

Connecting Families with Community Supports

A Study of Best Practices and Barriers to Community Referrals in the First Born Home Visiting Program

July 2020



TNM CRADLE TO CAREER
POLICY INSTITUTE

FIRST  BORN

Connecting Families with Community Supports

A Study of Best Practices and Barriers to Community Referrals in the First Born Home Visiting Program

Prepared by

Hailey Heinz and Andrew Breidenbach

Qualitative coding team:

Darlene Castillo

Graeme Chiasson

Margaret Cunningham

Selena Tran-Jurado



**CRADLE TO CAREER
POLICY INSTITUTE**

This study was conducted in partnership with the First Born home visiting program, with support from the Thornburg Foundation



July 2020

Executive Summary

Connecting families to supports and services in their communities is a crucial goal of home visiting, and First Born home visitors have a wealth of knowledge about how to do it. Seasoned home visitors have many strategies for successful referrals, as well as keen insight into why referrals sometimes fail. Analysis of home visitor interviews and nearly ten years of quantitative data show that home visitors are up against significant barriers in making referrals, but they often succeed through patiently building relationships, framing adult well-being as critical to child well-being, connecting families to services like shuttles, showing up at appointments to support families, and relying on their colleagues and managers for support. The report also suggests some areas for professional development, highlights statewide deficits in transportation and behavioral health infrastructure, and points to the need for an up-to-date repository of resources for families.

Selected Key Findings

- Home visitors seeking to make referrals must often overcome families' personal resistance, in addition to structural barriers such as a lack of needed services or transportation.
- Emotionally challenging referrals sometimes cannot be made successfully until a trusting relationship with the family has been established, although referrals related to immediate safety must always be addressed quickly.
- Two-way communication and relationships with pediatricians can be valuable tools in helping families accept referrals.
- Referrals are often more successful when they are framed around meeting the needs of children rather than adults.
- Referrals to Early Intervention (EI) have the highest success rate, while referrals for behavioral health and domestic violence are the least successful.
- Referrals for children and pregnant women are more successful than referrals for mothers whose children are already born, which in turn are more successful than referrals for fathers or other family members.
- Family-initiated referrals, while the least common, are the most successful, while referrals initiated by a home visitor on the basis of a screening tool were the least likely to succeed.
- The vast majority of referrals (88%) don't come from screenings, but originate more informally.
- Home visitors help families overcome structural and emotional barriers by accompanying them on appointments or making phone calls with them, and by connecting them to services like shuttles to get to appointments.
- Home visitors sometimes struggle to provide up-to-date and useful referrals, in the absence of a regularly updated repository of community resources that reflects waiting lists and program closures.
- Home visitors are supported in making challenging referrals through reflective supervision with their supervisors, supportive relationships with their colleagues, and the Facilitating Attuned Interactions (FANI) professional development framework.

Introduction

Home visiting serves a variety of functions for families with new babies and young children. In New Mexico, the Home Visiting Accountability Act of 2013 established six goals for home visiting: Babies are born healthy, children are nurtured by their parents and caregivers, children are physically and mentally healthy, children are ready for school, children and families are safe, and families are connected to formal and informal supports in their communities. This report is concerned with that sixth goal of connecting families to supports in their communities. In some ways, this goal has been measured more thoroughly in New Mexico than the others, because home visitors collect information on every referral they make and enter it into the state's home visiting database. For seven years, New Mexico's Home Visiting Annual Outcomes Report has reported aggregate, descriptive referral data across all state-funded home visiting programs, showing how many screenings are administered each year and how many of those screenings result in referrals and uptake with services. For fiscal years 2018 and 2019, this report showed a downward trend in referrals, measured as the percentage of at-risk screening scores that resulted in a referral. The annual report has focused heavily on three screens in particular: The Ages and Stages Questionnaire (ASQ-3), which measures children's developmental progress; the Edinburgh Postnatal Depression Scale (EPDS); and the Relationship Assessment Tool (RAT), which screens for domestic violence. Home visitors are required to administer these screenings for all families for whom they are appropriate based on child age, and the screenings relate to a number of home visiting goals such as ensuring families are safe and that children are healthy and on track for school.

This study focuses on New Mexico's First Born model of home visiting, which is used by eight home visiting programs in diverse communities statewide. First Born was developed in New Mexico more than 20 years ago and has expanded as a home-grown way for the state to support its families with new babies and young children. This research aims to better understand how First Born home visitors connect families with community services and supports, using a mixed-methods approach that combines in-depth home visitor interviews with multi-level regression analysis of quantitative referral data. The goal is to understand what makes a successful referral, what barriers prevent referral, and what kinds of concrete strategies and solutions home visitors have identified to overcome these challenges. We will also examine how these barriers and solutions vary across home visiting programs and family characteristics. Our hope is that lessons from this research may help the First Born Program tailor trainings and supports to referral types that are most difficult, while holding up solutions from the field for other programs to emulate. While this research focused on First Born programs, it is likely that many of its lessons may be generalizable to the broader home visiting field in New Mexico and beyond.

Study Methods

This study employed two distinct and complementary methodological strands: A qualitative strand based on in-depth interviews with First Born home visitors from across the state, and a quantitative analysis of nearly 10 years of referral data from First Born programs in the state's home visiting database. Taken together, these methods aim to quantify the success of referrals

in First Born programs, to improve our understanding of which referrals are easier and harder to make, and to tap into the expertise of home visitors themselves to tell us the stories that data alone cannot.

Quantitative Methods

We obtained data files from New Mexico's home visiting database, maintained for the state by the University of New Mexico Early Childhood Services Center. We received data on seven First Born programs statewide: United Way of Santa Fe, Gila Regional Medical Center, Presbyterian Health Services Socorro, Los Alamos, Española, Northern New Mexico and Northwest New Mexico. MECA Therapies, which has adopted the First Born model recently, was not included in the quantitative analysis. After extensive merging and formatting, including multiple imputation procedures to account for missing data, we derived a final dataset of 5,405 referrals covering 1,049 families from seven First Born programs across the state. The referrals span almost a decade, from August 2010 to January 2020. Details of the merging and imputation process are included as Appendix A.

The dependent variable used for analysis is whether the referral in question was successful – that is, whether the family engaged with services. This is coded as a simple yes or no. Other programmatic variables included in the models are home visiting program, parent age at referral date, who the referral was for (mother, child, whole family, etc.), the referral service type, who initiated the referral, total visits received, discussion topics covered, and staff education. We also included family demographic variables measuring gender, race/ethnicity, most recent home visiting enrollment reason, referral source into home visiting, language, education, and work status.

Analysis was conducted using mixed effect multi-level logistic regression. Detailed model specifications, iterations of model development, and a variety of robustness checks are included as Appendix B. The multi-level nature of the models accounts for the fact that multiple referrals might be nested within a single family, and those families are nested within the home visitor assigned to them. Differences between home visiting programs are included as a variable rather than a level of clustering. This allows us to more explicitly account for and quantify differences between programs. Our modeling produces values called odds ratios that represent the change in likelihood a referral is successful, based on one or more changes in the predictor variables. This allows us to calculate the likelihood of referral success for the overall sample, by program, by referral type, by family member the referral is for, and by who initiates the referral.

Qualitative Methods

Interview data for this study were gathered through interviews with home visitors, conducted during the summer of 2019. Nineteen home visitors across six First Born programs were interviewed for the project, using a semi-structured interview protocol approved by the UNM Institutional Review Board. All interviews were conducted by Principal Investigator Hailey Heinz. Interview questions dealt with the challenges home visitors encounter when making referrals, successful strategies they have used to overcome those challenges, and how

challenges and strategies differ across different types of referrals and different communities. Interview recordings were professionally transcribed and coded by a four-person team of researchers. Each transcript was independently coded by two researchers, who reviewed and reconciled discrepancies to ensure reliable coding of home visitor comments. Coding processes were inductive, in the sense that researchers were not testing a hypothesis so much as systematically identifying themes and commonalities that emerged from home visitor comments.

Findings

Quantitative Findings

We first identified descriptive and summary statistics about the referrals and families in our sample. Our final dataset consists of 5,405 unique referrals across 1,049 families. Referrals span almost a decade, from August 2010 to January 2020, and come from seven First Born programs statewide. Program-level analysis shows that almost half (49.6%) of the referrals come from United Way of Santa Fe (UWSF), as shown in Figure 1. To identify whether UWSF is driving our findings or whether findings are robust across programs, we have systematically looked at results by program, and will address this issue throughout.

Figure 1. Total Referrals by Program

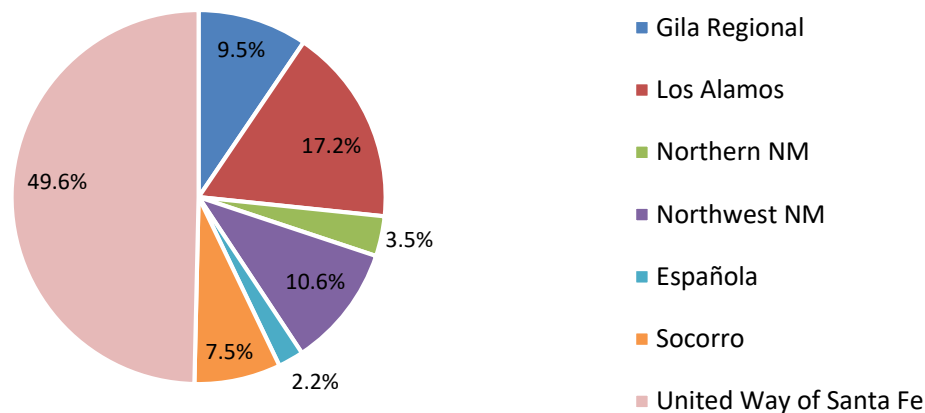


Table 1. Total Referrals by Type

Service /Activity	Frequency	Percent
Family and social support services	1,099	20.3%
Behavioral health services	930	17.2%
Recreational resources	480	8.9%
EI/FIT (Family Infant Toddler)	412	7.6%
Parenting program/classes	387	7.2%
Other	278	5.1%
Nutrition	242	4.5%
Basic needs	216	4.0%
Child care and early education	209	3.9%
Education	201	3.7%
Public assistance	181	3.4%
Breastfeeding support	154	2.9%
Domestic violence services	140	2.6%
Medical Services	105	1.9%
Health care (child or family)	91	1.7%
Legal	72	1.3%
Employment	60	1.1%
Medicaid (child or family)	40	0.7%
Pediatrician	30	0.6%
Dental services	21	0.4%
Primary care physician	19	0.4%
Substance abuse counseling	18	0.3%
Child protective services	10	0.2%
Community assistance	3	0.06%
Prenatal services	3	0.06%
Tobacco Cessation	2	0.04%
Specialists out of area	1	0.02%
Transportation	1	0.02%
Total	5,405	100.0%

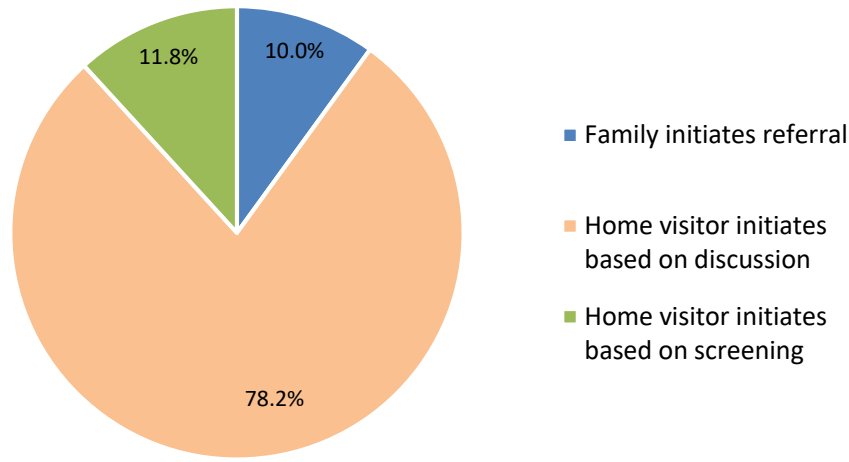
Table 1 shows the distribution of the types of referrals in our sample. The two most common services referred for were family and social support services, and behavioral health services. The next three most common referrals were for recreational resources, Early Intervention (EI) services and parenting classes. Table 2 shows who the referrals were for, within the family. On average, referrals for the entire family were most common, followed by referrals for mothers and referrals for children. We also examined who initiated referrals, shown in Figure 2. The vast majority of referrals were initiated by the home visitor based on discussion with the family (78%), followed by referrals initiated by the home visitor based on results of a screening (12%). Family-initiated referrals were the least common (10%).

Table 2. Who Referral is For

Who referral is for	Frequency	Percent
Family	1,623	33.9%
Mom	1,336	27.9%
Child	1,205	25.2%
Pregnant Woman	347	7.2%
Dad	219	4.6%
Other family member	60	1.3%
Total	4,790	100.0%

Note: 615 referrals were missing data on this field.

Figure 2. Referrals by Origin



The Families

About 99% of primary caseholder adults were female, about one-third were Hispanic (34%) and another 21% were white. Another 14% of caseholders were Native American (Figure 3). Just over half of families enrolled while the mother was pregnant, while another 38% enrolled for a first-born child who was already born. Eight percent enrolled with a child who was already born and was not the mother’s first born (Figure 4). The top four most common ways families learned about and enrolled in home visiting were through “other” means (21%), hospitals (21%), self-referral (17%) and medical clinics (16%). About 52% of the sample spoke English as their primary language while 8% spoke mainly Spanish and data are missing for about 33% of families (Figure 5). The educational attainment of these clients was somewhat bimodal, with about a third having a high school diploma/GED or less and about a third having a bachelor’s degree or higher. Around a quarter had achieved either some college credit or had attained an associate degree (Figure 6). Regarding their employment status, about 42% were not working, while nearly 50% were working either full-time or part-time (Figure 7).

Figure 3. Race/Ethnicity of Primary Caregiver

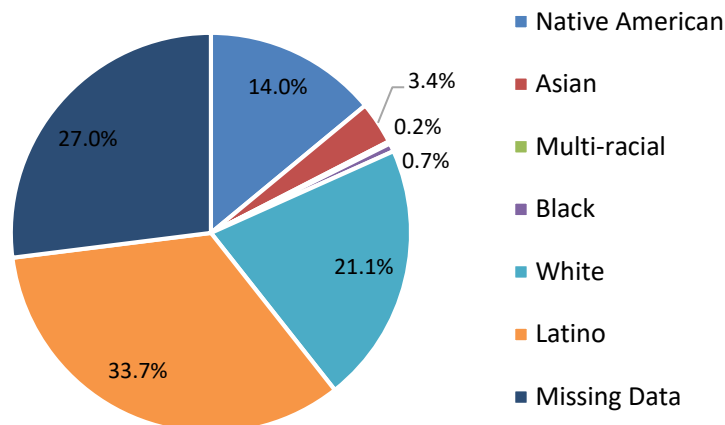


Figure 4. Enrollment Reason

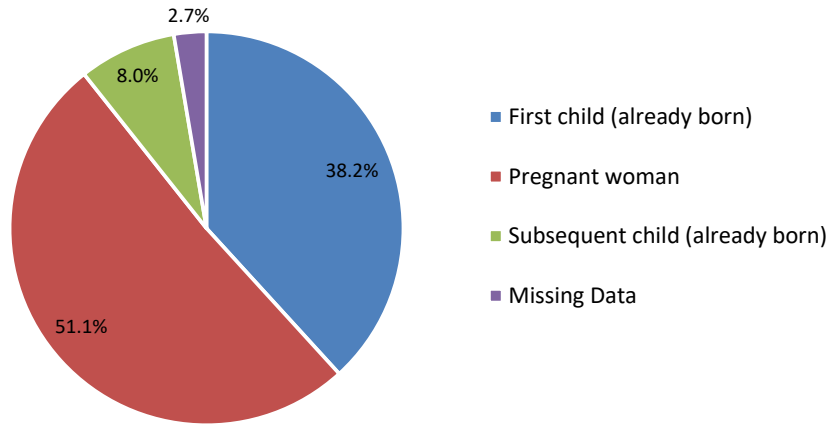


Figure 5. Family Language

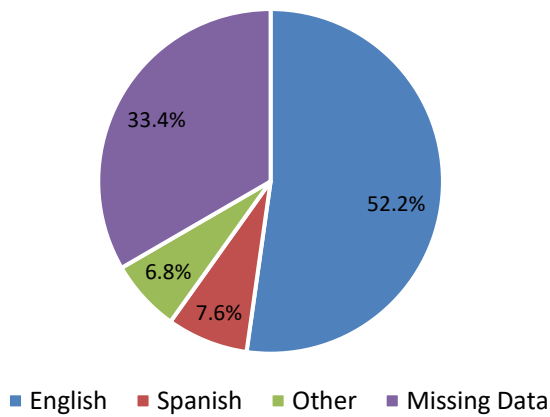


Figure 6. Adult Educational Attainment

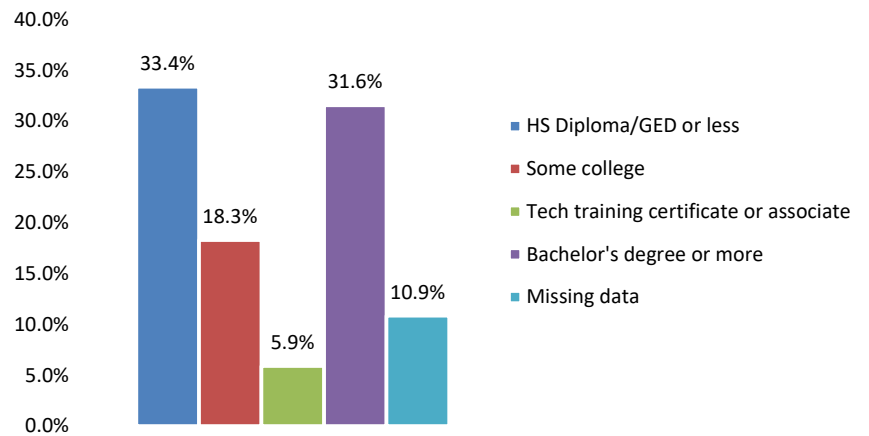
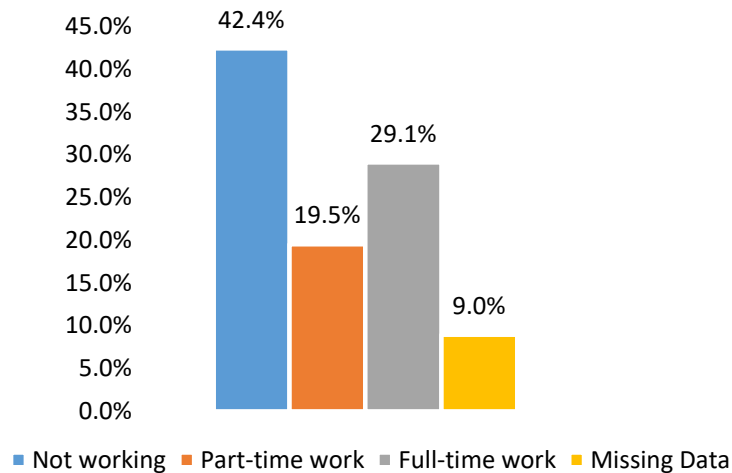


Figure 7. Employment Status



The Referrals

During the 10 years analyzed here, only about 1 in 4 referrals were successful. Success rates vary considerably across programs, with Gila Regional and Socorro achieving a success rate of more than 30%, while in Rio Arriba and Northwest NM, the success rate is closer to 20%. In Northern NM, only about 1 in 10 referrals were successful during this time.

Success rates also vary depending on the type of referral, who it's for, and who initiates it. Though EI referrals make up a minority of total referrals, they have the highest success rate (about 4 in 10). Referrals for “other services” are the next-most successful with about a 30% success rate. Referrals for sensitive issues such as behavioral health or domestic violence are least successful, with less than 20% resulting in connection to services (Table 3). Corresponding to the EI success rate, Table 4 shows referrals for children are the most successful out of any family member (35%), while referrals for pregnant women are the next-most successful (31%). Conversely, referrals for fathers are the least likely to be engaged with (16%). Finally, Table 5 shows that although they constitute a minority of total referrals, family-initiated referrals were the most likely to be successful (34%) while referrals initiated by the home visitor based on a screening were least likely to succeed (22%).

Table 3. Referral Success by Type

Referral Type	Frequency	Percent Successful
Early Intervention	161	39.1%
Other	1,099	28.0%
Behavioral health	167	18.0%
Domestic violence	19	13.6%

Table 4. Referral Success by Who is Referred

Who Referral is For	Frequency	Percent Successful
Child	421	34.9%
Pregnant woman	106	30.6%
Family	444	27.4%
Mom	296	22.2%
Missing	132	21.5%
Other family member	11	18.3%
Dad	36	16.4%

Table 5. Referral Success by Initiation Scenario

How Referral was Initiated	Frequency	Percent Successful
Family initiates	163	33.5%
Home Visitor, discussion	1,060	27.9%
Home Visitor, screening	128	22.3%
Missing	95	17.4%

Predictive Models

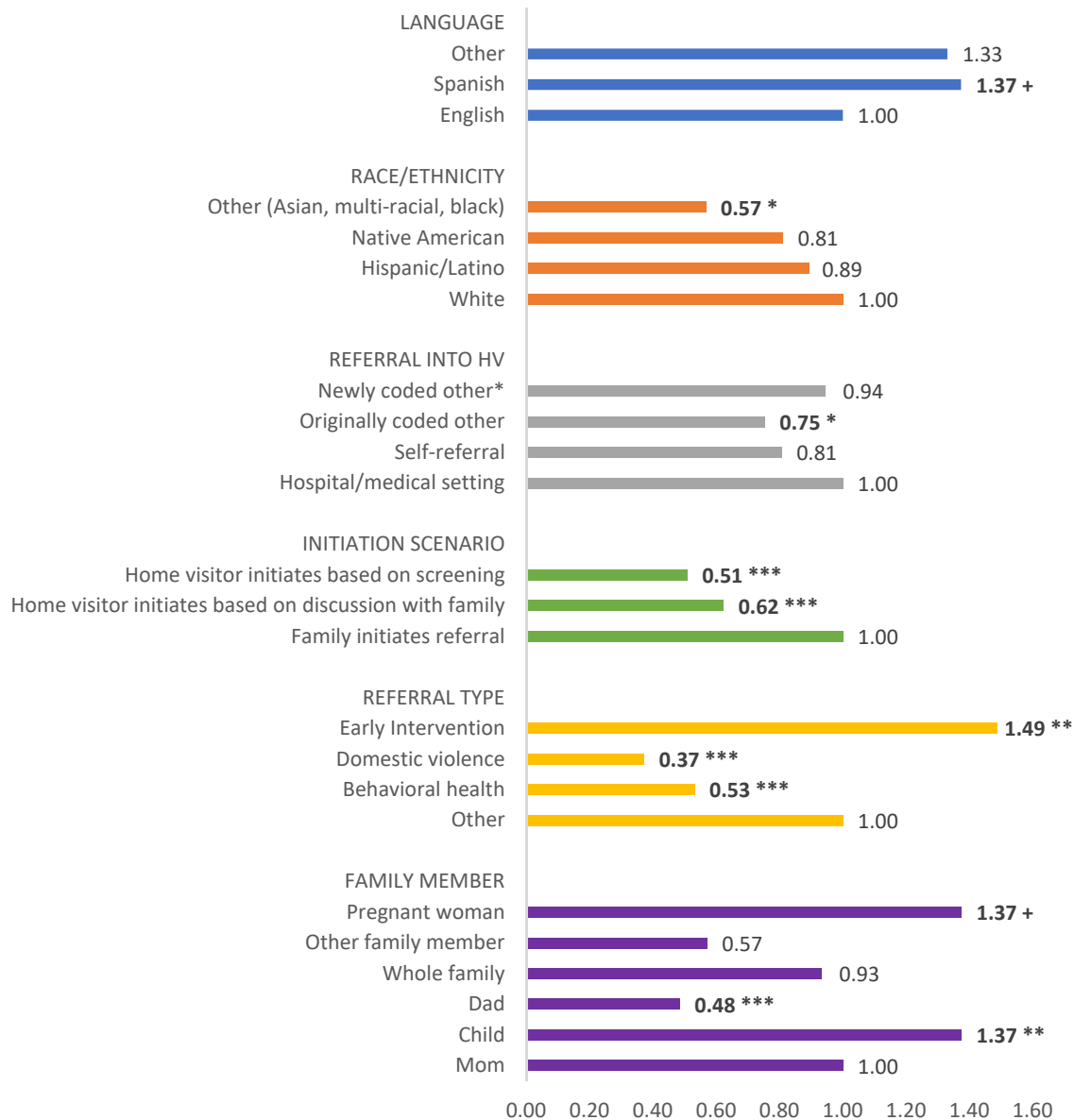
Our final model uses mixed-effects multi-level logistic regression to present odds ratios reflecting the likelihood of a successful referral. Put another way, we have calculated odds that a referral will be successful, based on changes across variables. This helps us move beyond descriptive analysis to estimate the relative importance of different variables. Odds ratios are shown in Figure 8, and a complete table with coefficients and levels of significance is provided as Appendix C. This analysis shows:

- Compared to referrals for mothers, those for children and for pregnant women are 37% more likely to result in connection with services, while referrals for dads show about half the odds of success.
- Compared to the large catch-all category of referrals (for “other” resources), referrals for EI have about 49% greater odds of success, while those for behavioral health have about half the odds. Referrals for domestic violence have closer to one-third the odds of success of “other” referrals, controlling for other factors.
- Compared to family-initiated referrals (the least common but most successful), referrals stemming from a home visitor’s discussion with the family have about a 62% chance of success, while referrals stemming from a screening have about half the odds of success.
- Compared to those who enrolled in home visiting through a hospital or other medical setting, those who came in through “other” means have about 25% lower odds of referral success.
- Compared to white caseholders, those who were Asian, multi-racial or black had about half the odds of successful uptake. Spanish speakers were more likely than English speakers to engage with a referral, all else equal.
- We found suggestive evidence at the $p < .10$ level that the discussion of curricular topics was related to referral uptake. Discussion of curriculum topics (aspects of First Born curriculum, Partners for a Healthy Baby, Circle of Security) were associated with a small increase in the likelihood of success, while discussion of topics like immunizations, well child care and monitoring children’s growth were associated with a similar sized decrease in the chances of success.

Notably, in the full model, we found no evidence that enrollment reason (e.g., first pregnancy, subsequent pregnancy, enrollment after child’s birth, etc.), caseholder gender, caregiver education or work status, or home visitor education were associated with successful referrals, controlling for confounding factors.

Because United Way of Santa Fe encompasses almost half of the referrals, we tested the robustness of our estimates by modelling UWSF separately from all other programs. While in many respects the two models were similar, we found that the significantly lower success rate for referrals for dads seems to be present only in the UWSF model, while increased referral success for pregnant women compared to non-pregnant mothers was not present in the UWSF-only estimates. Additionally, we found that only in UWSF were EI referrals significantly more likely to be successful than “other” referrals. Conversely, only in non-UWSF programs

Figure 8. Odd Ratios for Successful Referrals



Exponentiated coefficients (odds ratios)

+ = $p < .10$, * = $p < .05$, ** = $p < .01$, *** = $p < .001$

Note: “Originally coded other” refers to referrals into home visiting that are coded as “other” by the home visiting program and are unknown to the research team. “Newly coded other” is an aggregate of several small referral-in categories that were combined by the researchers for analysis. These include a small number of referrals from Child Protective Services, Early Intervention, judicial/law enforcement, mental health/substance abuse, other individual, other home visiting program, public health, schools, and social services.

were domestic violence referrals significantly less likely to be successful than “other” referrals (in UWSF, the likelihood of success for DV compared to other referrals were not significantly different).

Program-specific models

We also estimated program-specific models to verify whether estimates in the full model are consistent across programs. We found program-level variation in these relationships. While referrals for children have generally higher odds of success compared to those for mothers, it appears this relationship is strongest in Los Alamos, where referrals for children and pregnant women have over twice the odds of success compared to those for mothers. Such strong associations are not observed anywhere else. On the other hand, the low likelihood of referrals for fathers being successful seems to be attributable only to UWSF.

The low odds for behavioral health referrals compared to other referrals seem to be fairly consistent across programs, but the higher odds of EI referral success compared to other referrals seems to be driven mainly by UWSF. Los Alamos is the only program that shows significantly lower odds of success when referrals stem from home visitors instead of families. Differences in odds based on race/ethnicity and language wash out in the program-specific models. We also find limited evidence that total visits experienced by the referral date, as well as discussion topics covered by referral date, have program-specific associations with the odds of successful uptake.

Qualitative Findings

Relationships & Referral Timing

Home visitors across programs described similar relationship-based practices they use to build a foundation for successful referrals. Several said they establish themselves as helpful sources of information by making non-threatening, easier referrals up front. This can mean helping families get a library card, referring them to a local Zumba class, or helping them navigate difficulties getting their child’s birth certificate processed. These kinds of supports, which are universal and do not carry any connotations of risk or deficiency, can help set the right tone for the relationship. Several also described the importance of setting families’ expectations from the beginning of their home visiting experience so screenings and referrals will not later come as a surprise. When families are told that home visiting includes periodic screenings for adult depression and children’s development, they are less likely to feel judged or surprised when the screenings occur. This groundwork can also include other kinds of up-front honesty, such as informing parents that all home visitors are mandated to report if a child is unsafe. One home visitor said she makes it explicitly clear that referrals or calls for resources will never be a secret – and that she will tell the family about any concern she has. Bringing all this into the forefront helps take any mystery out of the program for families, and assuage concerns that their home visitor might be making calls or referrals behind their backs.

At the same time, a number of home visitors said a key to successful referrals is building a relationship with the family over time. Although groundwork for referrals must be laid early, families may not be ready to act on them right away. It can take time for home visitors to

earn families' trust, and families may not agree to a referral the first time it is suggested. One home visitor said it often takes six to twelve months for a family to fully trust a home visitor and feel ready to discuss difficult topics. This may be especially true around sensitive topics like domestic violence, which home visitors screen for using the Relationship Assessment Tool (RAT). One home visitor noted: "As you build rapport, that somewhere between 6 to 12 months, often, all of a sudden, the RAT's been fine, the whatever's been fine. Then, the parent's like, 'Well, actually,' and it's this huge story of a violence, or yelling, putting down, whatever it might be. I think just being patient and not trying to push stuff."

Of course, home visitors sometimes have to push forward with referrals before their relationship with a family has matured, particularly if there is an apparent threat to safety. Home visitors said if they observe a threat to a child's safety, suicidal ideation in an adult, or another pressing risk, they always must move swiftly. But for other referrals, the most effective thing is to lay groundwork and build trust. This can mean leaving written materials for families to read by themselves later, or just mentioning that a service or resource is available without pushing it. "I think if you come in guns blazing pretty much with anything, they're not going to do it. Walls go up, and things shut down," one home visitor noted.

Numerous home visitors said it can be effective to leave written materials for families to read by themselves, because it gives them time to think and process, without feeling like they have to respond in the moment. Written information can also seem more objective, and less a commentary on their particular child's progress or needs. One visitor described leaving written curriculum for a mother that described about how many words a typical child knows at 24 months. "That way it wasn't coming from me. It was just this piece of information. It wasn't my perception of how her child should be but it was just the curriculum. She said, 'I wanna do the referral now.'"

Home visitors emphasized that services and strategies must be individualized – not just because each family is different, but also because families come from a variety of cultural traditions and immigration statuses, carry their own past experiences with state systems, and vary widely in family structure and primary caregiver age. Teen mothers are a focus population for home visiting in New Mexico, and home visitors shared a wide variety of different and sometimes directly opposed perceptions about connecting teen mothers with services. Some home visitors noted that teen parents are often already connected with a number of services and social supports aimed specifically at them (such as through the NM GRADS program for young parents), so they are open to being connected to more. Teen parents were also described as less anxious, and more likely to parent intuitively than older mothers who have done extensive preparation. One home visitor said: "What I see is they are just more like, Oh, the baby's crying. You pick him up. You play. You do these simple things. It's not so heady. Whereas I think sometimes if there's so much knowledge, you just feel so stressed." However, that lack of anxiety can also make teen parents less eager to accept referrals, and more likely to take a "wait and see" approach about their children's development. One home visitor noted that teens are especially sensitive to being judged, or to interactions or experiences with the system that feel patronizing, noting that these conversations with teen parents helped her modify her practice. "It gave me a better understanding how these teens are navigating through adulthood."

And one of the things that I learned to listen to what they were saying was, that people talk at us. People tell us what to do. And it's very judge-y and shame-y, so I realized that, OK, this strategy needs to be different."

Making the Case for Referrals

Home visitors said families are often more receptive to referrals that are framed as beneficial to a child or fetus, rather than as beneficial to the adults. Knowing this, they often try to connect the dots for parents and caregivers between their own well-being and the well-being of their children. This framing is especially relevant around the behavioral health needs of adults; if a mother shows signs of perinatal depression, she may not be willing to seek counseling for her own sake, but might be more willing if the home visitor explains the links between adult well-being and child development. One home visitor put it this way: "I think sometimes, especially with new parents if you can say, 'I'm going to help you, so you can help your baby,' they're more willing and more likely to get the help than they are if you're just like, 'Oh, let's focus on you.' Because I think especially in new parenthood they feel like they have to give it all to their baby."

When they talk explicitly about referrals for children – especially around developmental delays – some home visitors said it helps to explain the value of early identification. Parents worried about stigma or labeling of their children can be persuaded by information about the value of intervening early and potentially preventing their children from needing services when they are older and when interventions may need to be more intensive. If EI can be framed as a short-term intervention rather than the first step on a pathway toward many years of special education services, families are more amenable to it.

Numerous home visitors described the effectiveness of partnering with pediatricians or other experts when making the case for a service referral. Many programs encourage families to sign release documents upon enrollment, so home visitors can develop and maintain a dialogue between themselves and other professionals supporting the family. For example, if a home visitor notes a developmental risk on an ASQ, they might forward the screening to the child's pediatrician for follow-up, especially if the parent is reticent about an EI referral or wants a second opinion. One home visitor put it this way: "It's different, I guess, the authority that (pediatricians) feel they have with the patient, so then moms are more open to taking the service once they are like, 'Yeah, well, the doctor told me the same thing that you told me.'" Some home visitors described similar strategies for mothers struggling with depression, such as sharing EPDS screening scores with the mothers' primary care doctor or OB-GYN, to help prompt a conversation in that setting.

Although a minority of referrals come from screenings, home visitors said screening tools can sometimes make a tough referral easier. The objective nature of a screening instrument gives the referral added authority, and removes it from the realm of their opinion or judgment. "It's almost easier if it's from a screening," one home visitor said. "Then, I can just flat-out say, 'Hey, you know, it shows that this is showing up a little bit low,' or 'It shows that you might be needing some help in this area.'" Though screenings can be useful in this context, home visitors said the majority of referrals come from informal conversations and observations, where family needs arise more organically. Some home visitors said they are rarely surprised by the result of

a screening, since it will usually match their observations. Occasionally, they said screenings can actually obscure family needs because they are largely based on self-report, and families may underreport their depression symptoms or overstate their children's developmental progress if they are not ready or willing for a risk to be identified. In that case, a screening can actually get in the way of a referral if it doesn't show a risk, but the home visitor is confident in the need for a referral based on what they observe during visits.

Barriers to Successful Referrals

Home visitors described two broad categories of barriers to successful referrals – barriers stemming from families' resistance to services, and structural barriers that prevent effective engagement even if families are willing and interested in receiving services. With Early Intervention especially, home visitors described a feeling among families that a developmental delay must be a result of a failure on their part, or something they have done wrong. Families take it as a personal reproach, home visitors reported, and that feeling can lead to persistently denying that the delay exists or is a problem. For many families, this can simply mean deciding to take a "wait and see" approach to development. "Sometimes we'll get, 'Oh, he'll talk when he talks. I was a late talker.' They justify, for whatever reason," one home visitor said.

In addition to their own feelings about admitting there is a need for services, families also wrestle with concerns about how they will be viewed by others. These seem especially pronounced in small communities, where home visitors reported a sense from families that "everyone" will know if a caregiver seeks counseling or goes to a domestic violence shelter, or if a child begins receiving services for developmental delay. Adults also bring their own fears, histories and traumas to interactions with public systems. Sometime referrals are unsuccessful because families with mixed immigration status are fearful that using any public services might jeopardize immigration processes, and many families are concerned that admitting any personal difficulty will make them vulnerable to losing custody of their children through Child Protective Services. Adults may also carry experiences in which letting official systems into their lives actually worsened trauma, making them reluctant to use other systems.

More than any other topic, structural barriers to referral success varied substantially depending on which region of the state home visitors served. For example, home visitors serving northwest New Mexico cited transportation as a major challenge for families. Those living hours outside of Farmington or Bloomfield often share a car with other family members and do not have a convenient way to get to an urban center for an appointment – often with a baby in a car seat. For home visitors in other parts of the state, transportation didn't come up at all. All programs reported some types of services that are simply absent or inadequate in their communities. Although these varied by program, strong themes emerged around behavioral health, which was insufficient in most communities, and providers that accept Medicaid. The Medicaid issue was raised especially in Santa Fe and Los Alamos, where a higher percentage of affluent residents seemed to result in more providers who only take private insurance.

Even in contexts where services were available, home visitors across programs reported difficulties with provider stability and waiting lists for services. This is particularly problematic in the context of referring reluctant families into services, since it limits home visitors' confidence

that they are referring families to a stable, known provider who will be able to help the family in a timely way. As it stands, it can be discouraging for families to work up to a difficult decision to seek services, only to land on a waiting list or be chronically rescheduled due to short staffing. “I think if there was more resources, more availability and more consistency, I would probably be more willing to sell it,” said one home visitor. Another said referring families into a negative experience also detracts from their credibility as a resource. “It’s really your relationship that’s at stake when you’re making a referral, to some extent,” she said.

A number of home visitors said keeping track of provider turnover and waitlists in their communities required constant vigilance, and that they would benefit from a centralized service with up-to-date information on services available for families, including who is open for new families and prompt removal of services that have closed. While some home visiting programs reported they have a staff person charged with managing a service list, resources for such a position are uneven across the system, and the process of referring families to services is significantly compromised when home visitors don’t have good information. “Honestly, I think some of the databases for resources need to be updated, especially in some of the rural areas because, sometimes, I’ll have a number for an agency, and they’ve been under for two years,” one home visitor said.

Strategies for Overcoming Barriers

In addition to the deep work of forming relationships and making the case for referrals, home visitors also reported on more straightforward, tangible strategies they use in their work. One common strategy was to accompany families through the process of engaging with services. This took a variety of forms, from making a phone call together during a home visit, to meeting at the Medicaid office to work through signup difficulties together, to being present and supportive during an initial EI evaluation. Home visitors reported that helping families actually make the call or attend a first appointment can help bridge the space for families between agreeing to sign up for a service and actually taking the steps to do so.

On the specific subject of transportation, home visitors across programs said they connect their clients with shuttle services provided by Medicaid. With sufficient advance notice, a free shuttle can be arranged to take clients to most Medicaid-eligible appointments. Although the shuttle is not a panacea – it was unclear how far it would go into remote areas on unpaved roads – many home visitors said it is a helpful service that can overcome some of the transportation barriers families face.

Although home visitors try to connect families to needed services, they are also prepared to support some of families’ needs if a referral doesn’t happen – either because the family isn’t ready to try it or because they are on a waiting list or awaiting a return call from a service provider. Home visitors, while explicitly not therapists, can work with a depressed caregiver on journaling or going for a walk, or can provide simple activities and guidance for talking to a child with a speech delay. One home visitor described helping connect a family to a food bank as a stopgap measure while they waited for their Supplemental Nutrition Assistance Program

application to be approved. These kinds of measures can help families even in the absence of successful referrals, and generally do not appear in data about home visitors' successes or struggles in connecting families to community supports.

Supports for Home Visitors

Home visitors report that they rely on their colleagues and managers as their primary resources if they are struggling to make a referral or otherwise support a family. Colleagues and managers can give advice, share similar experiences they have had, and empathize with difficult situations. Most home visitors referenced the reflective supervision practices that are used throughout New Mexico's home visiting sector, and which are focused on helping home visitors process and reflect on their own emotional responses to their work. A number of home visitors also said they have received valuable professional development through the FAN framework – which stands for Facilitating Attuned Interactions and has to do with providing information and supports to people in ways that match up with their readiness to receive the information. Some home visitors referenced FAN principles in describing how they suggest referrals to families, including the practice of providing a “drop” of information. The idea is that inundating families with a huge amount of information about available services may be overwhelming and ineffective. Instead, home visitors provide just a breath or two of key information and then let families react to it and process it.

Discussion and Implications

Results of this study provide some useful insight into how home visitors connect families with services successfully, what gets in their way, and how this differs across referral scenarios.

Several data points collectively point to a finding that referrals are more successful when they are perceived as benefitting children directly, rather than benefitting adults in the household. This is borne out by quantitative findings that Early Intervention referrals are among the most likely to succeed, and that referrals for children have higher probabilities of success than referrals for their caregivers or other adults in the household. Data also show that women accept more referrals for themselves when they are pregnant than after the baby is born, when they may not perceive as close a link between their baby's well-being and their own. Seasoned home visitors know this, and report that they draw explicit links for parents between the well-being of adults in the house and the well-being of children. This finding may be useful to home visitors who have not incorporated it into their practice, and to programs seeking to facilitate better self-care for adult caregivers in their programs.

It is clear both from quantitative data and from home visitor interviews that formal screening tools are involved in a small minority of referrals, and that these referrals are the least successful. Home visitors strive to introduce resources organically in the course of conversations with families, identifying needs based on what they observe and what families share with them. Although screenings are an important tool for home visitors in some ways, the home visiting field may wish to reconsider the outsized role these screenings have in the state's accountability systems and reporting on the home visiting system. Because screening tools measure domains that are crucial, and because they are required and easy to measure, they are often reported as

headline indicators of whether home visiting is connecting families to community services and supports. It may be useful to consider shifting the emphasis in referral accountability to the 88 percent of referrals that are not prompted by the results of a screening tool.

Practical barriers to referral uptake are systemic and outside the scope of home visiting to fix. A lack of sufficient behavioral health care, providers who accept Medicaid, and transportation infrastructure are major issues that must be addressed at the state and community level. In the meantime, home visitors from several programs reported that they would benefit from a frequently updated source of information about resources available to families. Although a number of resource libraries exist across New Mexico, home visitors reported that they are minimally useful without information about which providers are taking new families, and which ones have long waiting lists or have recently closed their doors. Either the First Born program or the state Early Childhood Education and Care Department could fund the creation and maintenance of a service database expressly for families with or expecting babies. One model might be Durham Connects, a universal “light touch” home visiting program that is partly characterized by its extensive and well-maintained resource library, which includes a feedback loop from families. So, if a number of families call a resource and get no response or have a bad experience, Durham Connects staff follow up with the service to provide feedback or remove them from the list.

Partnerships with medical providers seem to be powerful for home visitors in several ways. Families who were referred into home visiting through a hospital or health clinic were more receptive to referrals than families who entered through other means, all else equal. In addition, a number of home visitors reported that they have forged relationships with pediatricians, OB-GYNs and other health care providers to help provide a consistent message to families about the importance of services like early intervention and counseling. For programs not already embedded within a health care system, it may be useful to consider forging formal partnerships with local health care networks or clinics, to take full advantage of the potential for combining the complementary strengths of home visiting and the health care system.

Data from the report highlight differences between programs that may bear further examination and might guide program-specific trainings and supports. For example, First Born of Northern New Mexico has a substantially lower probability of referral success than other programs in the sample, but also faces a particularly acute constellation of structural barriers around transportation and remote housing. In addition, supplemental analyses show that for fiscal year 2019, First Born of Northern New Mexico made referrals at a very high rate (they made referrals for 100% of screenings that showed a risk on a screening tool) but struggled to translate those referrals into actual family engagement with services. Other differences within programs showed that United Way of Santa Fe’s program has a particularly low rate of referral engagement for fathers, and markedly high rates of successful referring into EI. These program-specific findings could provide a foundation for developing training and professional development tailored to the programs’ different needs, strengths, and contexts.

A few surprising findings from the quantitative analysis bear future exploration, such as a finding that Spanish speakers are significantly more likely than English speakers to engage

with referrals, all else equal. In subsequent research, it may be useful to probe this finding with home visitors, since most existing research would predict that families facing language barriers might be more reticent to engage with services and systems. It may be that having a Spanish-speaking home visitor facilitates successful referrals if the visitor serves as a trusted messenger and navigator. More broadly in terms of culture, the data showed that referral success rates for white, Hispanic, and Native American families were not statistically different from one another, but referral uptake for families of other races (including Asian, black and multiracial) were markedly lower. It may be useful for First Born programs to engage in trainings specifically about serving families who often constitute small minorities in their communities.

Finally, although these findings are not statistically significant at conventional levels, the quantitative data suggest that certain discussion topics are associated with successful referrals, while others have the opposite association. Specifically, discussion topics related to curriculum, including the First Born curriculum and Circle of Security, were associated with increased referral success. Discussion topics that relate more to compliance such as immunizations, well child care and monitoring children's growth were associated with decreased success. These findings should be considered cautiously, but may suggest that when families feel supported through curriculum they are more open to receiving help than if their home visiting experience is more characterized by efforts to monitor their compliance or their child's progress. While these topics are critically important to health and development, it may be useful to consider training on how to integrate them organically into curriculum in a supportive and non-judgmental way.

Conclusion

Connecting families to supports and services in their communities is a crucial goal of home visiting, and First Born home visitors have a wealth of knowledge about how to do it. Seasoned home visitors have many strategies for successful referrals, as well as keen insight into why referrals sometimes fail. Combined with findings from nearly ten years of quantitative data, this report shows that home visitors are up against significant barriers in making referrals for families, but they often succeed through patiently building relationships, framing adult well-being as critical to child well-being, connecting families to services shuttles, showing up at appointments to support families, and relying on their colleagues and managers for support. The report also suggests some areas for professional development, and highlights statewide deficits in transportation and behavioral health infrastructure, along with the need for an up-to-date repository of resources for families.

Appendix A

Data Merging and Imputation

Data Merging and Imputation

We obtained data files from New Mexico’s home visiting database, maintained for the state by the University of New Mexico Early Childhood Services Center. Separate data files were provided with case-level information, client-level information, screening risk scores, service referrals, other service-level data, discussion topics that the home visitor had engaged the family with, and staff education. Observations or rows in each file signified something different (a case, a client, a referral, a screening score, etc), but files contained common variables such as case ID and date that allowed for merging. Files were provided in Microsoft Excel format, with the data for each program on a separate tab of the respective workbook. In total, we received data on seven First Born programs across NM (United Way of Santa Fe, Gila Regional Medical Center, Socorro, Los Alamos, Rio Arriba, Northern NM and Northwest NM). All program-specific worksheets from all workbooks were saved as individual files to allow for appending in STATA.

We began with the referral data file, where each row constitutes a distinct referral made. The file contains essential meta-information on circumstances of the referral in fields like “referral type,” “who for,” “who initiates” and “family reaction/disposition.” After appending all program-specific referrals together, we dropped referrals marked “Family already connected,” since these represent instances where the family informed the home visitor that the family was already using some resource prior to entering home visiting, providing us with 7,437 referrals covering 1,171 families. We then moved to the case-level data file, where we appended case information together across programs, resulting in data on 1,859 families. We then merged case-level information into the appended referral data. 7,404 referrals matched on case ID, while 33 referrals had no equivalent case ID and 694 cases had no referrals. We kept the 7,404 referrals with complete data so far, representing 1,165 families.

Next, we turned to the client-level data, which contained information on the primary caseholder’s education and employment status. After appending clients from different programs and keeping only primary caseholders, we had a total of 1,785 clients. We then merged in this information on clients into the referral data. We identified 5,451 referrals with a matching case ID in this primary caseholder data, while 25 referrals did not find a matching case ID and 736 primary caseholders had no referrals. We kept the 5,451 referrals with complete data so far, representing 1,049 families.

At this point, we decided to look for duplicate records, since a visual examination of the data suggested there might be identical observations. We searched for all unique combinations of key referral meta-data and found 46 duplicate observations. After dropping them, we had a final total of 5,405 unique referrals from 1,049 families.

We then turned to the service-level data to estimate how many face-to-face visits a family had received by each referral date. In preparation for that, we saved a list of distinct referral dates for each case, resulting in 4,576 rows of distinct case and referral date combinations. We then appended service-level data together, creating a file with 140,312 records covering 2,994 families, far more than the 1,049 present in the combined referral data so far.

Our logic in merging the referral dates into the service dates was to create a duplicate date variable in both datasets. This served as a “master” date variable that STATA could identify in both and use to merge the data. Our process was to separate out cases with referral dates that matched available service dates for the case and merge those observations in, then subsequently add in case and referral date combinations that did not match available service dates. Of the case and referral date combinations, 2,712 matched service dates and were successfully merged, while 1,864 did not and subsequently were appended. With all referral dates now embedded in the service data, we computed the number of face-to-face visits a case had received by each referral date, then saved a streamlined dataset containing only the case ID, referral dates and the number of visits received by then, which we then merged back into the referral data. We repeated this process with the discussion data to compute how many discussion topics had been talked about with a family by a given referral date.

Next, we turned to the staff education file to identify the main staff member assigned to each case and their highest level of education. Unfortunately, no information in the referral data file was available to determine which staff member actually made a referral for a case. Using the services file, we computed the main staff member for a case as the staff member with the largest number of face-to-face visits with the family. We then examined how many of these staff members had information on education. In total, we identified 79 staff members associated with 1,049 families, 67 of which had education data.

Since there was, unfortunately, no way to precisely trace which risk score from a screening was responsible for a given screening-based referral, our last task before cleaning and preparing for analysis was to make an educated guess about this. We computed the highest (or lowest, for the ASQ) “relevant” risk score experienced over the lifetime of the case, based on what the referral was for. We could not make assumptions about which risk score might have triggered an “Other” referral, but we could estimate how ASQ screens relate to EI referrals, how EPDS screens relate to behavioral health referrals, and how RAT screens relate to domestic violence referrals. We followed the same process of merging in risk screen dates that matched referral dates, and appending those that didn’t match.

Our final dataset includes 5,405 referrals covering 1,049 families from seven First Born programs across the state.

Data cleaning and imputation

To prepare data for statistical analysis, we encoded all string variables, creating numerical variables in substitute. For variables that were ordered (e.g. education, staff education), we ensured that numerical versions reflected the ordering so that lower numbers implied lower levels, and vice versa. We then computed the days between a caseholder’s birthdate and the referral date to determine when in the case history a referral was made. We checked for strange values and recoded such values to missing.

For our dependent variable, we created a dummy variable that was 1 if the family reaction/disposition to a referral was marked as “Client enrolled in service,” and 0 if otherwise.

We then examined how much data was missing by variable, in anticipation of casewise deletion during model estimation (i.e., to be included in the statistical model, every observation needs data on all variables specified in the analysis). We identified 1,733 referrals with missing data on at least one of the key meta-info variables, such as who the referral was for and who initiated it, representing 636 families. Thus, estimating the model without imputing missing data would mean that 32% of the referrals would be dropped and 60% of the families would be dropped. We also found significant missing data on race (~22%) and language (~26%). Again, using all these variables in the model without data imputation would risk so much casewise deletion that the reduced sample of referrals with complete data might not be similar to the full sample anymore.

To maintain the full statistical power of our sample, we used a multivariate normal (MVN) multiple imputation (MI) procedure to estimate what missing values in the data would have been. Our imputed variables were: parent age at referral date, who the referral was for, who initiated, gender, race/ethnicity, most recent enrollment reason, referral source into home visiting, language, education, work status, and staff education. We modified several categorical imputed variables that had very small cell sizes so the MI procedure would run smoothly (all imputed variables except age at referral date, who initiated, and gender). We also transformed several continuous variables with a square root function pre-MI to improve assumptions of normality (total visits by referral date and all variables marking different discussion topics covered). The MVN MI procedure produced 20 additional datasets of 5,405 observations, with the observations that contained missing data in the original containing varying predicted values in the additional 20 datasets. Trace plots of these estimated values for each imputed variable show no clear trending and fairly constant “noise,” a good sign that estimates have stabilized and found a general ballpark to vary within.

Appendix B

Data Analysis

Data Analysis

We began by building regression models with the unimputed data, which serve as baselines of reference when comparing model estimates from the MI data. Because our outcome variable is binary (successful referral or not), we generated simple logit models of successful referrals, using program, parent age at referral date, who the referral was for, the referral type and who initiates as predictors. In the next stage, we added in demographic variables (gender, race/ethnicity, most recent enrollment reason, referral source into home visiting, language, education and work status). In the final stage, we completed the addition of predictor variables with total visits received, discussion topics covered, and staff education.

We then moved to mixed effect multi-level logistic regressions, which are better suited to the hierarchical data we have (referrals nested within cases, nested within staff members, nested within programs). We chose multi-level modelling over panel regressions since panel regressions can only handle one level of clustering. Specifying the different levels of nesting appropriately adjusts standard errors on the estimates of covariate coefficient sizes.¹ We checked each level of this hierarchy and found adequate correlation of successful referrals at each level, meriting inclusion of all levels as random effects. We used the same model-building strategy as employed in the logit models.

Turning to model-building using the imputed data, our final multi-level model incorporates 5,397 of the 5,405 referrals in the original, unimputed data (99.85%, or a total of 107,940 observations) and specifies all levels of nesting while using all predictor variables. Results agree closely with the saturated multi-level model using unimputed data.

Because United Way of Santa Fe encompasses almost half of the referrals, we ran a robustness test by modelling UWSF separately from all other programs. While in many respects the two models were similar, we found that a lower success rate for referrals for dads seems to be present only in the UWSF model, while increased referral success for pregnant moms compared to non-pregnant moms was not present in UWSF alone. Additionally, we found that only in UWSF were EI referrals significantly more likely to be successful than “other” referrals, while only in non-UWSF programs were domestic violence referrals significantly less likely to be successful than “other” referrals (in UWSF, the likelihood of success for DV compared to other referrals were not significantly different).

We also attempted to incorporate risk scores from the EPDS, ASQ and RAT into estimation to see if they would help predict the success of referrals initiated from a screening. Unfortunately, there were very few observations with risk scores, and when included in separate models predicting successful behavioral health, domestic violence and Early Intervention referrals, the risk score predictor variable failed to reach significance.

¹Rabe-Hesketh, S., & Skrondal, A. (2008). *Multilevel and longitudinal modeling using Stata*. STATA Press.

Raudenbush, S. W., & Bryk, A. S. (2002). *Hierarchical linear models: Applications and data analysis methods* (Vol. 1). Sage.

Finally, we decided to remove the program variable from the highest level of clustering in the random-effects part of the equation, and instead include program as a categorical predictor variable to be included as a standard fixed-effects predictor. This was primarily to give us the benefit of using these linear fixed effects to create predicted probabilities post-estimation that would explicitly account for differences between programs. This final, program-fixed-effects model agrees closely with the coefficients in the original full model using program as the top level of the hierarchy, and the predicted probabilities from this model are similar, as well. We present this model as our final model, and also run program-specific regressions to verify that estimated associations are fairly consistent across programs. To aid program-specific models in convergence, staff education and staff intercept were excluded. Additionally, programs with fewer than 200 observations (Rio Arriba, Northern NM) had limited variance in some variables, resulting in less covariance with other variables, that made multiple imputation (MI) estimation of program-specific models abort. The problem variable was identified and excluded in these models.

We used the program-fixed-effects model to generate predicted probabilities of a successful outcome, which involves obtaining MI estimates of linear predictions and then applying the inverse-logit transformation to turn these into probabilities. We present a table in Appendix C illustrating these probabilities for the overall sample, by program, by referral type, by family member and by who initiates. We additionally chart program-level differences in probabilities by referral type and who initiates.

Appendix C

Odds Ratios Predicting Successful Referrals

Odds Ratios for Factors Predicting Successful Referrals

		Odds Ratio		Standard Error
Age at referral date		1.01		0.01
Program				
	United Way of Santa Fe	(base)		
	Gila Regional	1.30		0.29
	Los Alamos	0.61		0.32
	Northern NM	0.22	***	0.43
	Northwest NM	0.55		0.33
	Española	0.66		0.50
	Socorro	0.98		0.36
Family member (subject of referral)				
	Mom	(base)		
	Child	1.37	**	0.12
	Dad	0.48	***	0.21
	Family	0.93		0.11
	Other family member	0.57		0.37
	Pregnant woman	1.37	+	0.17
Referral type				
	Other	(base)		
	Behavioral health	0.53	***	0.12
	Domestic violence	0.37	***	0.28
	Early intervention	1.49	**	0.15
Referral initiation scenario				
	Family initiates referral	(base)		
	Home visitor initiates based on discussion with family	0.62	***	0.12
	Home visitor initiates based on screening	0.51	***	0.17
Female		1.71		0.41

Race / ethnicity

Caucasian/White	(base)	
Hispanic/Latino	0.89	0.15
Native American	0.81	0.23
Other (Asian, multi-racial, black)	0.57 *	0.26

Most recent enrollment reason

First-time parent (born at enrollment)	(base)	
Pregnant woman	1.02	0.12
Subsequent child (born at enrollment)	1.15	0.21

Referral into home visiting source

Hospital/medical setting	(base)	
Self-referral	0.81	0.15
Originally coded other	0.75 *	0.13
Newly coded other ¹	0.94	0.14

Language

English	(base)	
Spanish	1.37 +	0.17
Other	1.33	0.18

Education

HS diploma or less	(base)	
Some college	1.14	0.13
Tech training certificate or associates	0.89	0.20
Bachelor's degree or higher	1.02	0.17

Employment status

Not employed	(base)	
Part-time work	1.19	0.12
Full-time work	0.99	0.11

Total visits by referral date	0.94	0.06
Total safety topics discussed by referral date	1.05	0.04
Total prenatal topics discussed by referral date	1.00	0.03
Total nutrition topics discussed by referral date	0.97	0.05
Total maternal-child health topics discussed by referral date	1.01	0.03

Total wellbeing topics discussed by referral date	1.03	0.03
Total curriculum topics discussed by referral date	1.12 +	0.06
Total development topics discussed by referral date	0.93 +	0.04
Highest education of staff member		
HS diploma (<i>base</i>)		
Associates degree	0.79	0.30
Bachelor's degree	0.82	0.27
Master's degree	0.91	0.24
Intercept	0.29	0.57
Variance of staff intercept	1.38	0.11
Variance of case intercept	1.41	0.08
Observations (multiplied by 20)	5,397	

Note: Exponentiated coefficients (odds ratios)

+ = $p < .10$, * = $p < .05$, ** = $p < .01$, *** = $p < .001$

¹“Originally coded other” refers to referrals into home visiting that are coded as “other” by the home visiting program and are unknown to the research team. “Newly coded other” is an aggregate of several small referral-in categories that were combined by the researchers for analysis. These include a small number of referrals from Child Protective Services, Early Intervention, judicial/law enforcement, mental health/substance abuse, other individual, other home visiting program, public health, schools, and social services.

