–60 months
	AC (Colombia)	Printable **guides** for working with children. **Guidelines** for the education sector (teachers, administrators) to deliver early childhood services remotely.	0–60 months
	Crianza Positiva with CAIF families (Uruguay)	**WhatsApp messages** based on behavioral science, with the goal of improving parental decision-making through **four tools:** reminders, calls to action, motivation, and repetition. The messages focus on themes of bonding, protection, reflection, training, and self-care.	0–36 months
	PPC en Casa (Uruguay)	**WhatsApp messages** structured around four topics: Our routines, Gathering and enjoying ourselves, What do I do to take care of myself?, and Healthy ways to live together. Each installment has an audio introduction and proposals for family activities in the form of audio recordings, videos, cutouts, stories, and songs.	0–36 months

TABLE A2. **PAVS SERVICES BY PHASE AND SERVICE DELIVERY APPROACH**

PHASE	DESCRIPTION	CNH and CCRA	CDI, pregnant women and children under 12 months old	CDI, children 12–36 months old
1	**Services**	**Virtual**		
	Frequency and length	Weekly (20–25 min)	Every two weeks (20–25 min)	Daily (20 min)
	Follow-up	Weekly (10 min) Virtually	Every two weeks, as part of services Virtually	Daily, as part of service Virtually
2	**Services**	**Hybrid: virtual + home visits**		
	Frequency and length	3 atenciones virtuales mensuales (20–25 min) + 1 home visit per month (30–40 min)	Every two weeks (20–25 min) + 1 home visit per month (60 min)	Daily virtual services (20 min) + 1 home visit per month (60 min)
	Follow-up	Weekly, in virtual check-ins (10 min)	Monthly, at the home visit In person	Daily, as part of services Virtually or in person
3	**Services**	**Hybrid: virtual + home visits**	**Hybrid: in-person services depending on capacity limits and hybrid services (virtual and home visit) to complete coverage**	
	Frequency and length	2 virtual sessions per month (20–25 min) + 2 home visits per month (30–40 min)	Virtual services every two weeks (20–25 min) + 1 home visit per month (60 min)	**Hybrid services:** Daily virtual services (20 min) + 1 home visit per month (60 min) **In-person services:** 6 hours per day depending on capacity limits established by the national and local Emergency Operations Committees
	Follow-up	Weekly (10 min), virtual sessions	Monthly, at the home visit In person	**Hybrid services:** Daily, as part of services Virtually or in person **In-person services:** Daily, at the CDI

Source: PAVS implementing instructions, September 2021. Families who do not authorize in-person services in the home receive virtual services. Likewise, families who do not authorize their children to attend the CDIs receive hybrid (or virtual) services
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Fig A1. **Average percentage of virtual and in-person services, February–December 2021**

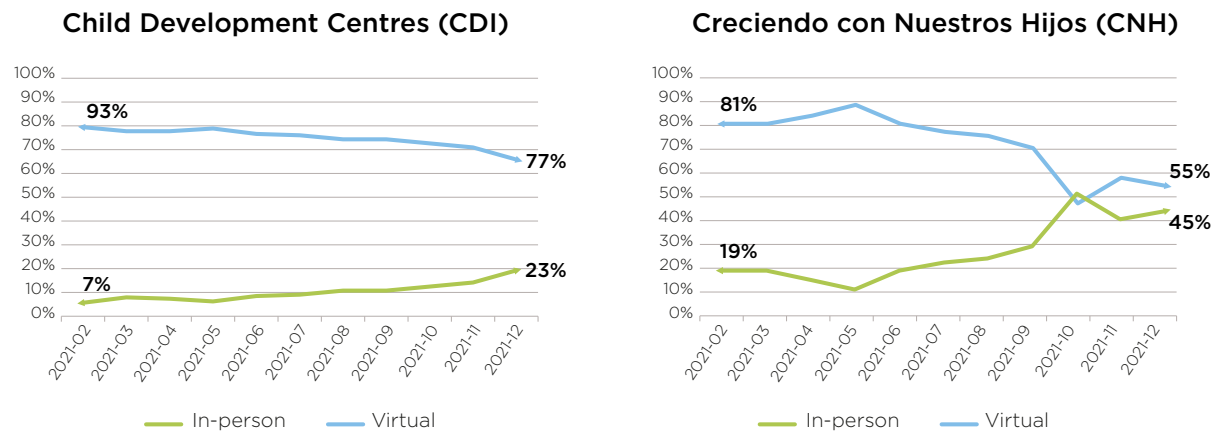
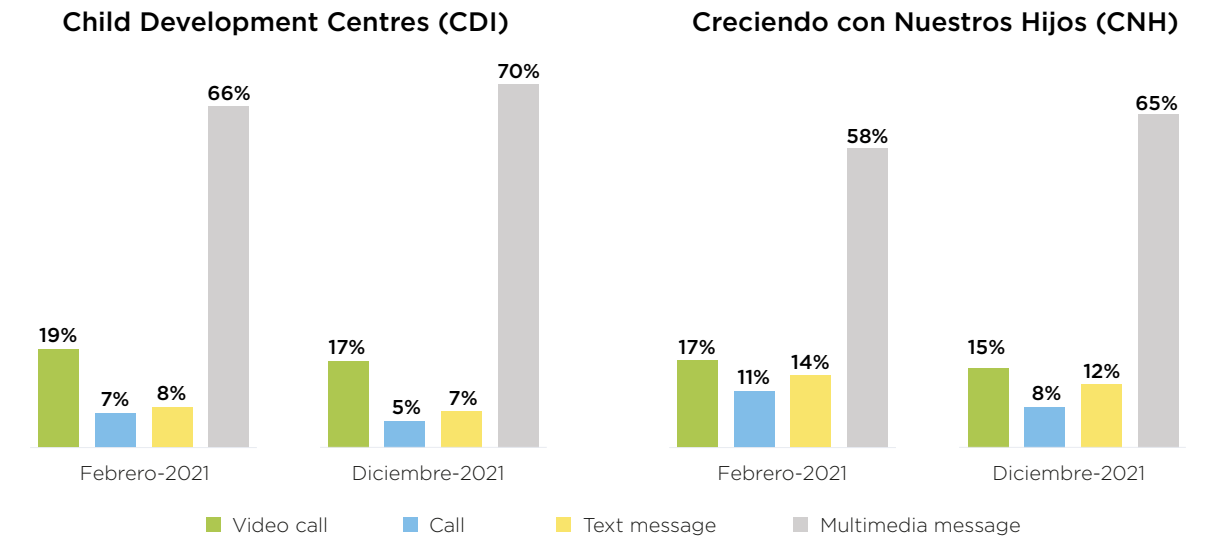


Fig A2. **Distribution of virtual services, by channel**



Source: SIIMIES. CNH includes CCRA.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