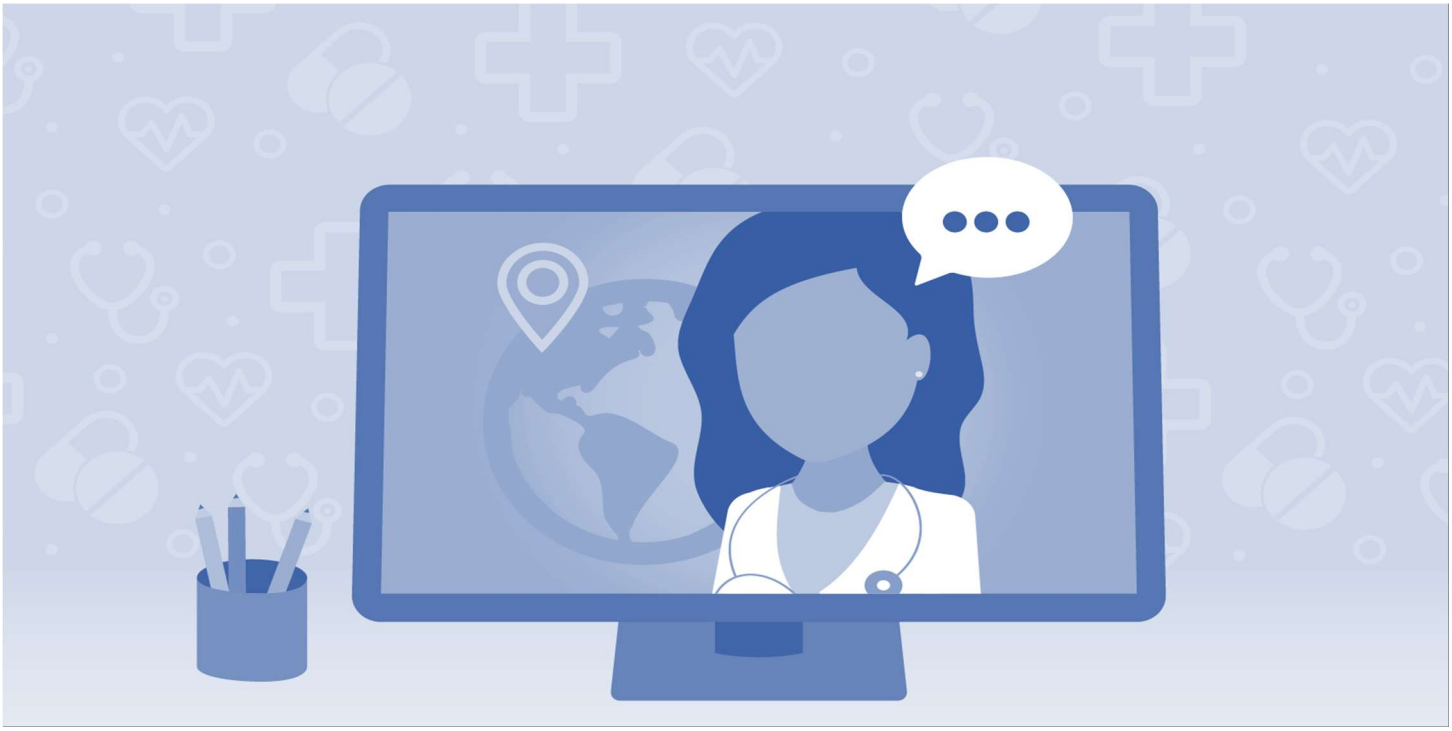

Understanding the Experience of Virtual Home Visitation during COVID-19: Findings from Surveys of Participating Families and Service Providers

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VIRGINIA DEPARTMENT OF SOCIAL SERVICES

Understanding the Experience of Virtual Home Visitation during COVID-19: Findings from Surveys of Participating Families and Service Providers[*]

Prepared by

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Abstract

This report summarizes findings from the two surveys concerning Healthy Families Virginia's home visiting program: a survey of participating families, and another of home visitors. The surveys inquired about their experience of transitioning from in-person to virtual home visits due to the statewide COVID-19 lockdown in March 2020. Of the qualifying 945 program participants and 186 service providers, 87 (response rate = 9.2%) and 43 (23.1%) took the surveys, respectively. Among our respondents, we find that families and home visitors alike were overall satisfied to continue home visits virtually throughout the Pandemic. Compared to home visitors, families found it much easier to adapt to the new mode of home visitation. While they were able to deliver a variety of supportive services for their clients, home visitors found it challenging to observe parent-child interaction virtually.
In both surveys, most of respondents expressed a strong preference for a mix of both in-person and virtual home visitation in the future. They particularly appreciated the greater flexibility in scheduling enabled by virtual home visits. Based on these findings, we recommend that virtual home visitation should be considered as an excellent complement – but not a perfect substitute—for the original mode of delivering services to families. Our cost estimation also shows that continuing to utilize virtual home visits in the future has a huge cost saving potential.

[*] We are grateful for consultation with Reagan Eshleman, Kira Walker, Michele Powell at Healthy Families Virginia, Tierah West at Early Impact Virginia, Dr. Lee Huntington at Huntington Associates, LTD, Dr. Danielle Dallaire at College of William & Mary, Elizabeth Lee, Mary Wilson, and Nancy Fowler with the Division of Family Services, and Shibu Varughese with the Data Warehouse team.
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I. Introduction

The Virginia Department of Social Services (VDSS), in collaboration with Families Forward Virginia, developed and conducted two surveys: a survey of Healthy Families Virginia's home visiting program participants and another of service providers conducting home visits. The purpose of the study was to investigate the impact of the COVID-19 Pandemic on these programs. In particular, we wanted to explore how well families and program staff received virtual home visits—an alternative to in-person visits adopted since March 2020 in response to the Pandemic. If the evidence supports the virtual method as favorable and efficient as in-person home visitation, then it may provide an opportunity for Healthy Families America (including Virginia's implementation of the program) to formally endorse the use of virtual visitation as an option and alternative to in-person visitation, and to leverage available funding to serve more clients and to expand service in Virginia.

II. Research Questions

The goal of our survey was to investigate the reception of virtual home visits among the program participants and service providers. With the lockdown in Virginia in March 2020, Healthy Families programs had to adapt quickly and continue their services virtually. Although the transition effort was as organized as possible, each site had the discretion to decide the best way to serve families in the virtual setting. For example, home visitors were allowed to choose the virtual communication tools (e.g., FaceTime, WhatsApp) with which families were most comfortable. If families preferred the platforms that charge fees for unlimited use (e.g., Zoom, Doxy.me), local sites purchased the accounts. In addition, most home visitors and families already had the necessary technology such as smartphones, laptops, and tablets for virtual home visits; for those who did not, their programs were able to provide devices by adjusting their budgets, such as reallocating funds from unused mileage reimbursement accounts.

Having experienced virtual home visitation for longer than a year (at the time of our survey), families and home visitors might have developed opinions on this new delivery mode. In particular, we aimed to investigate the following research questions:

1. How difficult was it to change from in-person to virtual home visits?
2. What were their experiences with virtual home visits? What tools did they use?
3. What did they like and dislike about virtual home visits?
4. How did they compare in-person vs. virtual home visits?
5. What is their preference for future home visitation when the Pandemic is over?

Essentially, the survey gauged families' and home visitors' satisfaction with virtual home visitation. Based on the results of the data analysis, we provide appropriate recommendations for utilizing virtual visits in the future. The survey was anonymous and did not attempt to assess the effectiveness of home visitation in terms of changes in measurable outcomes. The best way to do that would be to conduct a controlled assignment study which was not in scope for this effort.

III. Methodology and Sample Description

The survey was developed in Qualtrics and deployed on Monday, July 26, 2021. It was closed on Friday, August 27, 2021. In order to incentivize participation, respondents who completed the entire survey had the opportunity to enter for a chance to win a $10 gift card.

For the family survey, the study's sample consisted of 945 current program enrollees who had received at least three in-person visits before March 2020 and have continued virtually since then. We chose this selection criterion because, according to the program staff experiences, families were likely to have built rapport with their home visitors and started participating in earnest by their third visit. Similarly, the home visitor survey had a sample of 186 home visitors who had provided at least three in-person visits before March 2020 and continued virtually since then.

Families Forward Virginia shared the survey announcement, link, and reminders with program directors, who in turn distributed the information to the families and home visitors. In total, potential respondents received one survey announcement, the survey link, and at least two survey reminders. All survey-related communication and the instrument were available in both English and Spanish.

At the beginning of their respective survey, respondents were asked a set of screening questions. If they did not have (a) at least three in-person visits before March 2020, and (b) at least three virtual visits since March 2020 via phone calls or video conferencing, they were directed to the end. We explained that they did not qualify to participate in the study and thanked them for their interest. The final samples consisted of 87 families (response rate= 9.2%) and 43 home visitors (response rate= 23.1%) who successfully screened-in.

Except for the mandatory screening questions, respondents were allowed to skip a question[5] and stop the survey at any time if they wanted. The vast majority of program participants (n=67, 95.7%) identified as female, with only three male respondents (4.3%). All but one home visitor, who identified as non-binary, were female (n=40, 97.5%). In terms of race, the most prominent group in both surveys was White (n=31, 50% in the family survey; n=28, 75.7% in the home visitor survey), followed by Black or African Americans (n=26, 41.9%; n=8, 21.6%). Additionally, four respondents (6.5%) self-identified as multiracial in the family survey, and both surveys included one Native American respondent.

The average age was 32 among program enrollees, with most respondents (n=33, 47.1%) in the 25 and 34 age group. However, service providers were generally older as their average age was 44.

In the family survey, we inquired about respondents' marital status. Most of them (n=28, 40.6%) were single and never married, whereas half as many (n=14, 20.3%) responded they were not married but were currently living with a partner. Approximately 30% were married, either living with or apart from their spouse.

[5] We programmed Qualtrics to 'nudge' respondents for an answer in case they accidentally skipped the question.

While we aimed to include qualifying families and staff from all Healthy Families programs in the state, some programs were more represented than others. According to Healthy Family Virginia's data, programs in the Northern region had the greatest number of respondents qualifying to participate in the surveys. As shown in Figure 1a, the largest number of respondents in the family survey (n=26, 34.2%) were served by the programs in the northern region. This is closely followed by those in the Western or Piedmont regions with 25 (32.9%) respondents. However, only 19% (n=8) of those in the home visitor survey worked in the northern region, as displayed in Figure 1b. Instead, programs in the Eastern region had the greatest number of home visitors (n=17, 40.5%) participating in the survey.

Furthermore, only 18.4% (n=14) of families in the sample were enrolled in programs in the Eastern region, which has the second greatest number of respondents qualifying to participate in the survey. There were also only 11 program participants (14.5%) from the Central region. In the home visitor survey, there were more respondents working in the central region (n=10, 23.8%) than those in western/Piedmont regions, despite the former having the lowest number of potential survey takers. Given this distribution, readers should be wary of the possibility that the main results of this report may not reflect the true opinions of families and home visitors from Healthy Families Virginia programs at large.

Figure 1a. Please Choose the Program Your Home Visitor Comes From

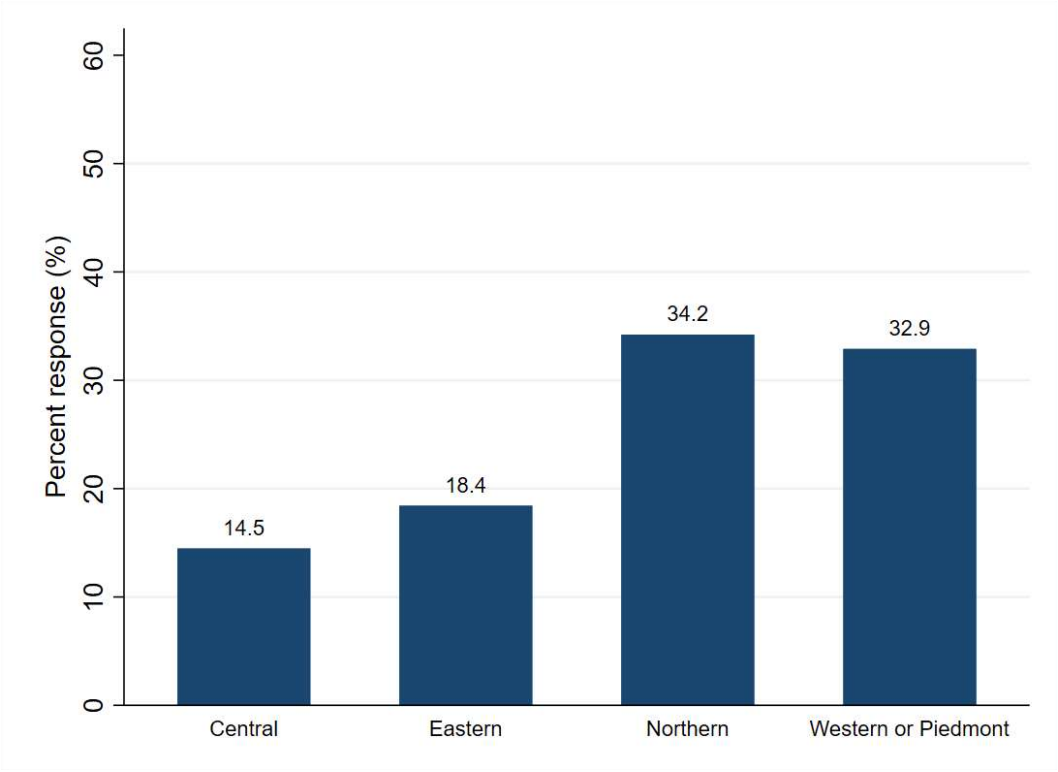
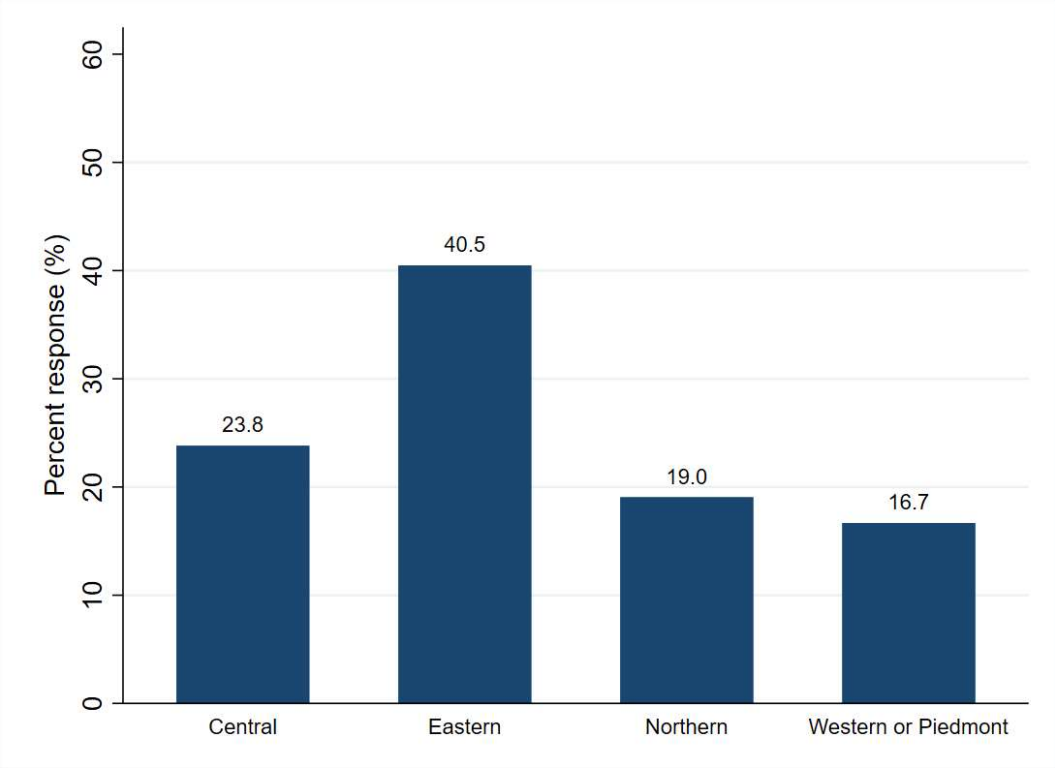


Figure 1b. Please Select the Region in Virginia Served by Your Program



In the home visitor survey, we asked respondents about their current roles within Healthy Families Virginia. Note that a service provider may hold more than one job title. Most respondents were Family Support Specialists (n=27, 64.3%). Other roles include Family Resource Specialist (n=12, 28.6%), Family Support Worker (n=10, 23.8%), Supervisor (n=5, 11.9%), and Parent Educator (n=2, 4.8%).

Finally, most families (n=38, 48.7%) have been receiving home visitation service for one or two years, though nine (11.5%) have been with their program for as long as four or more years. Most home visitors (n=17, 40.5%) have been working for Healthy Families for three to five years. Several of them (n=12, 28.6%) have been with their program for as long as nine or more years. These findings are in Figures 2a and 2b.

Figure 2a. How Long Have You Been Receiving Home Visits?

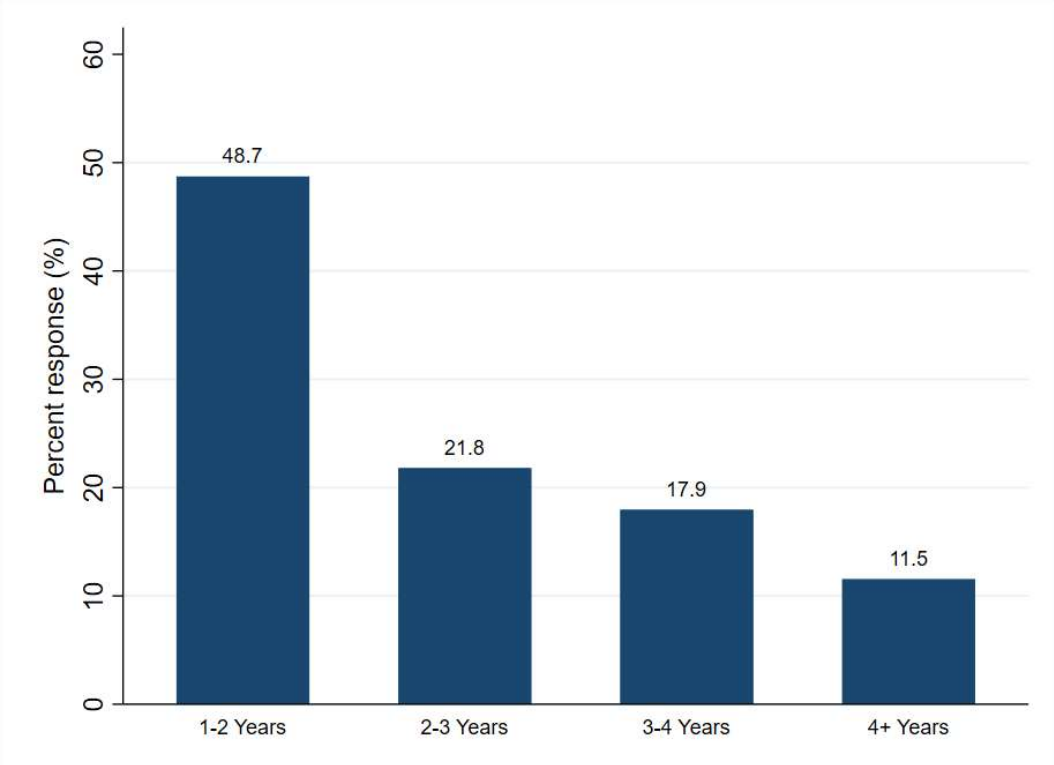
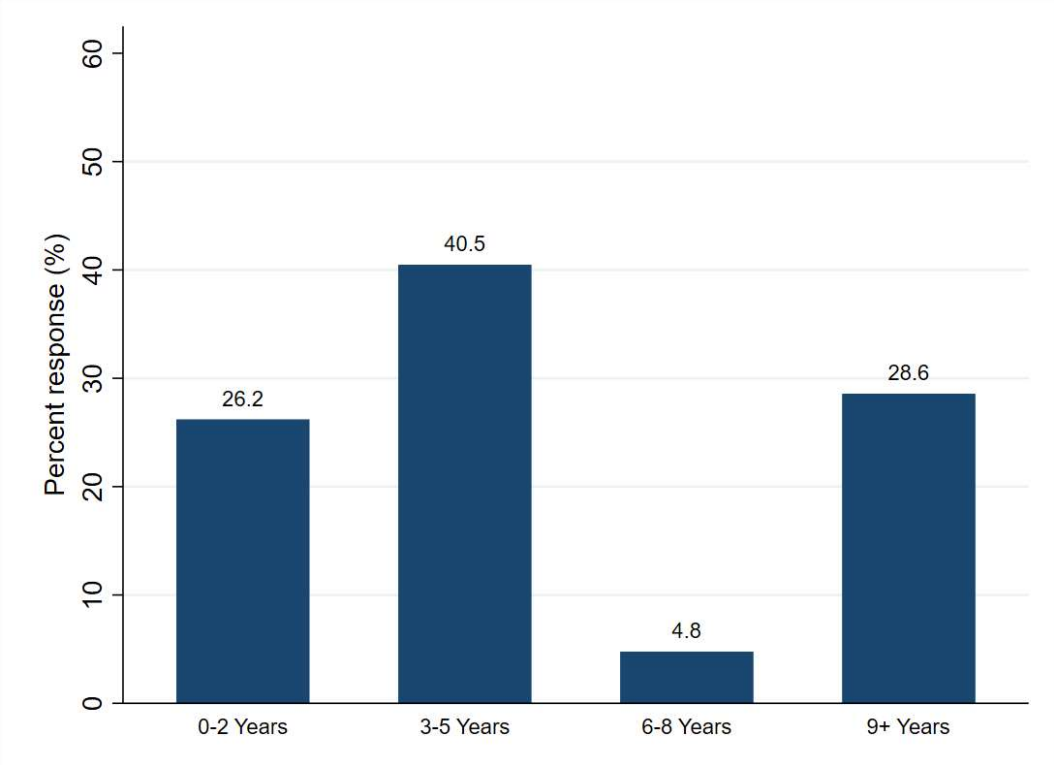


Figure 2b. How Long Have You Been Working for Healthy Families?

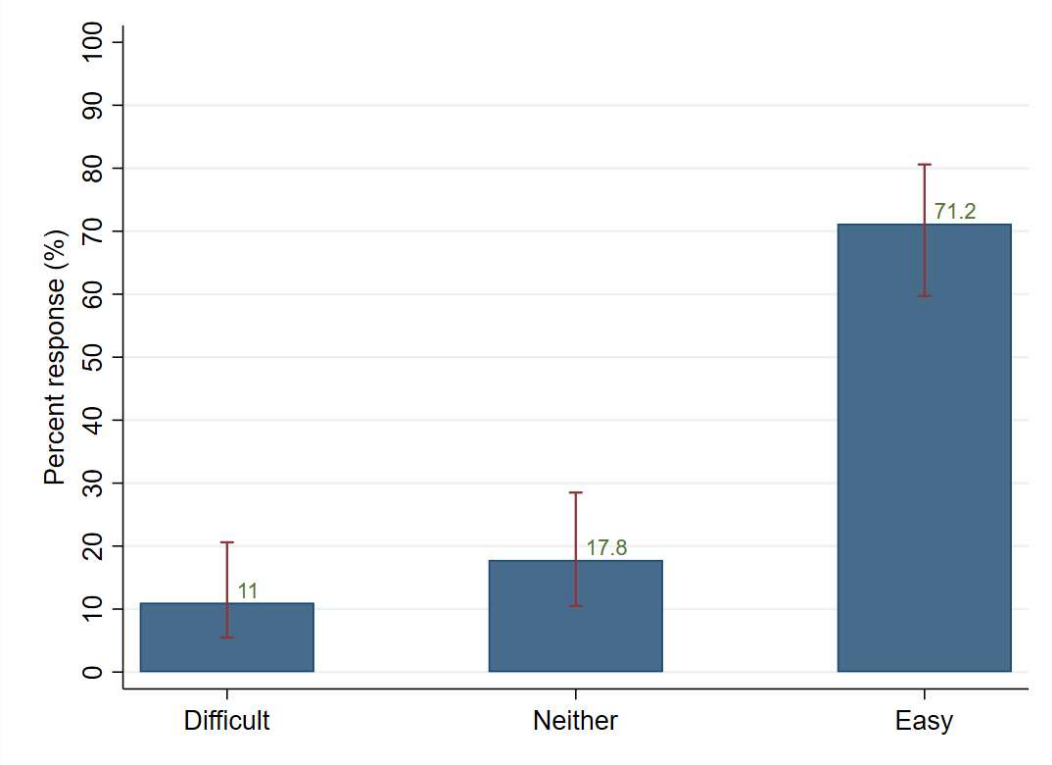


Having studied our survey respondents' demographics, we next analyze their experience with virtual home visits.

IV. Experience with Virtual Home Visits

With the COVID-19 state of emergency declared in March 2020, Healthy Families programs had to adapt quickly and continue home visitation virtually. Fortunately, the majority of their participating families (N=52, 71.2%) found it easy to adapt to the virtual visits. This estimate is statistically greater than the number of respondents who found the transition difficult (N=8, 11%) and those who perceived it neither easy nor difficult (N=13, 17.8%).

Figure 3a. Family Survey: How Difficult Was to Make the Change from In-person to Virtual Visits?

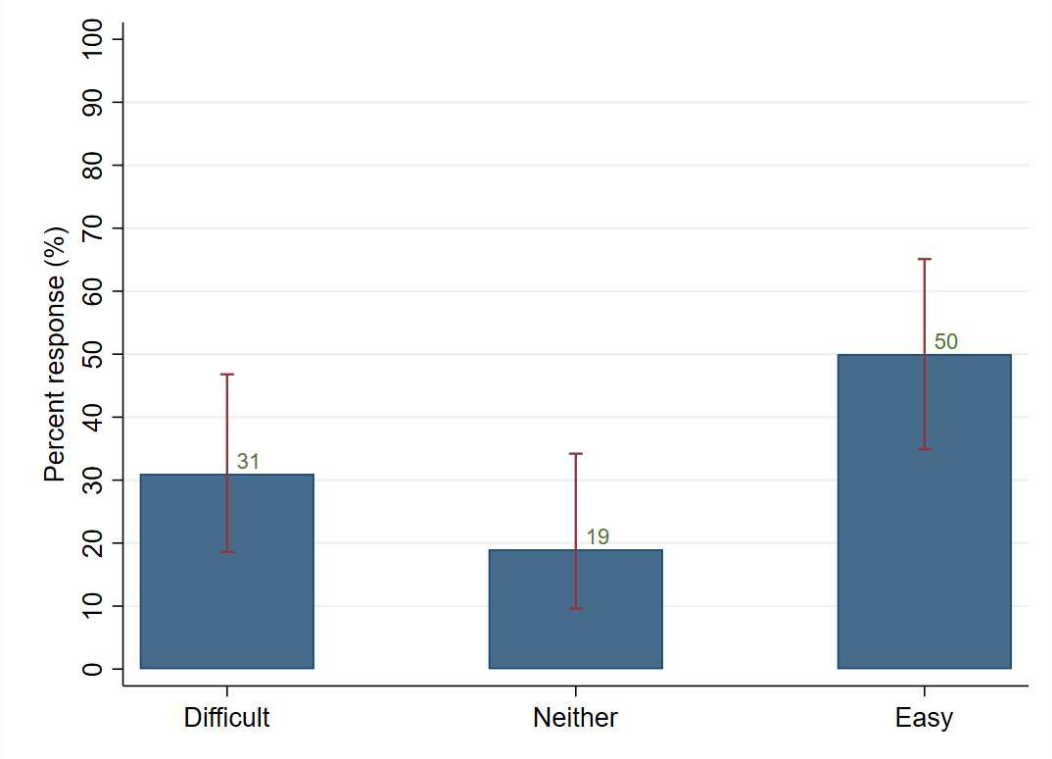


*Note: 95% confidence intervals[6] shown as red lines

[6] A 95% confidence interval represents a range in which we are 95% confident that it would contain the true estimate in the population. In Figure 3a, for example, we are 95% confident that the true proportion of the families who found the transition easy would be somewhere between 60% and 81%. The non-overlapping confidence intervals between the "Easy" and the "Difficult/Neither" categories imply that their differences are not due to chance alone. In this case, the differences are said to be statistically significant.

On the other hand, only half of the service providers (n=21, 50%) said it was easy to transition to virtual home visiting. This estimate is also not statistically greater than the number of home visitors who found the switch difficult (n=13, 31%), as indicated by their overlapping 95% confidence intervals[7] in Figure 3b. This non-significance is likely due to the small sample size. [8] At best, there appears to be a split of opinion among home visitors.[9]

Figure 3b. Home Visitor Survey: How Difficult Was to Make the Change from In-person to Virtual Visits?



*Note: 95% confidence intervals shown as red lines

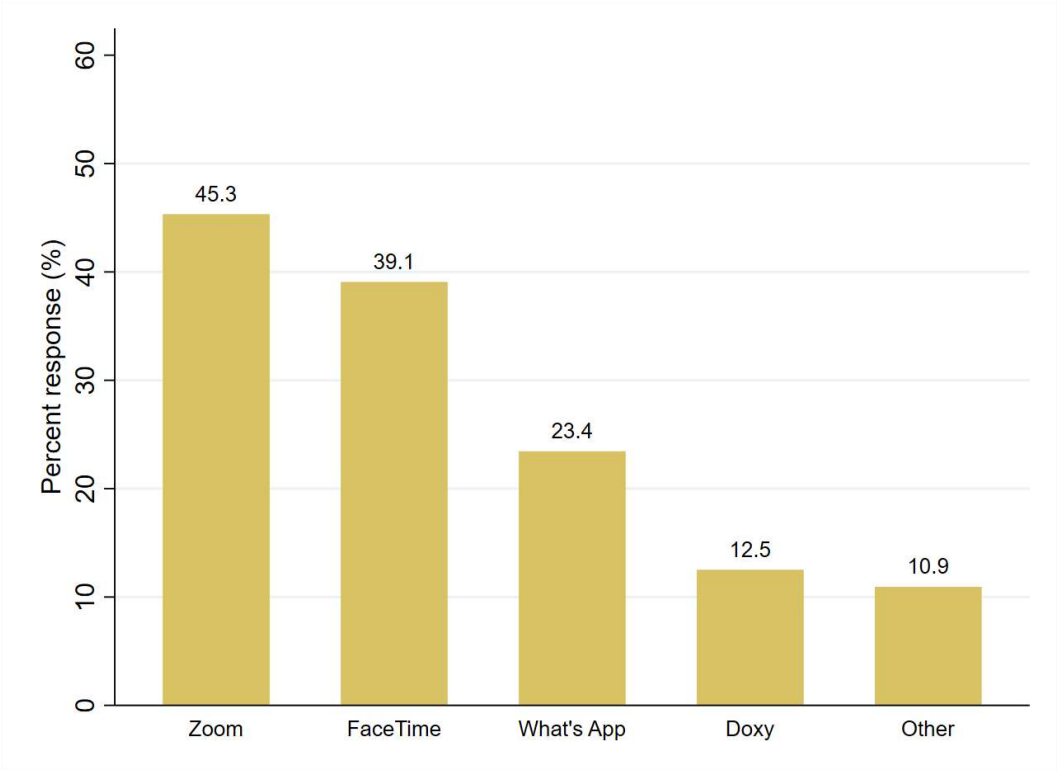
We then look at what communication tools were used for virtual home visits. As represented by the two tallest bars in Figure 4a and Figure 4b, Zoom (n=29, 45.3%; n=27, 69.2%) and Facetime (n=25, 39.1%; n=26, 66.7%) were the most popular options among both families and home visitors, respectively. They also utilized Doxy (n=15, 23.4%; n=7, 17.9%) and Google Meets (n=8, 12.5%; n=4, 10.3%). Among the respondents who chose "Other," two families and four home visitors qualitatively answered Google Duo, and four families and five home visitors wrote Facebook Messenger.

[7] In Figure 3b, we are 95% confident that the true proportion of the home visitors who found the transition easy would be somewhere between 35% and 65%. This overlaps with the confidence interval for the category "Difficult" which spans from 18.6% to 46.8%. In this case, the difference is said to be statistically not significant.

[8] Increasing the sample size helps decrease the width of confidence intervals.

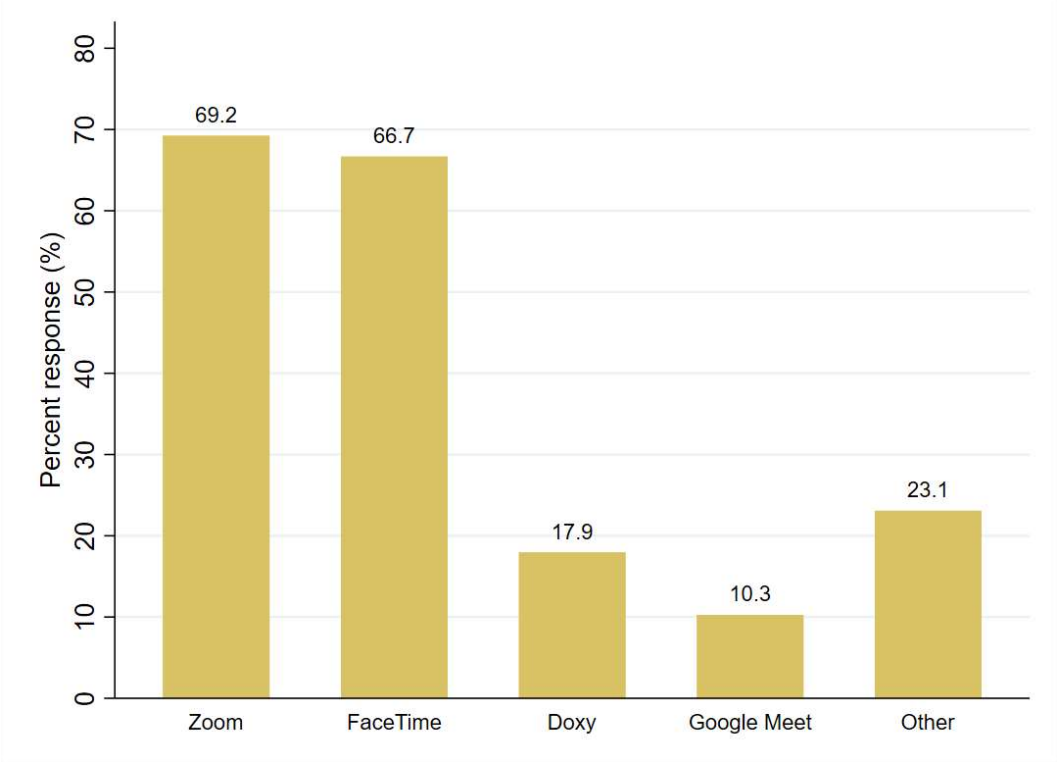
[9] We were curious if respondents' age negatively correlated with their perceived easiness of transitioning to virtual home visiting. However, the two variables did not significantly correlate in either the family (Pearson correlation= -0.12; p-value=0.33) or home visitor survey (0.01; 0.93).

Figure 4a. Family Survey: What Method or App Have You Used for Virtual Home Visiting?



*Note: respondents could choose multiple answer choices

Figure 4b. Home Visitor Survey: What Method or App Have You Used for Virtual Home Visiting?

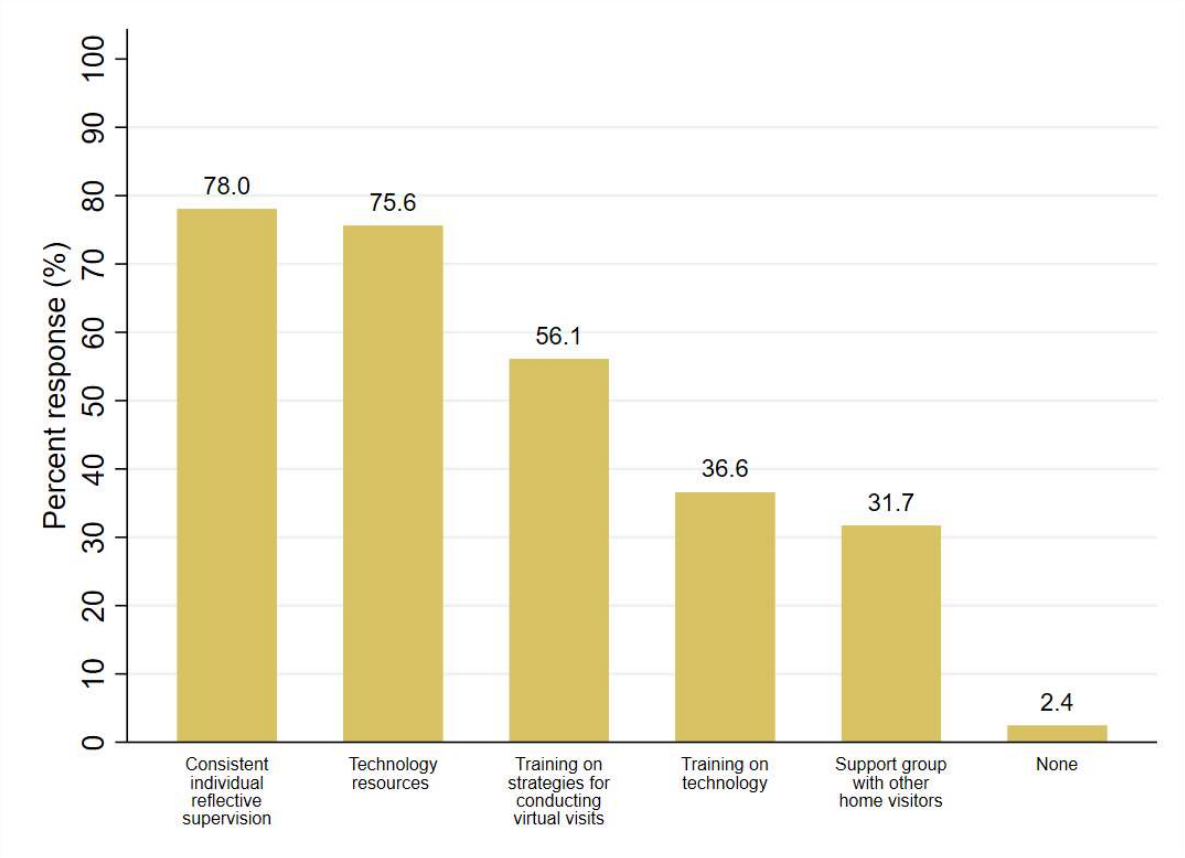


*Note: respondents could choose multiple answer choices

Given the rapid spread of the COVID-19 virus and orders from health officials to close businesses and social distance, social service organizations faced unprecedented difficulties in continuing to provide services to families during the Pandemic. As a result, Healthy Families Virginia provided their program staff a variety of supports to help facilitate the new mode of delivering services.

As shown in Figure 5, the most common support was consistent individual reflective supervision with program managers and/or individual supervisors (n=32, 78%). This is closely followed by help with technology resources (n=31, 75.6%) such as computers, laptops, tablets, microphones, webcams, and other hardware. Programs also provided training on strategies for conducting virtual visits with program managers and/or individual supervisors (n=23, 56.1%), training on technology (n=15, 36.6%), and support groups with other home visitors (n=13, 31.7%). Only one respondent (2.4%) said they received no support.

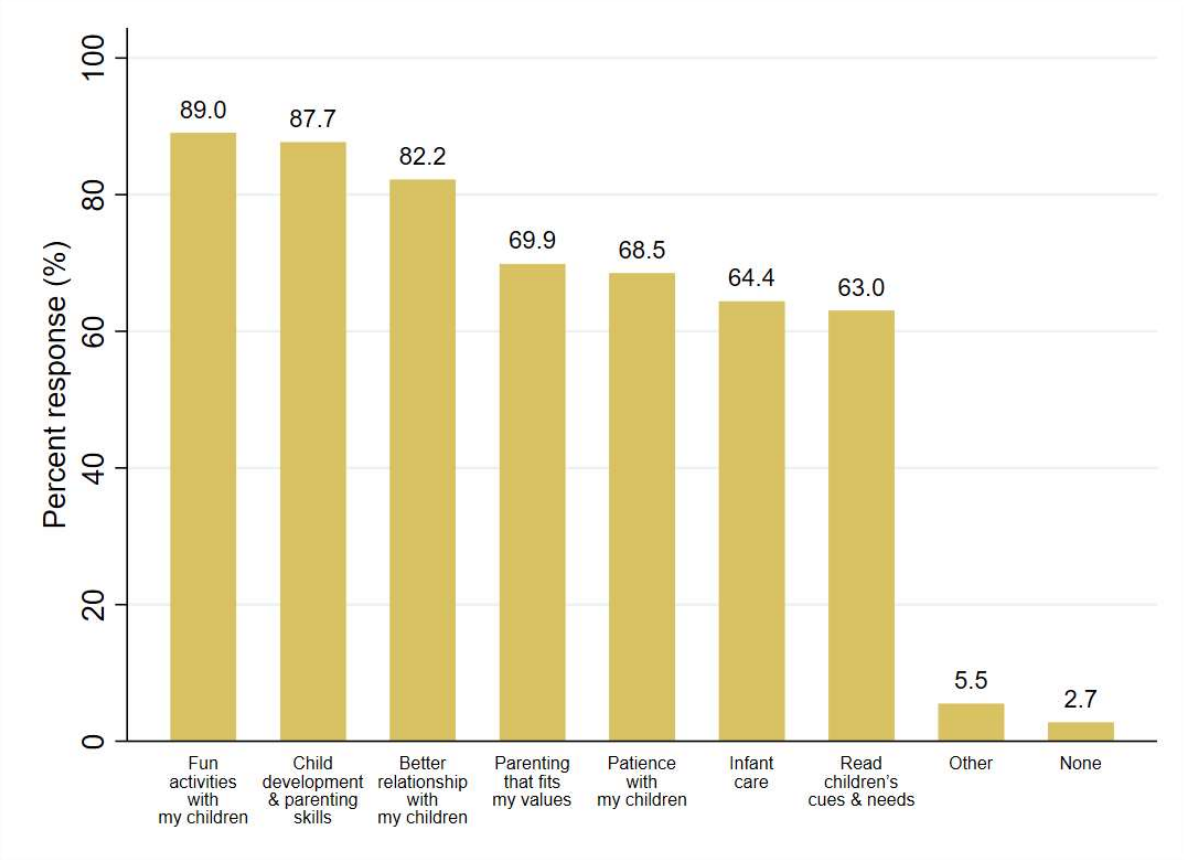
Figure 5. What Types of Support Did Your Program Provide to Help You Adapt to Virtual Visits?



*Note: respondents could choose multiple answer choices

Despite the Pandemic, families were able to receive a multitude of supportive services related to parenting through virtual home visits. This is presented in Figure 6. Sixty-five respondents (89%) said that their home visitors "gave me fun activities to do with my child(ren)," rendering it the most frequently provided service. To similar extents, 64 (87.7%) and 60 (82.2%) families said home visitors "taught me about child development and parenting skills" and "supported my relationship with my child(ren)."

Figure 6. What Types of Parenting Support Did Your Home Visitor Provide Through Virtual Home Visits?



*Note: respondents could choose multiple answer choices except for the "None" category

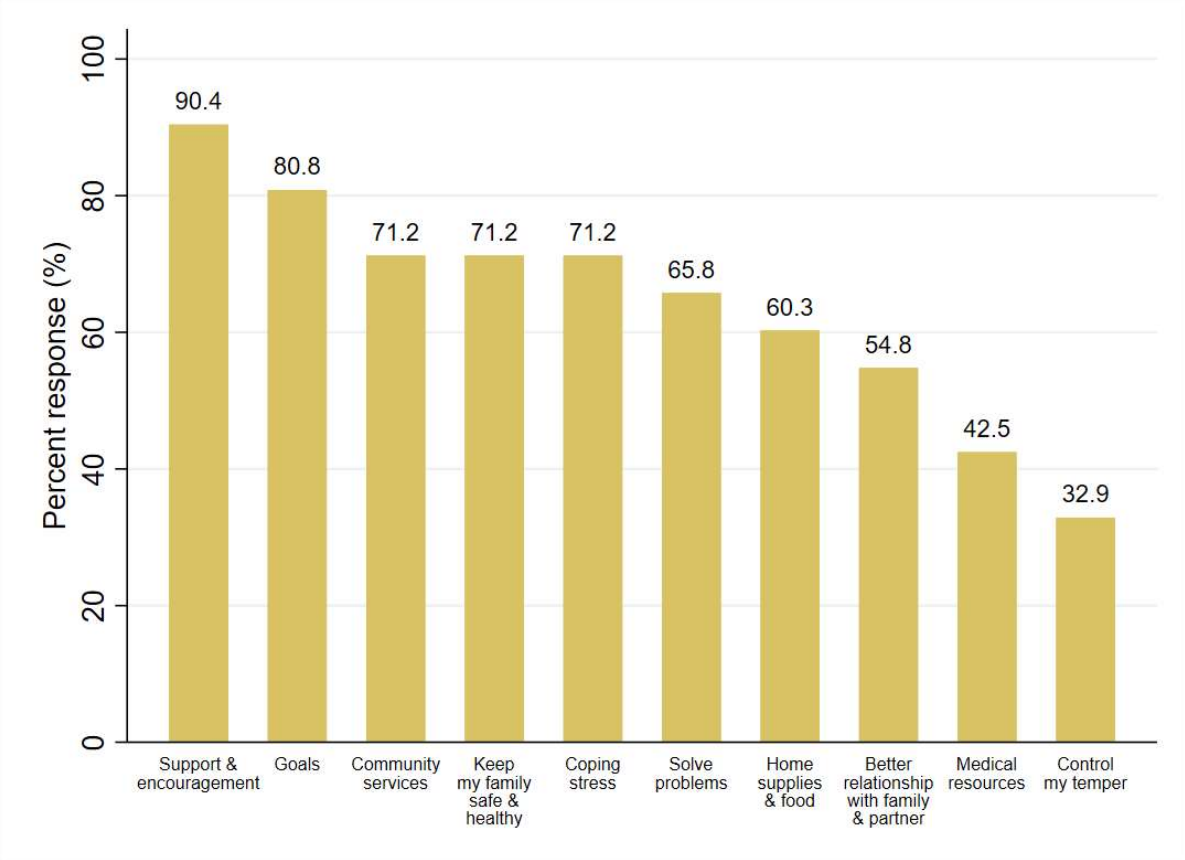
Other parenting support received include "helped me parent in a way that fits my values" (N=51, 69.9%), "helped me become more patient with my child(ren)'s behavior" (N=50, 68.5%), "offered parenting support around infant care" (N=47, 64.4%), and "helped me read my child(ren)'s cues and/or needs" (N=46, 63%). Four families (5.5%) received other types of parenting support, two specifically mentioned community services and resources. However, two respondents (2.7%) claimed to have not been offered any services related to parenting.[10]

[10] There were initially three survey participants who chose this response option. However, two of them actually selected all answer choices provided, meaning that they did receive services related to parenting. In addition, we found another respondent who qualitatively claimed to have not received any support in the "Other" category. We re-coded these data points accordingly.

The program participant families also reported a variety of other supportive services provided through virtual visits. Most often (N=66, 90.4%), they received general "support and encouragement." Home visitors also helped them "set and work on goals to accomplish" (N=59, 80.8%) and "find and/or connect with community services" (N=52, 71.2%). In addition, 52 respondents (71.2%) were offered ideas to "keep my family safe and healthy" and "cope with stress," respectively.

Many others still indicated that home visitors helped them "figure out how to solve problems" (N=48, 65.8%), "access home supplies and food" (N=44, 60.3%), "improve my relationship with my family and/or partner" (N=40, 54.8%), "access medical resources" (N=31, 42.5%)" and learn strategies to control my temper" (N=24, 32.9%).

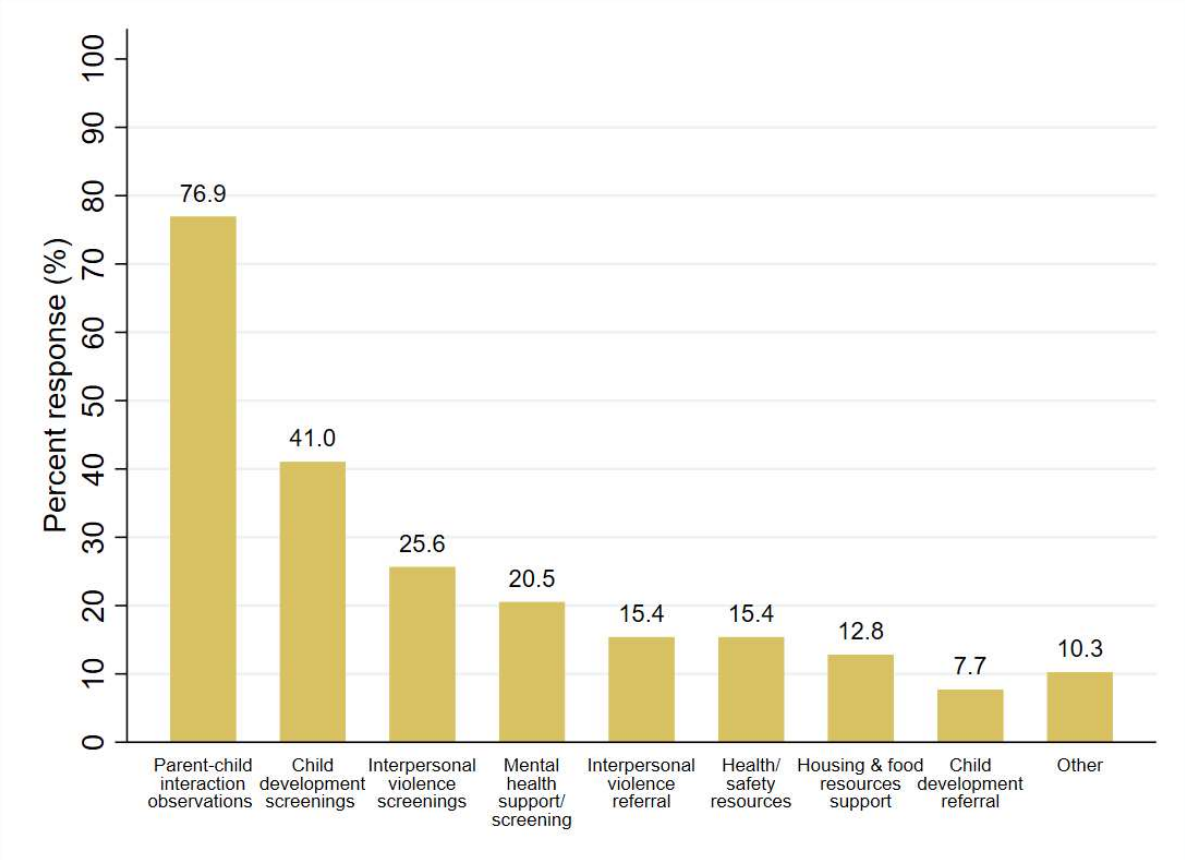
Figure 7. What Types of Support Did Your Home Visitor Provide *You* Through Virtual Home Visits?



*Note: respondents could choose multiple answer choices except for the "None" category

In delivering these services virtually, home visitors encountered numerous challenges. The survey inquired about the most difficult services and resources to provide for participating families through virtual visitation. Figure 8 summarizes the responses.

Figure 8. What Services/ Resources Have Been the Most Difficult to Provide Virtually?

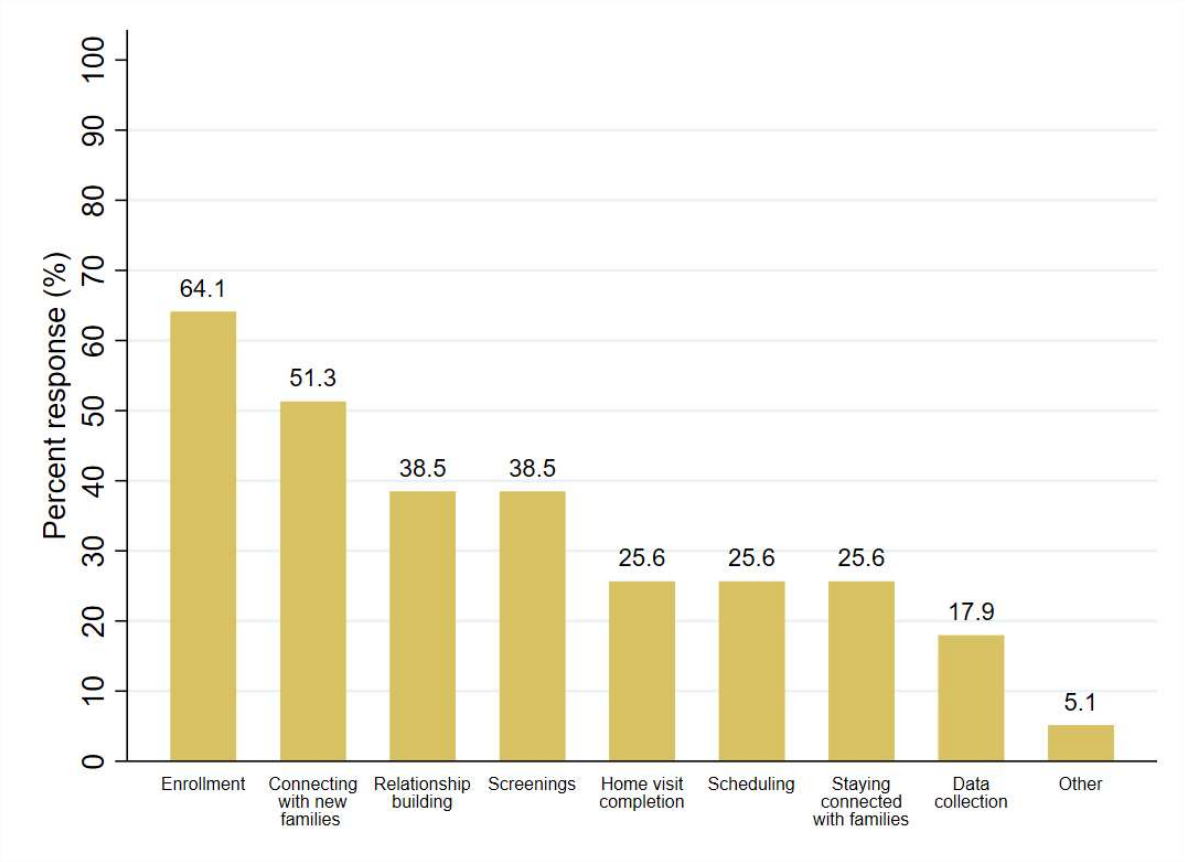


*Note: respondents could choose multiple answer choices

The most common challenge was observing parent-children interaction (n=30, 76.9%). This estimate is nearly twice as much as the next most common category and more than three times as prominent as other categories. Home visitors also indicated difficulty in screenings for child development (n=16, 41%), interpersonal violence (n=10, 25.6%), and mental health support (n=8, 20.5%). To lesser extents, they also chose interpersonal violence referral (n=6, 15.4%), health/safety resources (n=6, 15.4%), housing and food resources support (n=5, 12.8%), and child development referral (n=3, 7.7%).

Relatedly, we inquired about areas in service delivery that presented difficulties when using virtual home visitation. These are listed in Figure 8.

Figure 8. Regarding Service Delivery, in Which Areas Did You Experience Difficulties?



*Note: respondents could choose multiple answer choices

Most often, respondents said enrollment, such as completing paperwork and getting a signature for consent, was the most challenging area of service delivery (n=25, 64.1%). Many also said connecting with new families (n=20, 51.3%), relationship building (n=15, 38.5%), and screenings (n=15, 38.5%) were difficult. Comparatively fewer home visitors identified home visiting completion, scheduling, and staying connected with families (n=10, 25.6% each) as taxing areas with virtual visits. Only seven respondents (17.9%) said data collection was difficult. Among the two individuals (5.1%) who selected "Other," one specified "connecting with community partners."

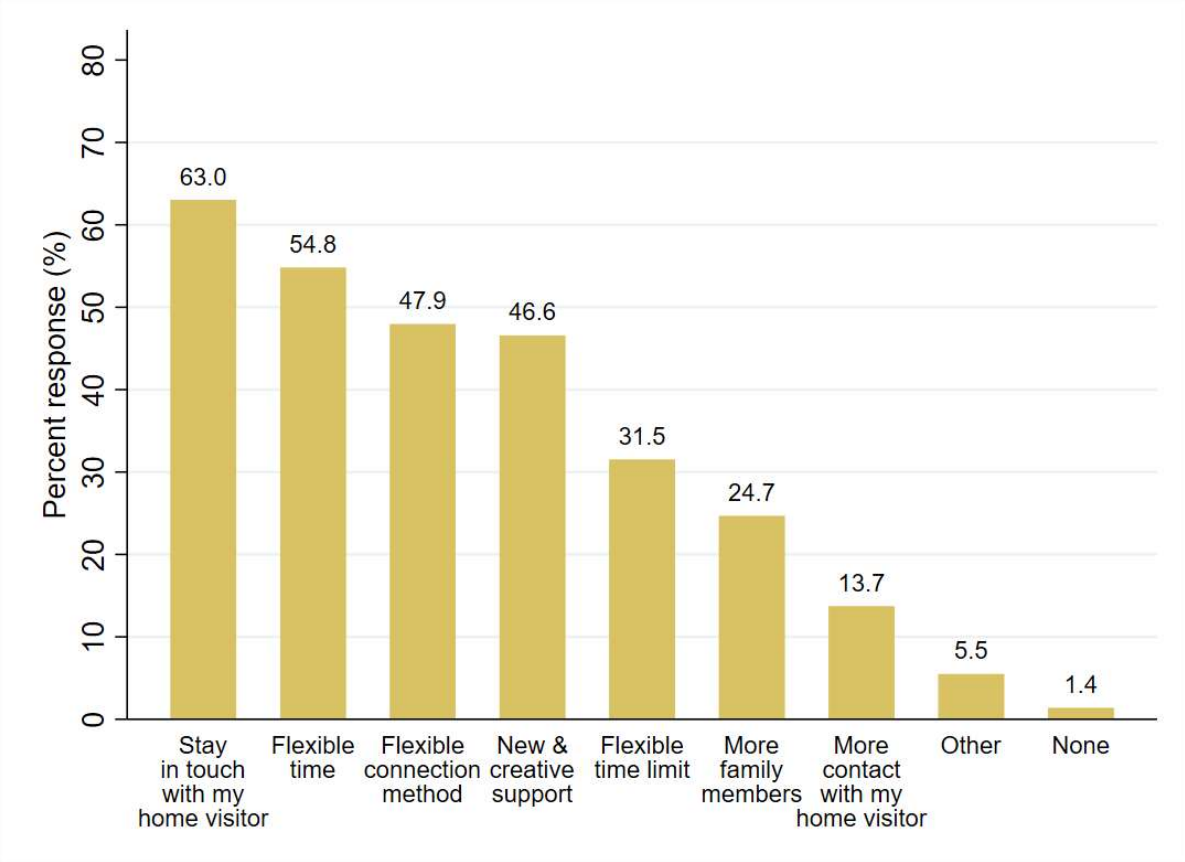
In short, most families were able to make a smooth transition from in-person to virtual home visitation since the onset of the Pandemic. Among home visitors, transitioning was easy for some, but challenging for others. Most virtual visits were conducted via Zoom or FaceTime. Healthy Families programs offered various support to their service providers to facilitate virtual home visitation. While home visitors were able to deliver diverse, supportive services for families virtually, they struggled with observing parent-child interactions and enrolling new families. Next, we investigate how families and home visitors assessed the virtual home visits.

V. Evaluation of Virtual Home Visits

One of the primary goals of the present study is to gauge the perception of virtual home visitation among participating families and home visitors. For this goal, we first explored aspects of virtual home visitation they liked and disliked.

When asked about what they like about virtual home visits, families most often (N=46, 63%) stated that it is easier to stay in touch with their home visitors. The flexibility of virtual visits was also a contributing factor, many citing reasons such as "when visits happen is more flexible" (N=40, 54.8%), "how we connect (text/phone/computer) is more flexible" (N=35, 47.9%), and "how long we connect is more flexible" (N=23, 31.5%).

Figure 9a. Family Survey: What Do You Like About Virtual Home Visits?



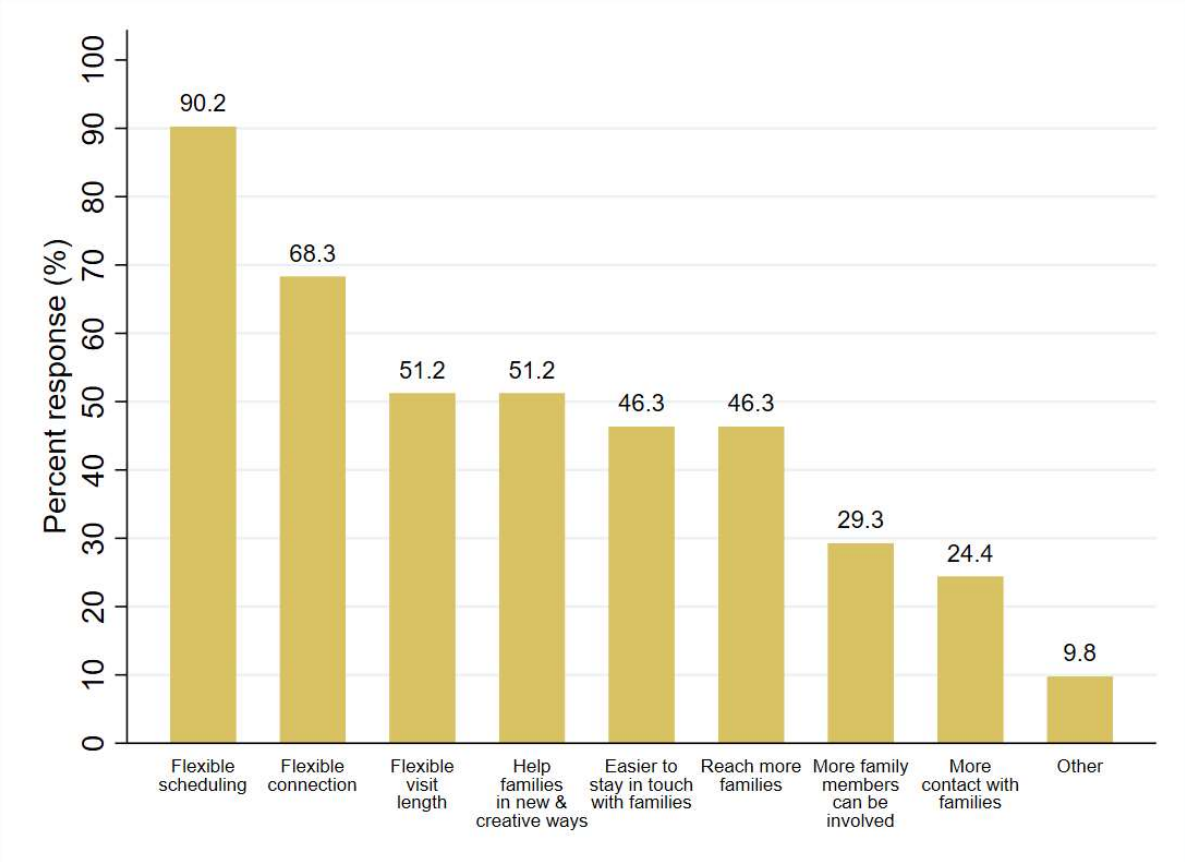
*Note: respondents could choose multiple answer choices

Families also appreciated that their home visitors found new and creative ways to support them (N=34, 46.4%). Relatively fewer respondents opted for "more family members can be involved in visits" (N=18, 24.7%) and "I have more contact with my home visitor now than before" (N=10, 13.7%).

Three of the four individuals who selected "Other" (5.5%) acknowledged that virtual visits are adequate, but they simply prefer in-person visits. Only one respondent (1.4%) said she did not like virtual home visits.[11]

Home visitors most often cited flexible scheduling (n=28, 90.2%) for what they liked about virtual visits. They also enjoyed the flexibility in how they connect with clients (n=28, 68.3%) and how long they connect per visit (n=21, 51.2%). Additionally, home visitors liked that virtual home visiting enabled them to help families in new and creative ways (n=21, 51.2%), stay in touch with families more easily (n=19, 46.3%), and reach more families (n=19, 46.3%). On the other hand, fewer respondents chose "more family members can be involved in visits" (n=12, 29.3%) and "more contact with my clients now than before" (n=10, 24.4%).

Figure 9b. Home Visitor Survey: What Do You Like About Virtual Home Visits?[12]



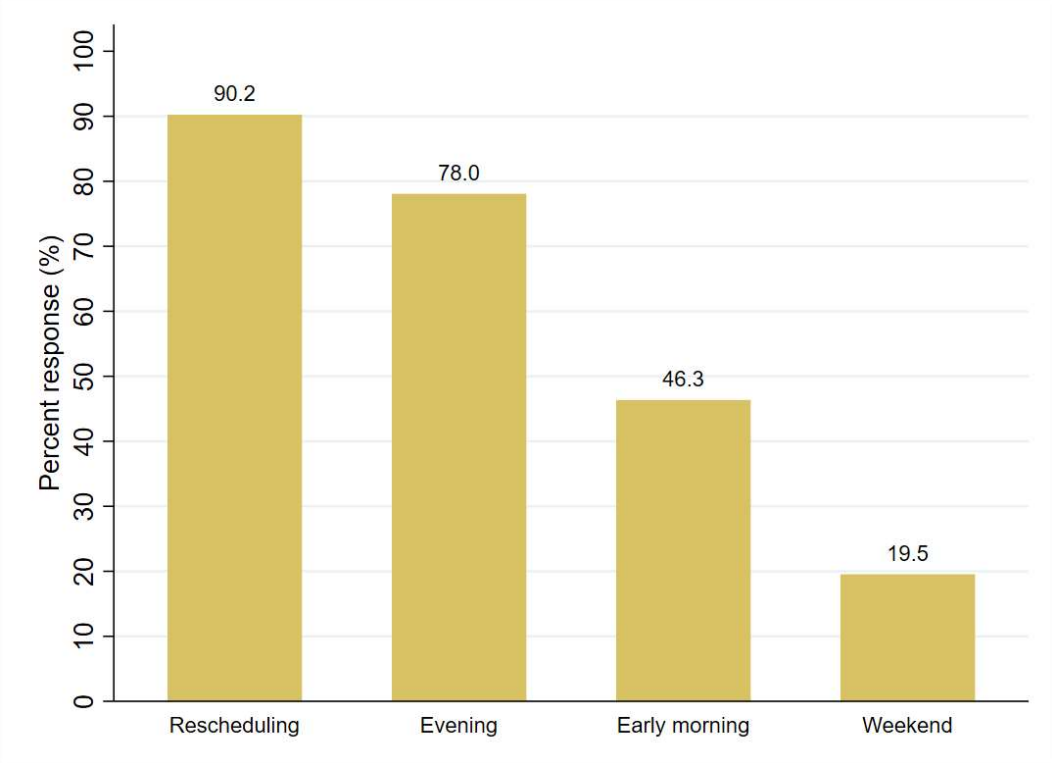
*Note: respondents could choose multiple answer choices

[11] There were initially six family survey respondents who chose "I did not like virtual home visits". However, five of them also picked at least one reason why they liked virtual home visits. Therefore, we re-coded their answers.
[12] There were initially six home visitor survey respondents who chose "I did not like virtual home visits". However, they all picked at least one reason why they liked virtual home visits. Therefore, we re-coded their answers.

Still, four (9.8%) home visitors chose the "Other" category. In addition, two respondents qualitatively stated that some families actually engage better in a virtual setting due to cultural reasons, such as the *cuarentena*, a tradition in which new Latinx mothers prefer not to have any visitors within the first 40 days of childbirth.

It appears that flexibility is a valuable aspect of virtual home visitation for families and home visitors alike. Many home visitors said that they were able to accommodate families through rescheduling (n=37, 90.2%), evening visits (n=32, 78%), and early morning visits (n=19, 46.3%). Weekend visitation was rare (N=8, 19.5%) but available nevertheless.

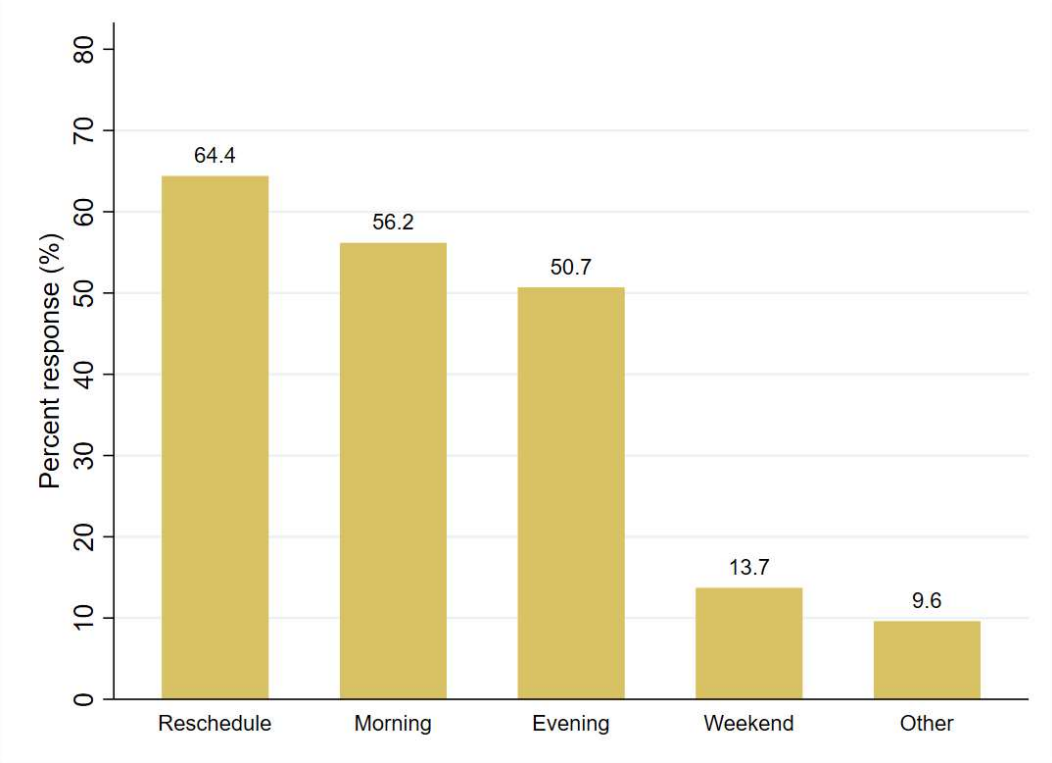
Figure 10a. What Kinds of Scheduling Accommodation for Virtual Visits Were You Able to Provide?



*Note: respondents could choose multiple answer choices

In turn, greater than the majority of families surveyed said that they benefited from rescheduling (N=47, 64.4%), morning visits (N=41, 56.2%), and evening visits (N=37, 50.7%). Again, weekend visits were infrequent (n=10, 13.7%). Seven respondents (9.6%) said they utilized other scheduling options; one answered afternoon visits qualitatively, and five wrote anytime that was convenient for them.

Figure 10b. What Kind of Scheduling Option for Virtual Visits Did Your Home Visitor Offer You?



*Note: respondents could choose multiple answer choices

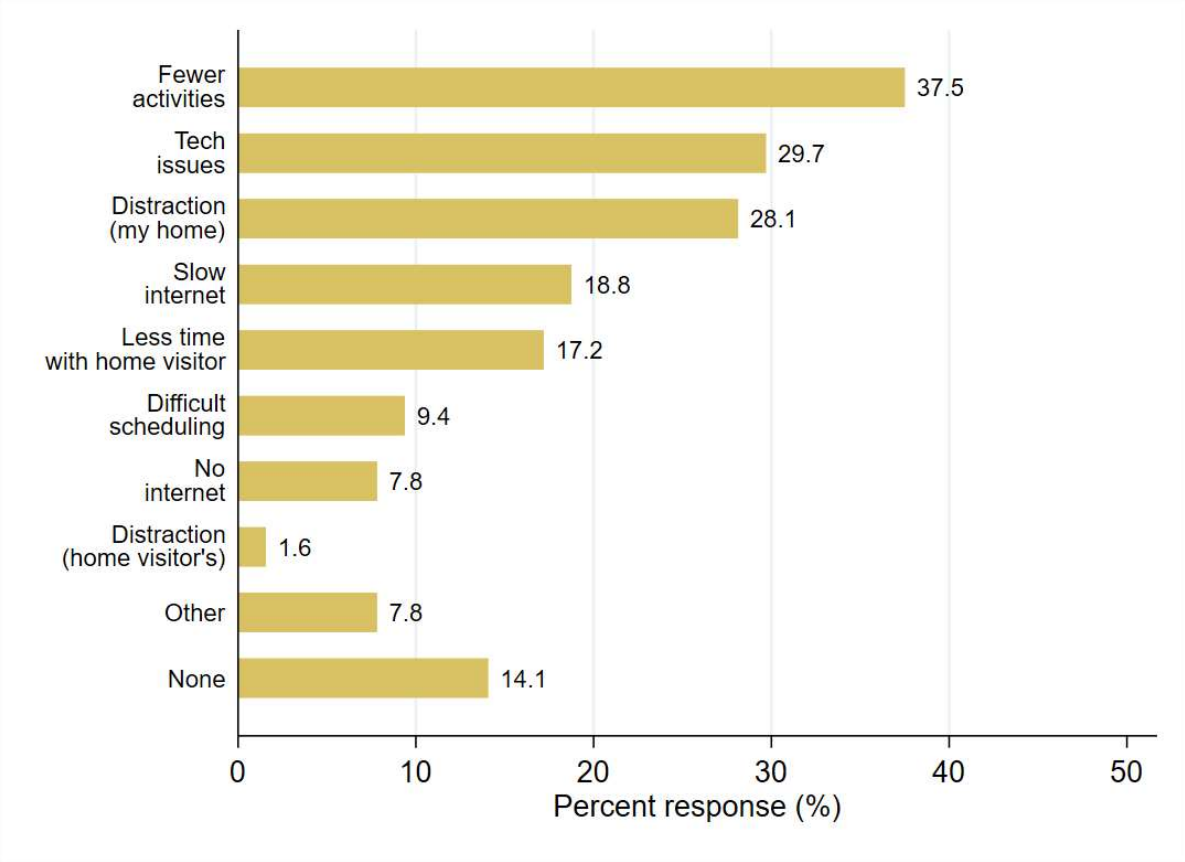
The survey also inquired about what has been difficult about virtual home visits. Among families, the most common complaint was that they could do fewer activities with their home visitors (n=24, 37.5%), followed by technology issues (n=19, 29.7%) and distractions in their home (n=18, 28.1%). Some also listed slow or unreliable internet connection (n=12, 18.8%) and not being able to spend as much time with their home visitors (n=11, 17.2%).

A selective few chose difficult scheduling (N=6, 9.4%) and no or irregular internet access (N=5, 7.8%) as the challenging aspects of virtual home visits. Only one respondent (1.6%) mentioned distractions in his home visitor's home.

Five respondents opted for the "Other" category. Among them, one expressed that she felt uncomfortable talking on the phone or video. Still, nine individuals qualitatively stated that there was nothing they disliked about virtual home visits.[13]

[13] These were originally recorded as “Other”. We created a new category “None” to account for these responses.

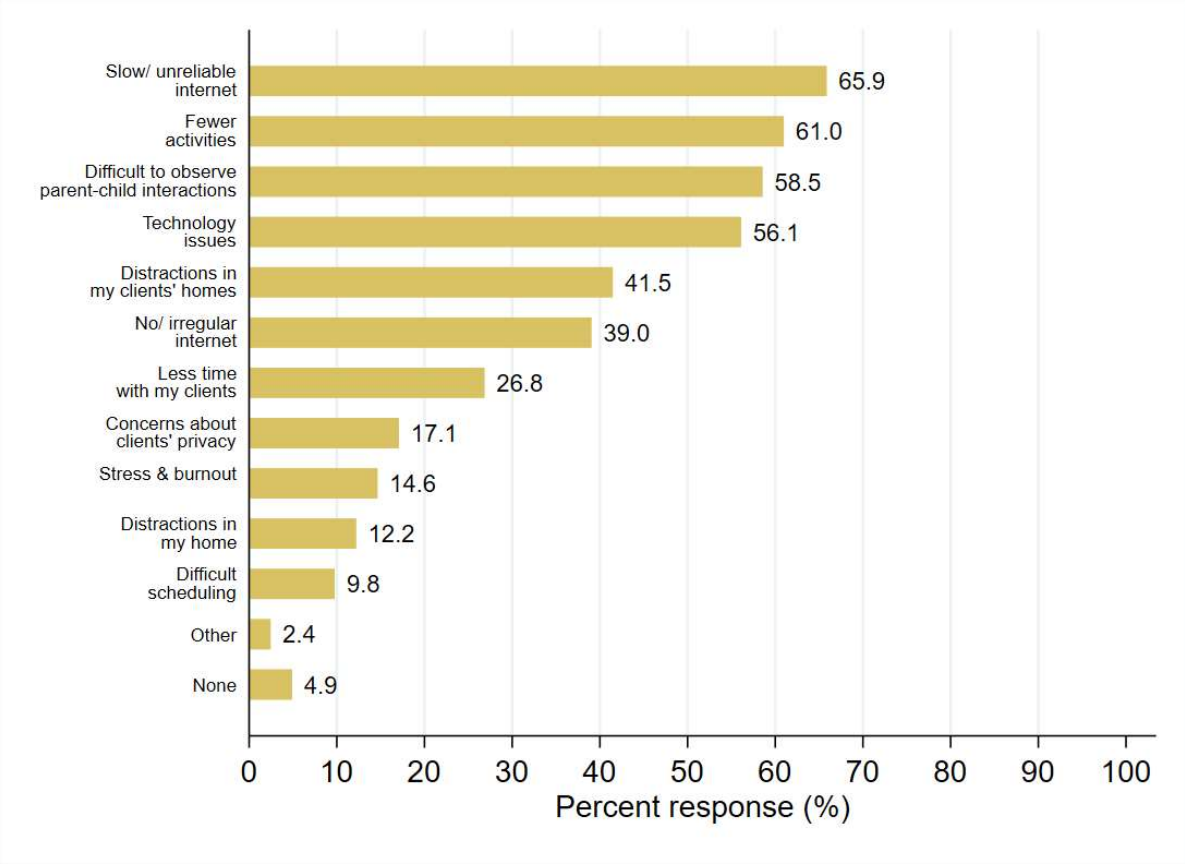
Figure 11a. Family Survey: What Has Been Difficult About Virtual Home Visits?



*Note: respondents could choose multiple answer choices

For service providers, the main disadvantage of virtual home visits was slow or unreliable internet (n=27, 65.9%). To a similar extent, they also chose fewer activities with clients and family members (n=25, 61%), difficulty in observing parent-child interactions (n=24, 56.1%), and issues with technology (n=23, 56.1%) as challenges. Other dissatisfying aspects were distractions in clients' homes (n=17, 41.5%), no or irregular internet (n=16, 39%), and not spending as much time with clients (n=11, 26.8%). Only two respondents (4.9%) said that they did not find anything challenging about virtual home visits.

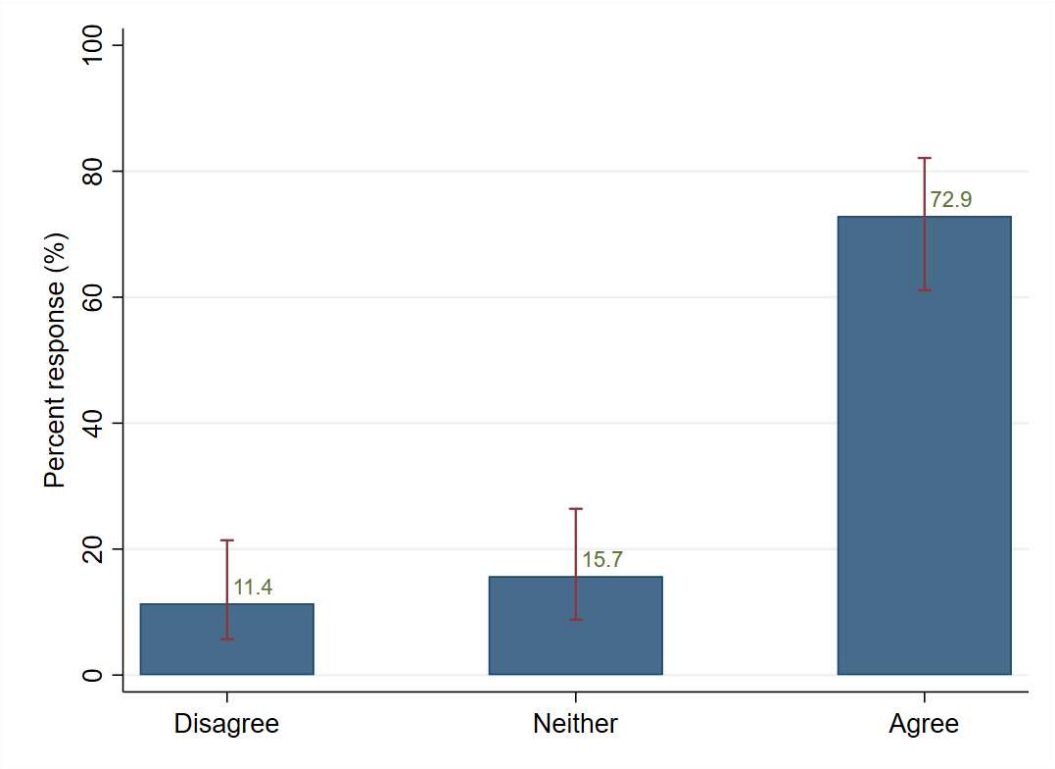
Figure 11b. Home Visitor Survey: What Has Been Difficult About Virtual Home Visits?



*Note: respondents could choose multiple answer choices

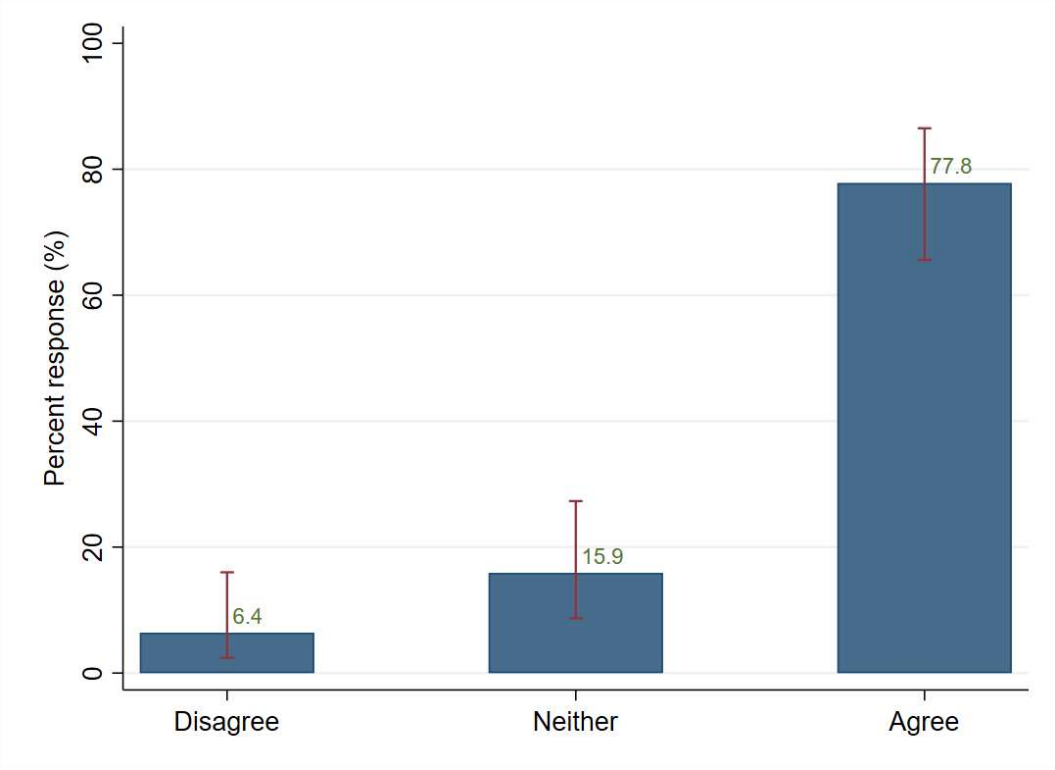
We inquired into how families and home visitors compare virtual visits to the original in-person visits. In the family survey, we asked whether respondents think virtual visits are as interesting, informative, and useful as in-person visits. As displayed in Figures 12a through 12c, there appears to be a general consensus; virtual visits were considered as similarly interesting (N=51, 72.9%), informative (N=49, 77.8%), and useful (N=51, 82.3%). The proportion of respondents who agreed was statistically greater than those of respondents disagreed and those who neither agreed nor disagreed.

Figure 12a. Compared to In-person Visits, Virtual Visits Are: As Interesting



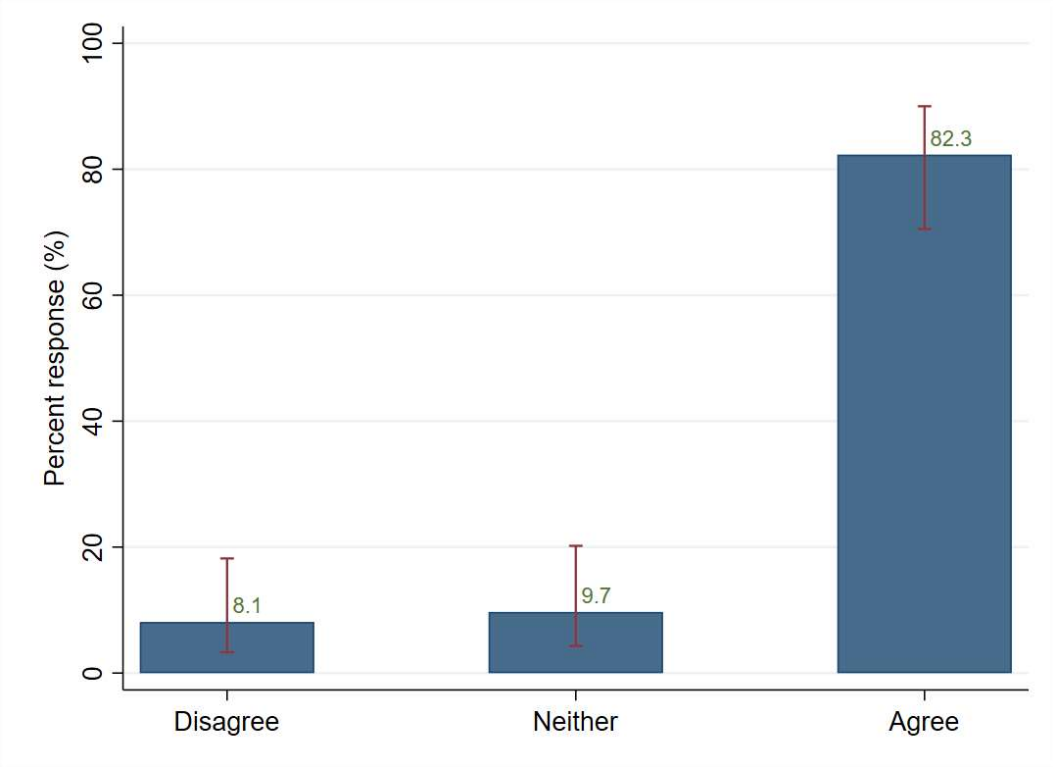
*Note: 95% confidence intervals shown as red lines

Figure 12b. Compared to In-person Visits, Virtual Visits Are: As Informative



*Note: 95% confidence intervals shown as red lines

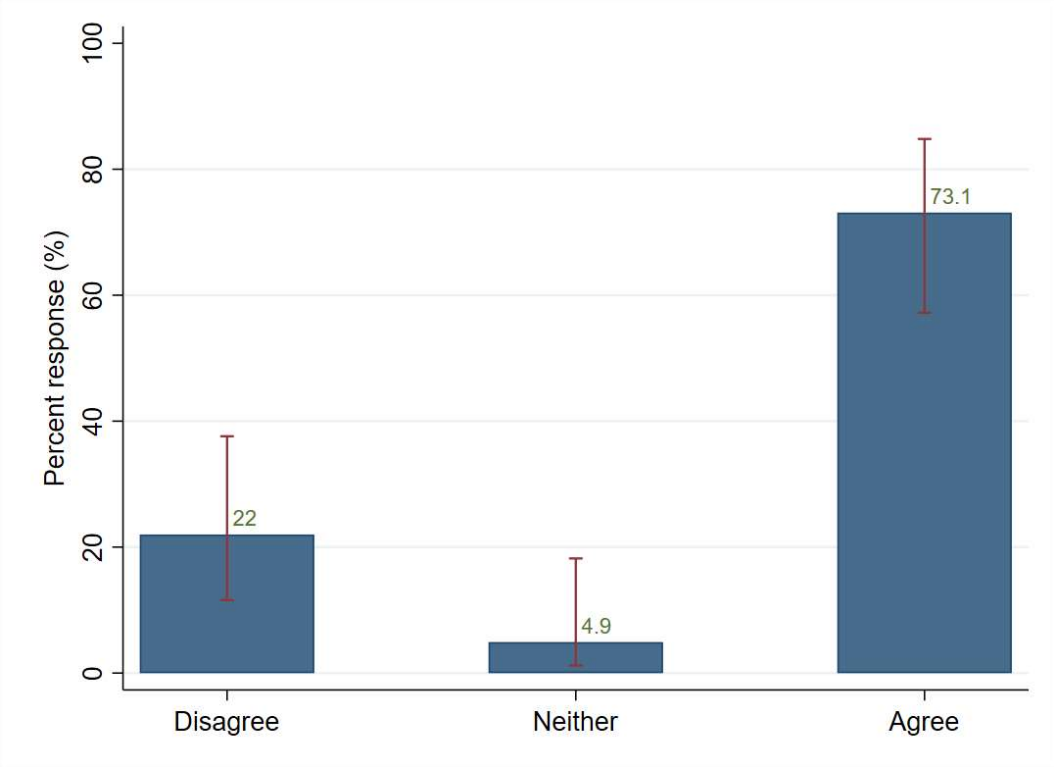
Figure 12c. Compared to In-person Visits, Virtual Visits Are: As Useful



*Note: 95% confidence intervals shown as red lines

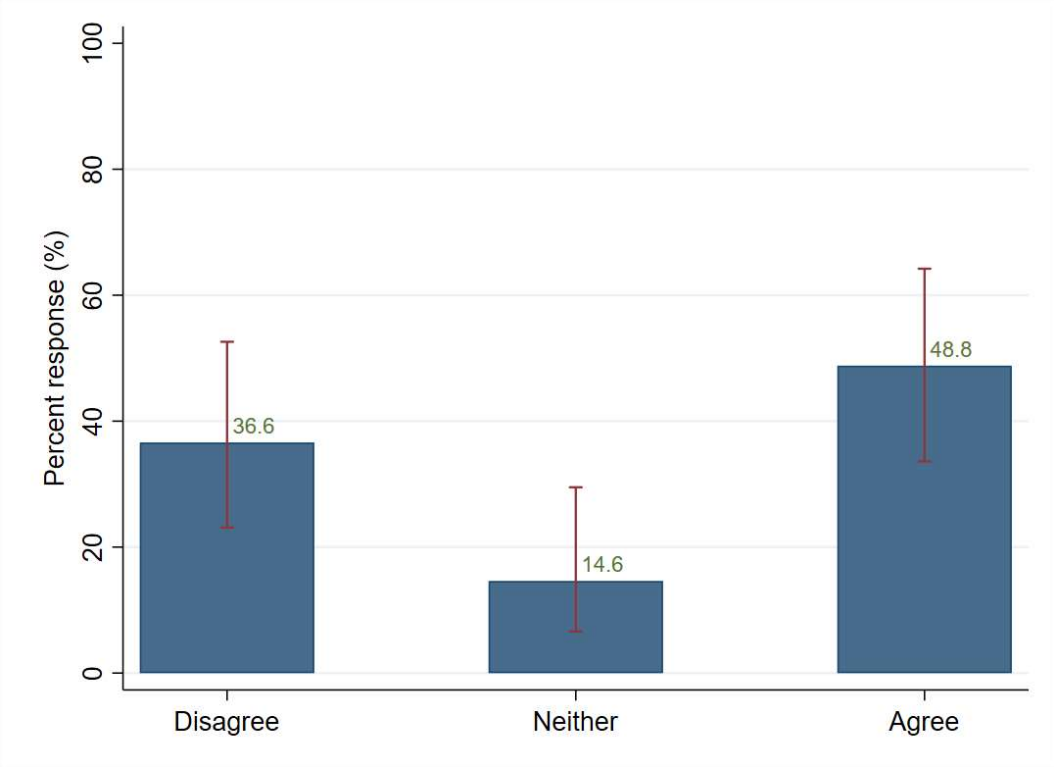
In their respective survey, home visitors were asked whether they think virtual visits are as engaging, rewarding, and informative as in-person visits. According to Figure 13a, most home visitors (n=30, 73.1%) agreed that virtual and in-person visits were similarly informative. This estimate is statistically distinct from those who disagreed (n=9, 22%) and those who neither agreed nor disagreed (n=2, 4.9%). In Figures 13b and 13c, 20 respondents deemed virtual home visitation as engaging (48.8%) and rewarding (50%). However, more than half as many (n=15, 36.6% for the former; n=12, 30% for the latter) disagreed with the statements. Moreover, the 95% confidence intervals all overlap. These responses suggest that the differences observed in Figures 13b and 13c may not be statistically significant. At this point, it appears that home visitors perceive virtual home visits as comparatively informative as the in-person alternative.

Figure 13a. Compared to In-person Visits, Virtual Visits Are: As Informative



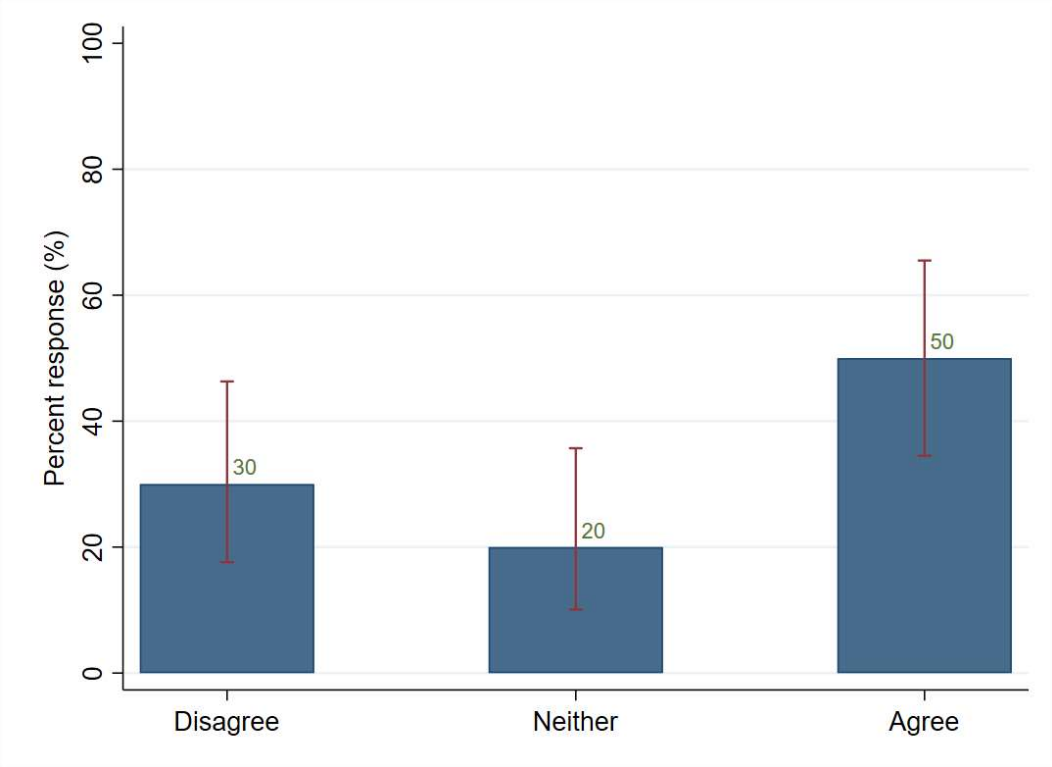
*Note: 95% confidence intervals shown as red lines

Figure 13b. Compared to In-person Visits, Virtual Visits Are: As Engaging



*Note: 95% confidence intervals shown as red lines

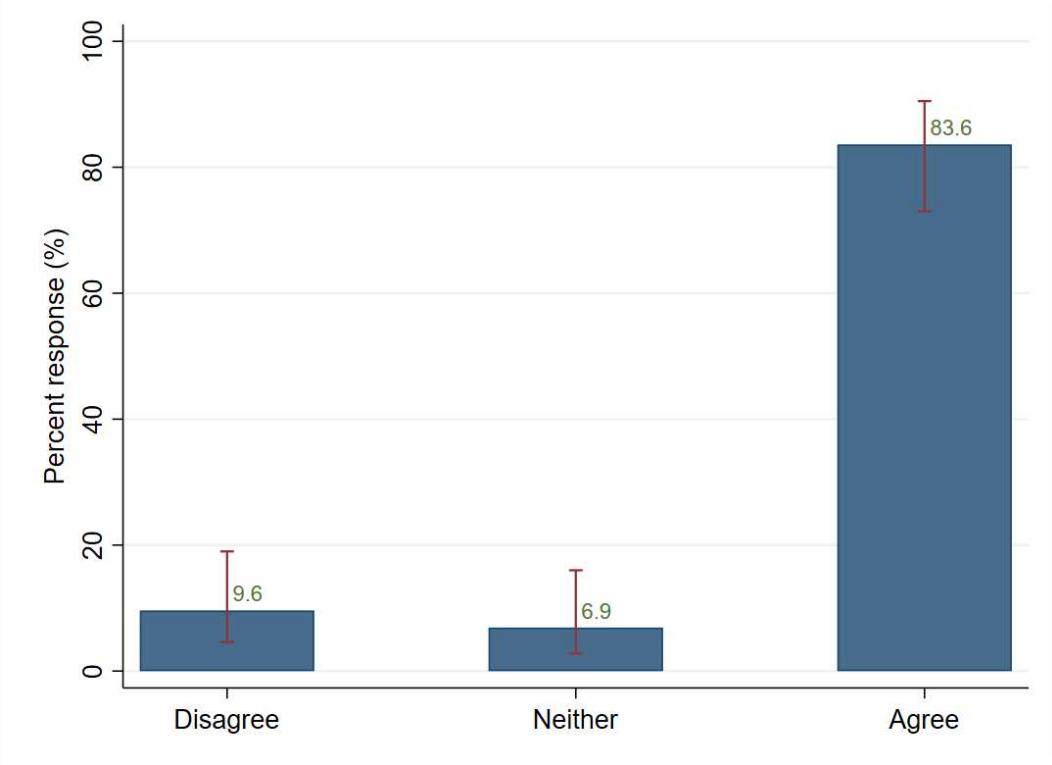
Figure 13c. Compared to In-person Visits, Virtual Visits Are: As Rewarding



*Note: 95% confidence intervals shown as red lines

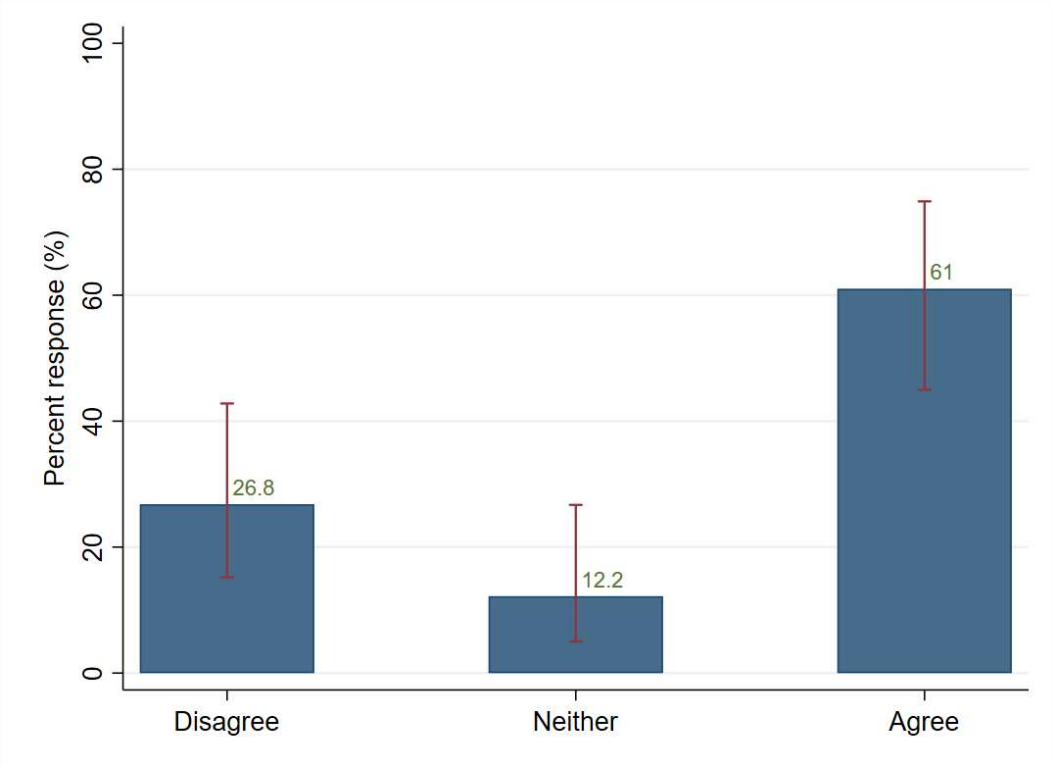
One potential concern about virtual home visitation is that families and home visitors might find it too impersonal to develop a connection with each other. For this reason, the survey asked to what extent respondents agree with the following statement: compared to in-person visits, I feel as connected with my home visitor/the families as during virtual visits. The results are summarized in Figures 14a and 14b. The majority of families (n=61, 83.6%) and home visitors (n=25, 61%) said they felt as much connection during virtual visits. This opinion is statistically distinguishable from the few in the "disagree" (n=7, 9.6%; n=11, 26.8%) and the "neither" (n=5, 6.9%; n=5, 12.2%) categories as well.

Figure 14a. Compared to In-person Visits, I Feel as Connected as With My Home Visitor



*Note: 95% confidence intervals shown as red lines

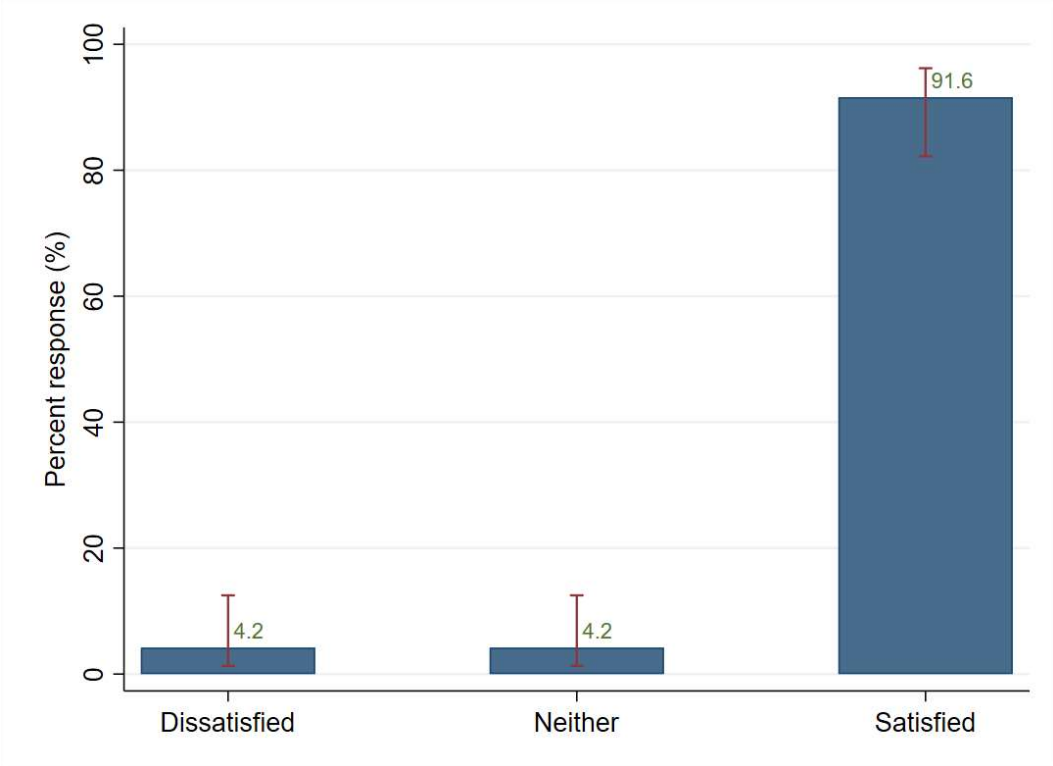
Figure 14b. Compared to In-person Visits, I Feel as Connected as With the Families



*Note: 95% confidence intervals shown as red lines

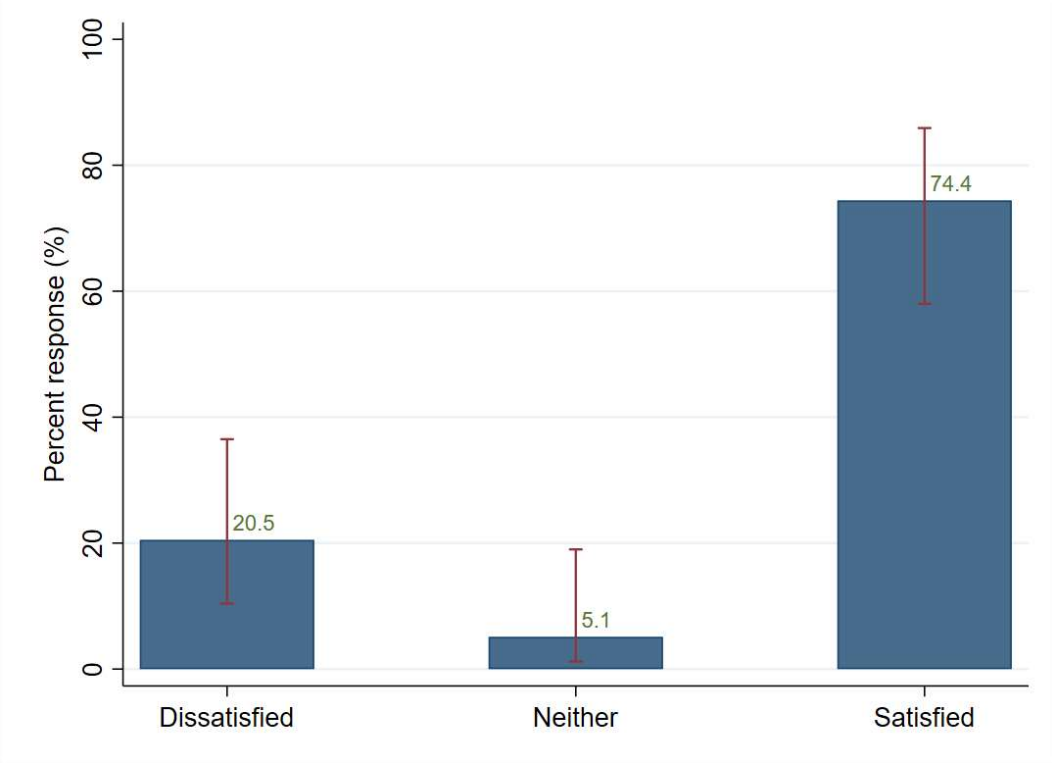
Finally, respondents were asked to rate their overall satisfaction with virtual home visits. As shown in Figure 15a, 92% (n=65) of families expressed satisfaction with the services received through virtual visits. In Figure 15b, close to 75% (n=29) of home visitors were satisfied with delivering services to families virtually. As indicated by the non-overlapping confidence intervals, both estimates are statistically different from the proportions of families and home visitors who were dissatisfied (n=3, 4.2%; n=8, 20.5%) or neither satisfied nor dissatisfied with virtual services (n=3, 4.2%; n=2, 5.1% each).

Figure 15a. Overall, How Satisfied Are You With The Services You Received Through Virtual Visits?



*Note: 95% confidence intervals shown as red lines

Figure 15b. Overall, How Satisfied Are You With Delivering Services to Families Virtually?



*Note: 95% confidence intervals shown as red lines

The general favorability toward virtual home visitation among service providers is surprising given that many of them did not find it as engaging or rewarding. However, we found a potential explanation when analyzing the qualitative responses. In both family and home visitor surveys, respondents were provided an opportunity to explain anything else they would like to share about their experience with virtual home visits in an open-ended question. Among the 16 home visitors who provided answers, seven wrote that virtual visits worked better for some families. For this reason, they advocated continuing some visits virtually in the future. Based on this finding, we surmise that home visitors were satisfied with having discovered a new mode of home visitation that could complement the original approach.

In the family survey, 43 respondents elected to answer the open-ended question. While close to half (n=21, 48.8%) wrote 'none,' the remaining half (n=20, 46.5%) communicated their gratitude for their home visitors and programs. These qualitative responses are available in the appendix of this report.

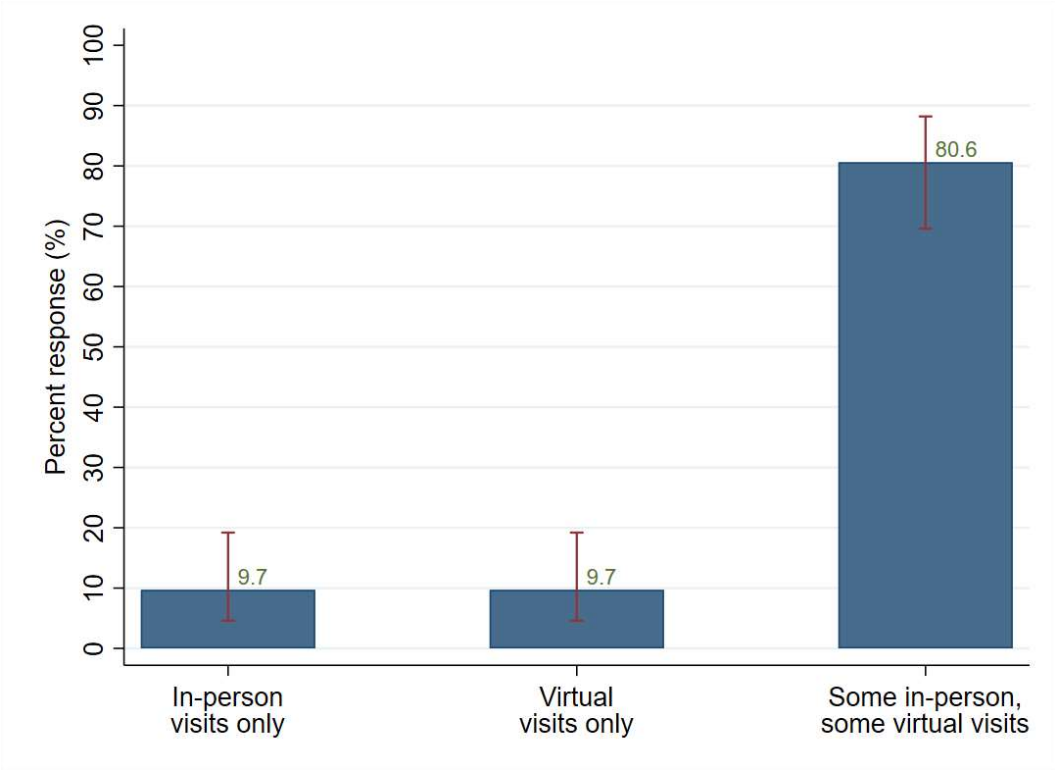
In summary, both families and home visitors appreciated the increased flexibility of the virtual home visits. However, they found many of its limitations, such as slow/unreliable internet and fewer activities to do, as frustrating. In addition, while families largely found the virtual alternative comparable to in-person visitation, home visitors only agreed that it could be as informative. Nevertheless, families and home visitors alike were able to develop a working relationship and were highly satisfied with virtual home visits.

To reiterate, we were interested in assessing the reception of virtual home visitation during the pandemic, and exploring the possibility of utilizing it in the future to expand services in areas currently served and to offer services in other localities across Virginia where the program is not currently available. Therefore, we looked into respondents' perspectives on continuing with virtual home visitations in the future.

VI. Expectations about Future Home Visits

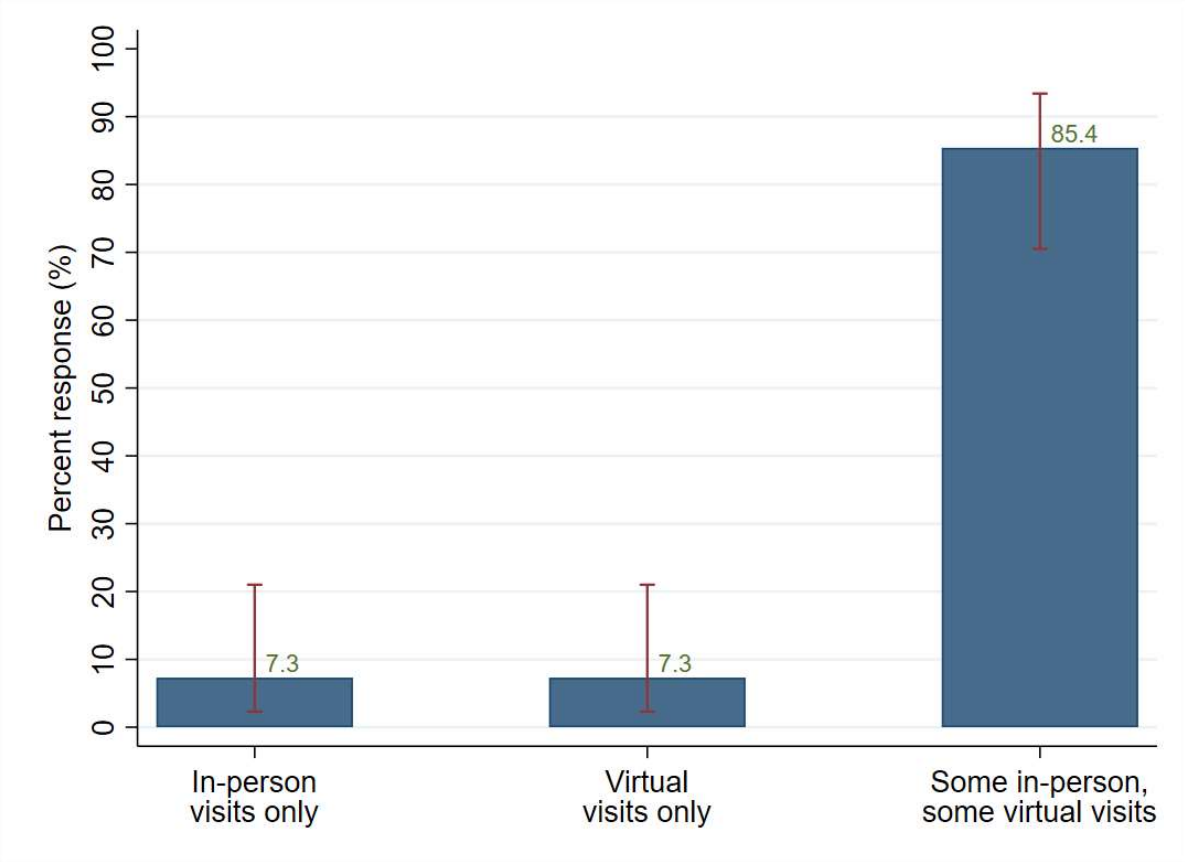
On the topic of future home visits, respondents were asked which mode they would prefer moving forward: exclusively in-person, exclusively virtual, or a mix of both. More than 80% of families (n=58) and home visitors (n=35) indicated that they would favor a blend of some in-person and some virtual home visits. On the other hand, only seven families (9.7%) and three home visitors (7.3%) opted for either in-person or virtual-only, respectively. Given that both groups of respondents were generally satisfied with virtual home visitation despite its limits, it is reasonable that they would want to continue with it to some extent.

Figure 16a. Family Survey: Moving Forward, Would You Prefer to Receive



*Note: 95% confidence intervals shown as red lines

Figure 16b. Home Visitor Survey: Moving Forward, Would You Prefer to Receive

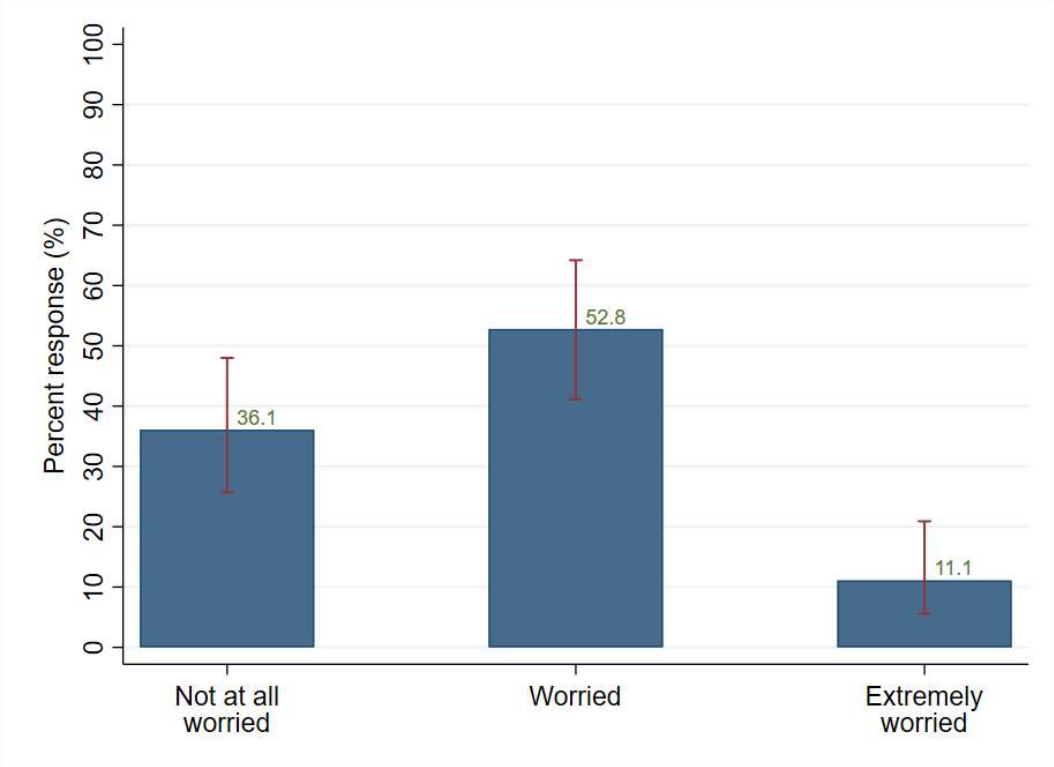


*Note: 95% confidence intervals shown as red lines

It is plausible that families and home visitors are still worried about the COVID-19; consequently, they do not feel ready to fully transition back to in-person visits, even though that would be their preference. For this reason, we asked how worried they would be about COVID-19 if the visits were to become in-person only.

First looking at responses among families in Figure 17a, the most frequently chosen answer among families was "worried" (n=38, 52.8%). However, more than half as many (n=26, 36.1%) expressed that they would not be worried at all. Note also that the 95% confidence intervals of the two bars overlap, meaning that the differences are not statistically significant. There are still eight respondents (11.1%) who admitted that they would be extremely worried about being exposed to the virus. Therefore, it is inconclusive at best whether concern about the COVID-19 affects families' preference for the mode of future home visits.

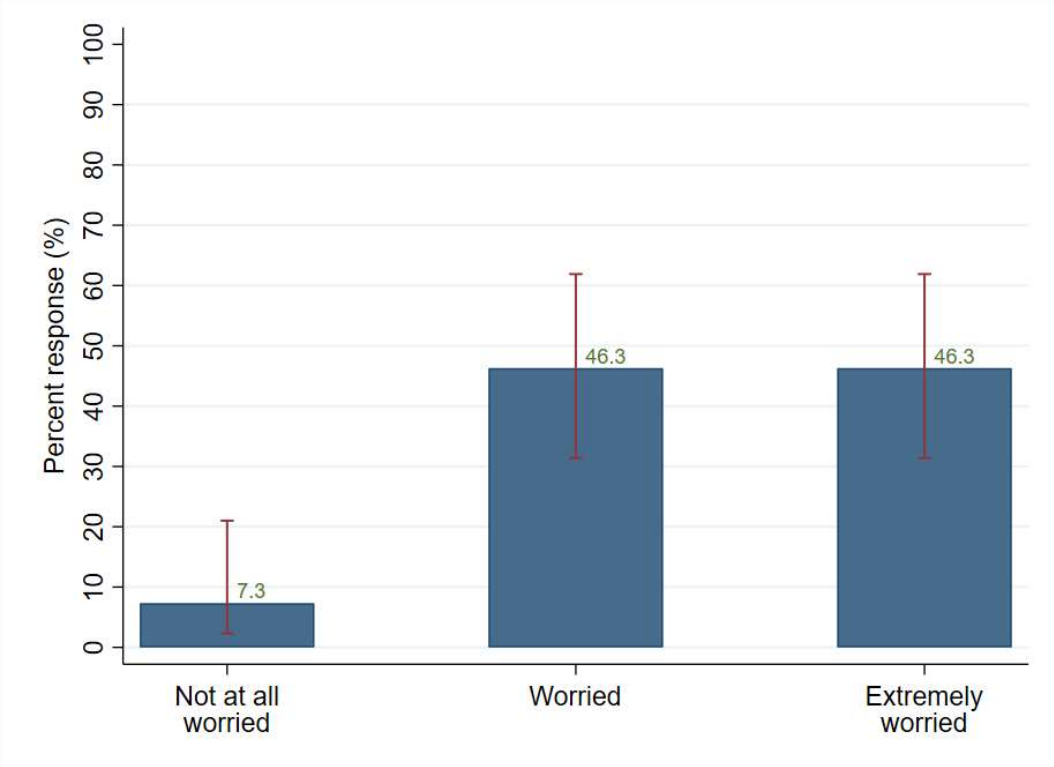
Figure 17a. If your Home Visitor Were To Offer In-person Visits Only,
How Worried Would You Feel About COVID-19?



*Note: 95% confidence intervals shown as red lines

Among service providers, the modal answers in Figure 17b were “worried” and “extremely worried” (n=19, 46.3%, respectively). Both estimates are statistically greater than the 7.3% of respondents (n=3) who were not concerned at all. Therefore, most home visitors appear somewhat wary of the possibility of being exposed to COVID-19 if in-person home visits are reinstituted anytime soon.

Figure 17b. If your Program Were to Offer In-person Visits Only,
How Concerned Would You Feel About Being Exposed to COVID-19?



*Note: 95% confidence intervals shown as red lines

For the foreseeable future, it is likely that the home visitation service will continue virtually due to the Delta and Omicron variants. Therefore, continuing some home visits virtually in the post-COVID 19 time may be worth considering, given its favorable reception among participating families and home visitors.

VII. Summary of Key Findings

1. Transitioning to virtual home visiting was not as much of a challenge among families; more than 70% thought it was easy to adapt to virtual home visits. However, home visitors had mixed feelings regarding the ease of implementing virtual home visitation. While 50% of respondents thought the transition was easy, 31% deemed it difficult; these estimates were not statistically distinguishable.
2. Healthy Families Virginia programs provided a variety of support for their workers, including consistent individual reflective supervision with program managers (78%), technology resources (76%), and training on conducting virtual home visits (56%) to help their staff adapt to virtual home visits.
3. Through virtual home visits, families received a variety of supportive services. For example, the top three parenting support include fun activities with children (89%), lessons on child development and parenting skills (88%), and improving parental-children relationships (82%). Families were also offered general support and encouragement from their home visitors (90%), help with setting and working on goals (81%), and referral to community services (71%).

4. In delivering services and resources virtually, home visitors faced many challenges. Particularly, they identified observing parent-child interaction as the most difficult aspect of conducting virtual home visits (77%).
5. Most families and home visitors appreciated the greater flexibility in scheduling enabled by virtual home visitation. Nevertheless, virtual home visits lacked the desired social components of in-person visits. In particular, both groups of respondents identified fewer activities as the most challenging aspect of virtual home visitation.
6. Altogether, families and home visitors were satisfied with continuing home visitation virtually during the Pandemic. Families generally found virtual home visits very comparable to in-person visits. While home visitors found them as similarly informative, they did not regard delivering services virtually as engaging or rewarding.
7. Both families and home visitors have a strong preference for a mix of both virtual and in-person home visitation in the future.

VIII. Recommendations

Virtual home visitation, despite its limitations discussed in this report, appears to meet many of the needs of program participants and service providers. Overall, families and home visitors were satisfied to continue visits virtually through the COVID-19 Pandemic. Most of them expressed that they would prefer a mix of both virtual and in-person home visitation in the future.

Based on these findings, we feel that virtual home visitation is an excellent complement – but not a perfect substitute – for the original in-person delivery mode. Of course, due to the low response rate of this survey, it would be beneficial to confirm our results with further investigation using a larger sample of the population. Nevertheless, we believe that this study provides preliminary evidence that virtual home visitation can effectively aid home visitors, thereby potentially improving outcomes among participating families, particularly when used together with in-person visitation.

In addition, continuing to utilize virtual home visiting in the future has tremendous cost savings potential. Anecdotal evidence gathered from site directors indicated that their programs were able to save money from mileage reimbursement and vehicle upkeep. Many also noted a reduction in their staff's travel time. Some programs did incur costs in purchasing Zoom accounts ($180 annually) and in some cases technology such as laptops, tablets, and better internet services. Because there is no specific data on these expenses, it is difficult to calculate precisely how much money they saved due to transitioning to virtual home visitation during the Pandemic. However, site directors did note that they were able to make any necessary changes within their budget. We estimate and compare the cost of in-person and virtual visitation below using other available information, and find that there are significant potential savings from incorporating virtual visitation into Healthy Families service delivery model. It will allow expanding services to more families in areas currently served, and offers the potential for expanding services to other areas of Virginia where travel costs are considered a barrier.

The costs of virtual and in-person home visitation are quite different. Virtual visitation requires some fixed costs that do not change regardless of the number of clients served, while in-person visitation incurs variable costs that accumulate as caseload increases. The fixed costs of virtual visitation include internet

service, online meeting software, and occasionally hardware (e.g. smartphones, tables, laptops, cameras). Each Healthy Family site provider should already have the necessary internet service and computers, tablets, or phones needed for staff to conduct virtual home visits. They may need to purchase tablets for some families that do not have any means to participate in online meetings. But site directors indicated this was not necessary for most families. They could use free versions of online meeting software if they choose, with the caveat that workers should be able to record and save a copy of each meeting. Most online meeting software requires a purchase in order to record meetings or to conduct meetings that last longer than 30 or 40 minutes. For example a Zoom Pro account ($180/year) would allow the entire staff to conduct an unlimited number of meetings per month and up to 30 hours per meeting with recording capability.

For site providers who have already issued smartphones, tablets, and/or computers to their staff, the cost of providing virtual home visitation could be as low as $180 per year, if utilizing online meeting software such as Zoom Pro. Hence, incorporating virtual home visitation into the Healthy Families practice model could be done with very little, if any additional operating cost. Because these fixed costs do not change, they are spread across the entire caseload. Hence the cost per case for virtual visitation decreases as the number of cases increases.

In contrast, in-person visitation incurs a number of variable costs every time a trip is made. These include vehicle fuel, insurance, and maintenance expenses, and employee wages. Both vehicle and employee expenses are a function of the time spent traveling to and from each client's house. It requires data on the distance traveled per trip and the number of trips made per year. Trips per year is a function of caseload and the number of visits per case per year. In order to estimate the annual total travel cost associated with Healthy Families Virginia, we use data on the number of clients served by each site provider in 2021, standard vehicle operating costs (fuel and fuel efficiency), estimated average hourly salary/wage for workers, and estimates of the average distance traveled per client trip.

Our calculation of average distance per trip involves information from different sources and some assumptions that warrant further explanation. First, because we do not have the home address of families that participate in the Healthy Families program we use the address of VDSS Child Protective Services (CPS) families as a proxy for Healthy Families cases. This is reasonable if one considers that the population served by Healthy Families and VDSS Child Protective Services are very similar. In fact, we know that many families participate in both programs. Hence, it is reasonable to assume that CPS clients and Healthy Families clients live in many of the same locations and are distributed similarly across the state. We calculate the average distance (miles) from the Healthy Families site office to all CPS cases within the service area covered by the Healthy Families site provider. Some Healthy Families sites serve multiple counties and cities, so we did not restrict the calculation to just those CPS cases served by the local DSS.

The vehicle cost per trip for in-person visitation is equal to the round trip distance traveled, times the fuel used, times the price of fuel. We use $3.00 per gallon and an average of 25 miles per gallon. The employee cost per trip is equal to travel time (round trip distance divided by average speed), times average salary (wages plus benefits). Total cost per trip is the sum of vehicle and employee expenses per trip.

Each Healthy Families client is typically visited weekly for the first six months and less frequently thereafter. We assume clients are visited 30 times per year on average. To complete the estimation of total annual cost of in-person home visitation for each site we apply these calculations to the 2021 caseload reported for each Healthy Families site. Results are shown in Table 1 below.

The statewide total estimated cost of in-person home visitation in 2021 is $1,489,018. This is based on the number of Healthy Families clients served by each site provider in 2021 and the assumptions described above. The cost of in-person home visitation is significant. It is particularly high on a per-case basis for sites that provide services over a large geographic area. In addition, travel expenses grow quickly as the caseload grows regardless of the geographic area served. Virtual visitation would be especially attractive to these site providers as it would provide significant savings and allow providers to expand services to additional clients in their area.

In short, we recommend that Healthy Families Virginia utilize virtual home visits as much as possible, understanding that some elements of the program cannot be delivered effectively using virtual visitation. For those instances workers should continue to rely on in-person visitation.

Table 1 - Estimated In Person Costs of Home Visitation

Mean Dist to CPS Clients (miles)	Site ID	Site Name	Clients Served	Trips Per Year	Avg Travel Cost per Case Trip	Avg Travel Time per Case Trip (Hr)	Avg Emp Cost per Case Trip	Cost of In-Person Visitation	Cost of Virtual Visitation
3.91	3	Alexandria	85	2550	$0.94	0.1738	$3.48	$11,256	$200.00
6.22	4	Arlington	84	2520	$1.49	0.2764	$5.53	$17,695	$200.00
22.6	5	Blue Ridge	111	3330	$5.42	1.0044	$20.09	$84,958	$200.00
21.1	6	Central Virginia	190	5700	$5.06	1.4067	$28.13	$189,225	$200.00
13.12	7	Charles City/New Kent	22	660	$3.15	0.8747	$17.49	$13,624	$200.00
7.15	8	Charlottesville/Albemarle	67	2010	$1.72	0.4767	$9.53	$22,611	$200.00
10.08	9	Chesterfield/Colonial Heights	47	1410	$2.42	0.6720	$13.44	$22,361	$200.00

7.89	10	Culpeper	110	3300	$1.89	0.5260	$10.52	$40,965	$200.00
6.94	11	Danville/Pittsylvania	57	1710	$1.67	0.4627	$9.25	$18,671	$200.00
6.37	12	Fairfax	535	16050	$1.53	0.4247	$8.49	$160,855	$200.00
30.98	13	Fauquier & Rappahannock Co.	15	450	$7.44	2.0653	$41.31	$21,934	$200.00
31.18	14	Tri-County	37	1110	$7.48	2.0787	$41.57	$54,453	$200.00
2.84	15	Hampton	854	25620	$0.68	0.1893	$3.79	$114,477	$200.00
3.48	16	Henrico	72	2160	$0.84	0.2320	$4.64	$11,826	$200.00
6.32	17	Hopewell/Prince George	64	1920	$1.52	0.4213	$8.43	$19,091	$200.00
6.75	18	Loudoun	81	2430	$1.62	0.4500	$9.00	$25,807	$200.00

30.98	19	Madison & Orange Co.	13	390	$7.44	2.0653	$41.31	$19,009	$200.00
3.2	20	Newport News	216	6480	$0.77	0.2133	$4.27	$32,625	$200.00
5.14	21	Norfolk	39	1170	$1.23	0.3427	$6.85	$9,462	$200.00
10.88	22	Northern Shenandoah Valley	175	5250	$2.61	0.7253	$14.51	$89,869	$200.00
8.14	23	Page County	36	1080	$1.95	0.5427	$10.85	$13,831	$200.00
2.43	24	Petersburg	27	810	$0.58	0.1620	$3.24	$3,097	$200.00
3.87	25	Prince William	126	3780	$0.93	0.2580	$5.16	$23,016	$200.00
12.2	26	Rappahannock Area	275	8250	$2.93	0.8133	$16.27	$158,356	$200.00
3.26	27	Richmond	36	1080	$0.78	0.2173	$4.35	$5,539	$200.00

10.02	28	Roanoke Valley	54	1620	$2.40	0.6680	$13.36	$25,539	$200.00
5.7	29	Shenandoah County	39	1170	$1.37	0.3800	$7.60	$10,493	$200.00
23.48	30	Southwest VA	93	2790	$5.64	1.5653	$31.31	$103,068	$200.00
9.93	31	Suffolk/Isle of Wight	8	240	$2.38	0.6620	$13.24	$3,750	$200.00
4.33	35	Virginia Beach	74	2220	$1.04	0.2887	$5.77	$15,124	$200.00
11.65	36	West Piedmont	65	1950	$2.80	0.7767	$15.53	$35,742	$200.00
33.03	37	Three Rivers	71	2130	$7.93	2.2020	$44.04	$110,690	$200.00
							Total	$1,489,018	

Appendix

Is there anything else you would like to share about their virtual home visits during the past year?

- No, they were good and helpful and [it] worked out for me doing these visits virtual[ly].
- [My home visitor] has been a great asset to me and my family.
- Mrs. Green is awesome.
- Everything is good and I do believe virtual visits are more convenient.
- My worker was there for me more by phone.
- I love my case worker MRs. Roxanne. She was like family to me. She was a listener and encouraged me so much. She is the best.
- Stressful when our son doesn't nap.
- As a mother with no family nearby, Family First visits are very useful and I have learned a lot about parenting.
- Had just as much fun and information as in person.
- I was terrible at keeping appointments, it was all my fault and I sucked at keeping my phone ready for the meetings. I'm sorry Dana.
- My worker has been nothing but supportive and informative.
- We love the program.
- I'm glad I still had the chance to keep my H.F. appointments when CV-19 came.
- My visitor has given me and my child a lot of support (translated from Spanish).
- [My home visitor] is awesome.
- Everything was fine (translated from Spanish).
- It has been very convenient and has worked well for myself and [my] family.
- My visits are always great.
- It was a way to stay connected, but the quality of visit was not as good. It was hard to keep toddlers engaged.
- Yes, it helped me a lot with my daughter (translated from Spanish).
- [My home visitor] has done an excellent job & caring about our safety with COVID.
- We have always communicated (translated from Spanish).
- My provider is awesome.