

MEMO

TO: Erin Dalton, Allegheny County Department of Human Services

FROM: Deborah Daro, Ph.D., Senior Research Fellow

DATE: April 19, 2019

RE: *Hello Baby* Ethical Review

PURPOSE

To review the ethical considerations surrounding the development and implementation of a tiered prevention service model which offers the most intensive interventions to new parents identified through a predictive risk model (PRM) as presenting high risk for subsequent child maltreatment and post neonatal death.

THE PREVENTION LANDSCAPE

Preventing child maltreatment is a tall order, one which requires a delicate balance among three aspirational but often competing values—child safety, healthy child development, and parental autonomy. Shared child-rearing standards that mitigate potential conflicts across these goals are rare, particularly in a multicultural society that values the rights of parents to determine their child’s best interests. On the one hand, mandating public schooling exemplifies a generally accepted shared child rearing standard. Mandating specific parental techniques, by contrast, is far more controversial and subject to reasonable legal and normative disagreements. Even when a society can agree on what it wants for the next generation, government’s role in ensuring these goals vacillates between helping parents to do the right thing and assuming parental responsibilities if they do not.

Given these societal and legal disagreements, two pathways have developed to exercise collective influence on how parents raise their children—mandatory public intrusion and voluntary offers of assistance. The public child welfare system illustrates the first approach. This system limits public intervention to parents who have harmed their child or who have placed their child at risk. Once government identifies these at-risk children, it subjects parents to a set of rules and statutes that can determine their future relationship with their children. In contrast, child abuse prevention services are voluntary and place responsibility on parents to determine when they will allow others into their private sphere, and whether they’ll accept the advice being given and ultimately change their behavior. For the past 50 years, these two systems have operated independently, with minimal shared agenda setting and planning. Policy makers have paid little attention to the continuum of risk and variability among families’ opportunities for adequate support and early intervention. Disparities in service access, often shaped by race and class, mean that a disproportionate number of minority and poor families receive distinctly fewer and often more punitive service options.

The Family First Prevention and Services Act (FFPSA), approved by Congress as part of the Bipartisan Budget Act of 2018, offers state child welfare administrators an opportunity to structure meaningful reforms. This legislation, coupled with a significant expansion of prevention services focusing on new parents, creates a unique opportunity to build an alternative approach that can bridge the long standing divide between assistance offered families before maltreatment occurs and mandated services in response to a child being abused. Rather than operating in isolation, child welfare and targeted prevention programs across the county are increasingly working together to support families at a level commensurate with their needs and to improve their collective success in identifying, engaging and retaining families facing the greatest challenges. Despite repeated efforts to engage high risk families in voluntary prevention services, however, enrollment data suggests current prevention efforts are reaching challenged but perhaps not the most challenged new parents. For example, the most recent federally funded evaluation of home visiting programs found that very few families in either the treatment or the control groups had contact with the child welfare system during the child's first 15 months, suggesting that these programs are not reaching families with a high probability of entering the child welfare system. Either the eligibility criteria are not targeting the right risk factors or high-risk families are opting not to participate in these voluntary programs.ⁱⁱ

To improve the efficacy and efficiency of prevention services, the prevention field is exploring new ways to identify, engage and successfully serve families most in need. A key strategy emerging is a tiered prevention system that builds on a universal infrastructure of support for all new parents, referring families onto additional services as needed. Rather than simply focusing on high risk families, a tiered system of universal and targeted prevention services normalizes expectations around seeking assistance and creates a context more hospitable to early engagement. The system also offers the possibility of engaging a greater proportion of the most challenged families, potentially reducing the need for more intrusive and costly child welfare interventions. Research on the implementation and impacts of such strategies suggest that aiding all families can improve parental capacity, foster optimal child development, and, most central to this discussion, reduce reported and substantiated rate of maltreatment.ⁱⁱⁱ

THE ALLEGHENY COUNTY PREVENTION INITIATIVE

The *Hello Baby* program proposed by Allegheny County's Department of Human Services, reflects this new prevention paradigm. The model includes a "universal component" that involves discussions at the hospital with all parents at the time their baby is born, introducing them to the array of available resources which parents can access as needed (e.g., calling a warm line, logging on to a website, using a texting service, or enrolling in voluntary parenting classes). The model also includes additional services and case management assistance for families experiencing greater difficulties or who present a profile suggesting an elevated risk for child maltreatment or post neonatal death. Depending on the level of need, identified families will be eligible for outreach and engagement in additional services through Family Support Centers or other community services. Those at greatest risk, will be provided a "navigator" or case manager who will assess their needs on an ongoing basis and offer priority access to a range of clinical, basic need and parenting services as appropriate through the child's third birthday. Services at all levels will be voluntary.

While well aligned with current prevention thinking, the proposed Allegheny multi-tiered prevention model differs in important ways. Specifically, *Hello Baby* will use a predictive risk model (PRM) to

identify families at substantial risk for future child welfare involvement and post neonatal death, offering these families the most intensive level of support. In contrast to the broad range of demographic and situational risk factors used to identify appropriate recipients for many target prevention programs, the PRM places primary emphasis on a family's history with the child welfare and justice systems and housing insecurity. Very few of the variables in the model capture a family's current status or proximate risk factors. The county is adopting this strategy to improve the likelihood that those families at highest risk for maltreatment will be directed, as early as possible, to appropriate prevention services, thereby reducing the need for subsequent child welfare services. To achieve these outcomes, high risk families will not only need to enroll in the program but also respond favorably to the types of voluntary, participant-initiated prevention services commonly offered new parents. At this point, it is not clear how these high-risk families will respond to the program or how prioritizing the enrollment of these families might impact the aggregate benefits of prevention services. With respect to the question of successful enrollment, prior research on intensive home visiting programs find that families at greatest risk for poor outcomes due to opioid addiction, homelessness, poor maternal mental health, or family violence struggle to fully engage in voluntary prevention services.^{iv} If those families identified as high-risk do not see value in the program itself or fail to fully participate in interventions that focus on achieving measurable behavioral change, the *Hello Baby* strategy might not realize the hoped for reduction in child maltreatment rates, subsequent placements, or child deaths.

In addition, offering "priority" to these families when allocating available service slots could result in fewer prevention services being made available to families who, while challenged, fail to score at the highest end of the PRM scale. Prevention programs, particularly those that focus on enhancing parental capacity, maternal health and wellbeing, and healthy child development, target a range of outcomes beyond reducing child maltreatment. Core outcomes include improved maternal and child health access, economic self-sufficiency, early detection and referral for maternal depression and child developmental problems, and improved school readiness. As a result, the participant population for these programs is diverse and the collective impact of these efforts occurring in a wide range of domains.^v Asking parenting programs to place priority on enrolling families at high risk for maltreatment, many of whom may already be child welfare involved, over those families whom they have historically successfully served, may alter not only the aggregate success these programs have achieved in other domains but also create an assumption that such services exist primarily to avoid child abuse and neglect. Such a change might alter public perception of prevention services and the relationship between accepting voluntary offers of assistance and eventual child welfare involvement. None of these problems are disqualifying nor insurmountable. They simply underscore the implementation challenges that confront any attempt to innovate or change the way prevention services are allocated or alter the balance between mandated and voluntary interventions.

Despite the impacts this effort might have on individual participants or the community's attitude toward prevention, *Hello Baby* does offer the county and other jurisdiction seeking to improve the integration between child welfare efforts and community-based child abuse prevention strategies a unique opportunity to advance their mission. The core challenge in doing this work reflects a long standing, normative debate in the United States around how best to direct parents to the assistance they need in ways that value parental autonomy but also embraces a public commitment to child safety and wellbeing. How Allegheny County manages this thorny issue will provide important guidance and learning for child welfare and prevention systems across the country. If successful, the effort will make a significant contribution to advancing the goal of building a more integrated system of parent support,

one in which the needs of all children and families are addressed.

The balance of this report is divided into three broad sections -- the process of identifying families at highest risk for adverse outcomes and its implication on program performance; the characteristics of the proposed program model and its use of various engagement strategies to improve enrollment rates; and the specific human subjects considerations that surround the ethical implementation of any intervention. Each section outlines the relative strengths and weakness of the proposed approach.

Particular attention is paid to identifying implementation strategies that will help mitigate the ethical challenges posed by the use of a PRM. Following these discussions, the report outlines specific strategies the county might adopt to maximize the learning opportunities this initiative can offer other jurisdiction seeking a more integrate community-based response to child protection.

DETERMINING RELATIVE RISK

Some home visiting and other targeted prevention programs use socio-demographic risk markers to determine program eligibility (such as young maternal age, limited education, poverty, or single parent status). More frequently, however, eligibility is determined by a standardized assessment process generally involving an in-person interview with the parent during pregnancy or at the time the baby is born. The factors commonly assessed during this process include:

- History of maltreatment as a child.
- Past or current domestic violence victimization.
- Substance abuse related issues.
- History of mental health conditions.
- Prior contact with child welfare services as a child or adult.
- Access to and appropriate use of primary and preventive health care.

In addition, these assessment interviews explore the parent's current ability to meet their child's basic needs (housing, food, and clothing) and their perceived sense of safety and access to various formal and informal social supports. An extensive body of research has demonstrates a correlational, and sometimes causal, relationship between these issues and a range of adverse outcomes including weaker, less positive parent-child relationships; lower ability to overcome temporal stress and focus on a child's immediate needs; less consistency in providing adequate care and maintaining a supportive home environment; and, in some instances, more frequent contact with the child welfare system.^{vi} In other words, families with elevated scores on these assessment tools are perceived as being *at risk for a broad range of negative outcomes*, only one of which is a report to child protective services. Further, services are being provided to these families not simply to avoid the worst or most costly outcomes but rather to maximize a parent's potential to create the most nurturing, stimulating, safe and consistent environment possible for their child. These multiple prevention objectives has produced a diverse participant population, encompassing different degrees of risk and behavioral challenges.

A family's responses to these questions are generally ranked on a numerical scale, with explicit offers for additional services limited to those families who score above a pre-determined cut off point. For example, the Family Stress Checklist, used to determine a family's eligibility for Healthy Families America, sets a minimal score of 40 for a family to qualify for the program.^{vii} The Bridges tool used in Los Angeles

County requires that a respondent score 50 or above before she is referred on to more intensive home visiting programs.^{viii} In other cases, such as the Matrix employed by Family Connects, individual scores within specific domains are used to refer families to a range of interventions depending on which areas are of highest concern.^{ix} A primary goal of these and similar assessment tools is to reduce the number of families who are offered the most intensive, and often the most costly, interventions. The capacity of this interview strategy to identify the optimal pool of recipients is a matter of debate.

Limits to Existing Practice

There are several factors or limitations in these interview methods that create potential barriers to appropriate service access. First the strategy's ultimate success depends on the willingness of families to disclose sensitive information to an individual they do not know or know well. Many families do disclose a wide range of adverse experiences and current challenges, issues that are confirmed during the early weeks of program enrollment. However, it is possible the most troubled families or those with the most complex histories may be more reluctant to provide complete and accurate profiles. This may be particularly true for families who have a prior history with the child welfare system or who live in communities where the child welfare agency does not have a favorable reputation. In such cases, respondents may minimize current struggles or misrepresent their past experiences. When this occurs, families appropriate for services may not be offered an opportunity to access them because their scores suggest no additional services are needed.

Second, the cut-off score for enrollment or offers of assistance on most of these instruments is a general estimate of who might require or benefit from additional assistance. Little research exists to support the notion that families falling just below the cut-off score are significantly less in need than those qualifying for services. While families who score at the highest end of these scales most certainly differ in kind from those with no identified risks, less certainty exists on the relative risk of families falling in the middle of these scales. Indeed, the specific cut-off score used on some of these measures can vary depending upon local service capacity at a given point in time. The greater the number of service slots in a community, the more generous the cut-off score. The more limited the number of services, the more restrictive the cut-off score.

Third, these types of focused "eligibility" assessment interviews can in some instances reinforce the perception that a parent needs to demonstrate challenges and admit vulnerabilities before expecting to receive additional parenting support. The "normative" position remains one in which the child's parent has primary responsibility for his or her wellbeing and that only those unable to shoulder this responsibility should be asking for assistance. Skilled interviewers can alter this dynamic by framing topics in a certain way, reminding respondents that all parents face difficulties, and emphasizing it is "ok" to reach out and ask for help. However, the reality that only those families who disclose past trauma or face current proximate challenges are singled out for assistance may convey a more enduring message.

Finally, the focus on assessing an *individual's risk* around child maltreatment or other poor outcomes for children does little to disentangle service needs that reflect a parent's personal shortcomings in knowledge or skills versus shortcomings that are compounded by the context in which parents are raising their children. Core services such as adequate and easily accessible preventive health care, affordable and high quality child care, safe and secure housing, and community-based social services are not equitably distributed across all communities. Parents that share a common history of trauma and proximate challenges may have a very different level of actual risk based on where they live. Those

residing in resource rich communities enjoy a stronger safety net that can, in part, compensate for parental shortcomings. In contrast, resource poor communities can make parenting more challenging and increase the odds of being reported to child protective services. This concentration of child maltreatment reports in certain neighborhoods is well documented.^x As prevention programs become more aware of the interaction between individual risk and community risk, greater care has been taken in factoring this into how prevention resources are allocated and community service networks are examined to create communities in which it becomes easier for parents “to do the right thing”.^{xi}

Allegheny County’s Risk Assessment Approach

Hello Baby proposes two pathways for determining which new parents will be offered more intensive services (*Hello Baby Family Support Tier and Hello Baby Priority*), addressing some but not all of the shortcomings observed in the assessment interview method. First, community agencies who have contact with new parents and those raising young children will be encouraged to refer them on for additional assistance if they believe such assistance is warranted. In determining a family’s level of need, community agency staff will consider a range of factors including, among other factors, a mother’s demographic risk profile (young material age, single parent status, low income), existing social connections, and interest in accessing parent supports. Because families are free to refuse or accept these additional services, there are no unique ethical challenges to this approach.

The second approach, targeting families for additional services based on data obtained from administrative records, presents a more challenging situation. Unlike the personal assessment/interview strategies outlined above, families would be offered additional prevention services based on their past behaviors as observed in administrative records. Following detailed analyses and statistical modeling, the specific factors identified by the county as being predictive of subsequent maltreatment and post neonatal death include:

- **Infant’s Birth Records:** mother’s marital status, father’s educational level; mother’s plans regarding breastfeeding; if father’s age is missing; and maternal smoking during pregnancy.
- **Child Welfare Records:** recent court referrals for child abuse and neglect (CAN) involving the mother as perpetrator (last 2 years) or father in the role of other adult (last 1); court referrals for CAN that were screened out involving the mother as perpetrator (last 3 years); court referrals for CAN that were screened in for mother as perpetrator (last year); and court referrals for CAN that were screened-out for mother in role as parent (last 3 three).
- **Homelessness:** total number of times mother has been reported homeless; number of times this has occurred (last 2 years); number of times father has received homeless case management services; father’s number of homeless episodes (last year); and number of times mother has been reported homeless (last 3 years).
- **Jail/Juvenile Probation:** number of months father spent in jail (ever); number of months mother spent in jail (ever); number of months dad in jail/juvenile probation (last 3 years); number of months mother in jail (last 2 years); and number of months mother in jail (last 3 years).

Determining the validity of these factors in producing a strong predictive indicator for subsequent child maltreatment or post neonatal death is not the subject of this specific review. Rather the focus here is on identifying the method’s advantages and disadvantages in offering the most intensive prevention services to those at highest risk for poor outcomes and its potential to alter worker perceptions about families in ways that may increase the odds of a subsequent report to child protective services.

While not addressing all problems inherent in using participant interviews to assess risk (neither individual interviews nor administrative record reviews disentangle individual and contextual risk factors), the PRM approach offers some distinct advantages. First, PRM provides a third-party assessment on the extent to which all new parents in a community have experienced prior reports for child abuse and neglect, homelessness, and involvement with the criminal justice system. In contrast to assessment interviews, the PRM offers a more detailed description of a family's prior experiences in these areas than is obtained in standard assessment interviews. A family's "score" on this measure is not subject to a family's willingness to disclose their prior history or the accuracy of their reflections. When families are asked about these types of experiences during an interview process, these topics are generally covered by yes/no questions that provide limited information on the frequency or scope of these experiences. For example, new parents may be asked if they have ever been reported for child maltreatment; those with a single experience and those with multiple experiences are considered "equally exposed" to the system. In this regard, the specifics and level of detail available through administrative records allows for a more nuanced review of the family and assessment of their relative risk.

On the other hand, very few of the variables in the model address proximate challenges. The exception to this pattern is birth certificate data which captures a few proximate maternal behaviors (smoking during pregnancy and plans to breastfeed) and certain demographic characteristics (marital status, father's education) associated with a mother's capacity and interest in acting in ways supportive of her infant's health and wellbeing.^{xii} No variables in the model reflect a parent's current access to health care, informal social supports, and current psychosocial health, characteristics that are often associated with poor health outcomes for both the child and mother. While repeated housing insecurity may serve as a proxy for other challenges such as substance abuse, poverty, or a general inability to consistently meet her child's needs, very few items capture a new parent's immediate reality or her current capacity to create and sustain a nurturing environment for her child. The absence of these proximate indicators does not seem to impact the predictive strength of the PRM; however, proximate stress and the lack of resources are important elements prevention programs consider in identifying families that can benefit from their services. Prevention programs that focus on enhancing parental capacity are seeking participants in need of a range of support and guidance. They are not solely focused on avoiding the worst outcomes. Limiting service referrals or prioritizing families with high PRM scores in an environment in which service capacity is limited or stagnant might result in families who can benefit from services losing important resources.

Indeed, if the model predictions hold and if a notable proportion of the highest risk families enroll in targeted prevention programs, such as home visiting models, the programs will see a notable change in their participant base. For example, families with the highest combined score on the PRM are more likely in the absence of early intervention to have adverse child welfare outcomes. The county's analysis predicts that 17% of all births receiving the highest PRM score will experience at least one placement by the child's fifth birthday. By contrast, randomized trials that have examined subsequent child welfare involvement for *families assigned to control groups* in evaluations of intensive home visiting programs observe 5 to 10% with substantiated reports for maltreatment within a two-year period and a placement rate of around 3 to 5% within seven years.^{xiii}

Beyond its potential to alter the overall composition of the participant pool enrolling in prevention services, the PRM also may impact provider perceptions and behaviors toward their clients. All home

visitors report a proportion of their participants to child protective services. While rarely the first course of action, home visitors will act to protect a child from harm when warranted, often discussing with the parent their reasons for making a call to social services. Factors that may precipitate a referral would be a participant revealing or the home visitor observing something that suggest eminent risk to the mother or her baby. Common “red flags” noted by home visitors include violence between the mother and her partner; intentional harm to the child or overt disregard for the infant’s safety; substance abuse; mental health concerns that limit the mother’s ability to meet basic child care responsibilities; or conditions in the home that pose an immediate safety threat to the child. The PRM gives service providers additional information on a family’s history that may alter the way workers interpret the conditions they do observe. Even if the exact details regarding a family’s history is not provided to program staff or other providers, the fact parents have been identified through the PRM as being at high-risk will convey a general profile of concerns. As such, key implementation questions for the county to address include:

- How might knowledge of a family’s prior history with the child welfare and justice systems impact a provider’s judgment regarding current relationships in the home and the ability of other caretakers (particularly the father) to appropriately care for the infant?
- How does this knowledge impact how providers might interpret a mother’s actions – will they be less forgiving of minor concerns they observe?
- Will knowledge of a family’s history increase the likelihood a provider will report the family to child welfare as a potential risk for maltreatment if the family drops out or refuses additional program services?

At this point,¹ it is unclear how this knowledge might influence the service delivery process or impact notions of “voluntary enrollment”. Given that an estimated 40% of the high risk pool may be currently involved with the child welfare system at the time prevention services are initiated, these families may face an elevated level of scrutiny generated not only by the information in the PRM but also from ongoing conversations between the navigator and the family’s child welfare case worker. Heightened awareness of a family’s circumstances may create surveillance bias, resulting in a higher probability of a family being reported. Providers will know more about a family and will need to weigh this knowledge against a family’s willingness or reluctance to remain in the program. As discussed in the following section, these concerns can be addressed and potentially minimized through initial training and ongoing supervision across all level of *Hello Baby*. However, it is unlikely they can be fully eliminated.

THE SERVICE DELIVERY PROCESS

Hello Baby’s tiered prevention model offers an important opportunity to strengthen prevention services and build a more integrated response to protecting children across multiple public and private service agencies. The structure and implementation of this model will play a significant role in mitigating or exasperating the ethical challenges associated with the PRM risk assessment method, particularly with respect to how “voluntary” services appear and how a family’s ongoing relationship with program staff is established and managed.

¹ Since this report was provided in Spring 2019, discussions have continued regarding the type of information that will be shared with prevention service providers.

Of particular importance is the depth and availability of *Hello Baby's* universal component. In contrast to systems in which universal offers of assistance are limited to a comprehensive assessment interview and service referrals or a modest number of early contacts with a home visitor, *Hello Baby* proposes more consistent universal level of assistance to all new parents at the time their baby is born. Through its universal component every new parent will hear the same message – parenting is tough; it is normal and expected for parents to have questions and need some help.

Universal Service Challenges

Because *Hello Baby's* universal component will be provided at the time of delivery in the hospital, the content of the interaction and conditions surrounding when and how new mothers can be approached will be defined, to a large extent, by the hospital staff and their institutional review board. Other prevention programs that approach women in the hospital are generally required to be approved by hospital administrators and are subject to the patient confidentiality standards and HIPA guidelines governing all health data. Information on *Hello Baby* and the array of new parent services available in the county will be offered to all new parents. Individual parents will be free to accept the information; they can refuse to talk with the outreach worker. Because women who have given birth experience a range of emotional and physical challenges, outreach workers will need to adjust their schedules and length of time they spend with each mother to fit her circumstances. Despite aggressive efforts to meet with all new parents, it is possible that as many as 20% of new parents will not be able to have face-to-face contact with the outreach worker due to the limited time women are hospitalized following birth and the number of new parents in the maternity wards at any given time.

To maximize the reach of the program's universal component, all information should be made available in written form and in multiple languages appropriate for the community's target population. In addition, outreach workers should draw on the expertise of nurses working on the maternity floors to identify those new parents who might most benefit from a face-to-face conversation regarding *Hello Baby* resources. Depending on the hospital's policy with respect to patient confidentiality, nurses may be able to identify patients who are first time mothers or teen parents; those who have had a more difficult delivery or whose baby is low birth weight or in the neonatal intensive care unit; women who have had few visitors; or women who had late or no prenatal care.

All parents will have access to a common website and "warm line" they can use as they see fit. In addition, women delivering at Magee Women's Hospital will be offered the option to participate in the "Pittsburgh Study", a prevention program that includes a comprehensive assessment of the participant with additional services offered as needed based on the assessment. No information is provided as to what this assessment will involve, but one might assume it will be similar to the assessment interviews described in the previous section. In presenting this option to new parents, it will be important to be clear that the Pittsburgh Study is another pathway for accessing various parenting services and not a research study. The current name might be misleading – the word "study" sounds more like a research project than a service program. Participants who are identified as being at minimal risk based on the assessment will be given access to a "texting service" that offers periodic messages on parenting tips and child development milestones. Those identified with greater risks or concerns will be offered access to a short video on parent-child interaction or receive a limited number of in-home visits through an evidence-based model (Family Check-Up). It is not clear what the programmatic response will be if, in the course of the assessment, substantial risks or concerns are identified. The county may wish to clarify this process with the service providers.

Assuming maximum parental choice, each of the options included in the model's universal component represents a minimal level of intrusion. Based on the experiences in other communities who offer similar universal service options and referrals, the program should be well received by most new parents. Families, particularly those who are skilled in managing service markets and utilizing resources available to them (what has been termed in the prevention field as "consumer families") will be well served by these options and able to capitalize on them.^{xiv} Independent of its ability to engage all new parents, the

Hello Baby program's universal component may well contribute to a new, normative standard in which parents will feel more comfortable accepting additional, more intensive prevention services.

Were this type of normative shift toward seeking out and receiving offers of voluntary services to permeate the community's culture, these activities will reduce attitudinal barriers to service access and potentially increase receptivity among parents facing the greatest challenges to voluntary prevention services.

Issues Surround the PRM "opt out" Process

The one potential barrier to generating this type of normative shift through a consistent, universal offer of support to all new parents is the discussion that will occur during this phase regarding the option parents have to "opt out" of the PRM data review. Little information is provided as to how this element will be explained to families. Using such language as "we will be determining what other needs you might have by reviewing your prior experiences using information maintained by state agencies" may well raise red flags for families, particularly those who are already involved in the child welfare system or who have a less favorable view of public agencies. Integrating this conversation into what has been, up to this point, a very positive and inclusive exchange about universal parent needs could be challenging. During this conversation, it will be important to reinforce the message that some families need more help than others and you are using this method to be sure that all families receive the help they need. Giving families an option of mailing in a postcard to remove their baby's name from this analysis is essential to insure family privacy and strengthen the voluntary nature of any subsequent service offers. Program material did not make clear what the county will do if an active CPS parent "opts out" of the PRM process. Since an estimated 40% of the families with the highest PRM scores will be active CPS families, a formal procedure needs to be put in place as to how these cases will be addressed. One could follow a policy of having any active case in which the mother has another child automatically enrolled in *Hello Baby Priority*. If this is the policy, the "opt out" option should not be presented to these families. Rather, these families should be told that they will be contacted in a few weeks by *Hello Baby* service providers to talk about what other supports might be available to them.

Until the program is implemented, it is difficult to estimate what proportion of new parents will "opt out" of the PRM review and if those who opt out will differ in any significant ways from those who "opt in". To track these patterns, the county may wish to have the "opt out" card indicate where the mother delivered. Working with each birthing hospital, the county could explore the possibility of obtaining aggregate information on the proportion of these "opt out" cases that reflect certain characteristics such as being a first-time parent, having late or no prenatal care, having a low birth weight infant, or being a teen parents. One would not be able to obtain participant level data on those opting out of the program, but aggregate numbers would provide some indication if those opting out include a higher proportion of parents presenting some of the common characteristics associated with future parenting difficulties. The county could then use this information to refine how the PRM is being presented to families in order to improve the number and range of families who agree to participate.

Hello Baby Family Support and Priority Tiers

While universal offers of support are well received and accepted by families at low to moderate risk, families who struggle in making informed choices about assessing their own needs and selecting among alternative service options, often find the process of weighing the relative merits of different service

alternatives overwhelming. The *Hello Baby* program addresses this concern, in part, by offering extended levels of support to high-risk families in understanding and accessing various interventions. As specified in the program plan, service options will increase in relation to the family's level of risk as identified through the PRM and a family's receptivity to service. Families presenting some but not the highest risk (those scoring 15-19 on the PRM) will be directed to the network of Family Centers and other community partners (*Hello Baby Family Support Tier*). Those facing the most extreme challenges, as reflected by a score of 20 on the PRM, will be eligible for services that include "relentless engagement", service coordination, priority access to service, and case management (*Hello Baby Priority*).

Enrollment in these programs as well as any service options recommended for families will be voluntary; families will be free to leave *Hello Baby* at any time or refuse any specific services that are offered. Persistent efforts to engage families in programs designed to strengthen parental capacity, improve parent child interactions, and enhance healthy child development are long standing in the prevention field. Many early home visiting programs, for example, use what they term as "creative outreach" in which a home visitor or program outreach worker repeatedly visits the family in their home offering basic supplies (such as diapers, formula, baby clothes, coupons to local discount stores) and provide basic parent education information.^{xv} Other programs provide parents an opportunity to select those issues of primary importance to them, using motivational interviewing techniques and versions of a "readiness to change" scale to assess where to begin with families in order to maximize early engagement and problem solving around a participant's most salient issues.^{xvi} Few prevention services are offered only once; most providers offer multiple opportunities for families to engage, allowing families to weigh the relative risks and benefits of participation and decide if and how such services can meaningfully improve their circumstances. To the extent *Hello Baby's Family Support and Priority* options follow similar procedures and parents retain authority to remain or leave an intervention at any point in time, the model poses no ethical risks.

The primary challenge, of course, is insuring that outreach and engagement strategies do indeed respect the rights of all families to refuse services or to leave a program at any point without penalty. Identifying when "relentless" outreach becomes "intrusive" from the parent's perspective is difficult to define in the absence of context. However, several features embedded in the *Hello Baby Priority* protocol may increase a participant's comfort level in accepting services and fit better with the way families under stress often makes decisions. Once a family has been identified, the outreach worker will be encouraged to utilize a range of engagement strategies not unlike what is currently used by other prevention programs – home visits, gift cards, small incentives, introduction to the family from other providers they may be using or from friends enrolled in similar programs. During this early outreach stage, the primary goal is to secure the family's trust and openness to establishing an initial relationship. Families are not accepting any service at the onset; they are simply agreeing to continue the conversation. Once a relationship has been established, the family specialist, working in partnership with a trained social worker or navigator, will work with the family in assessing their needs and identifying appropriate interventions. If a family is already engaged in an ongoing, intensive intervention, the *Hello Baby* staff will maintain a supportive role and reinforced the positive message and guidance these programs are providing families. *Hello Baby Priority* embraces many of the features often identified as "best practice" across a range of clinical and supportive interventions. These features include:

- Low caseloads.
- Reflective supervision including regular case consultation.

- Commitment to ongoing staff training and support.
- An individualized approach driven by family needs.
- A “do whatever it takes” philosophy.
- Collaboration and coordination with family supports and other services.
- Maintaining a family’s right to determine the depth and duration of service engagement.

Sustaining these program principles will be key in successfully enrolling families, insuring services are fully voluntary, and achieving program objectives.

Despite embracing many prevention principles, *Hello Baby Priority* is a different type of prevention “service” and requires a different understanding of what it will mean for a family to engage in the program. Participants are not being asked to enroll in a proven, evidence-based program where the service parameters are fully defined, the indicators of program fidelity fully articulated, and targeted outcomes confirmed through rigorous research, often including repeated randomized clinical trials. *Hello Baby Priority* participants are enrolling in a process. Some families may, at some point, access one or more evidence-based programs, as defined by others in the field, but the goal is not to provide all families these interventions or the same service mix. Rather, the goal is to create a context in which families at highest risk will have the opportunity to work with a service team to assess their individual needs, identify their priorities, and work with a range of community service partners to address these priorities in the manner the family deems most appropriate. *Hello Baby Priority* participants will have diverse service experiences; the only consistency will be having someone work with them, for up to three years, to help them manage the social service market place and draw from it those interventions that best suit their needs and priorities. This strategy, while not fully tested, is in keeping with emerging research in the field of behavioral economics which identifies those factors that limit an individual’s ability to act in a fully rational manner. In applying these principles to structuring human service programs, researchers are identifying those characteristics that limit a family’s ability to make a reasonable “benefit-cost” analysis regarding the value of seeking, enrolling in, and remaining active in early home visiting and similar supportive services. Moving forward, the county might test specific practice reforms that would facilitate an outreach worker’s ability to accurately gauge participant capacity in key areas such as:

- The degree to which a family is facing multiple stressors and “cognitive overload,” which may limit the family’s ability to focus on the specific changes that the *Hello Baby* team is trying to promote or to fully engage in joint-case planning efforts.
- The ability of the participant to defer short-term rewards in favor of addressing longer-term needs—especially the ability of new parents to invest their time in making the immediate behavioral changes they would like to make to support the optimal development of their child.
- “Poverty” in terms of both economic resources and the held belief among family members that they are (or are not) in control of their lives, along with the implications of this belief on sustained enrollment in a time-consuming, intensive intervention.

A fuller understanding of these dimensions, particularly as they apply to families at high risk for subsequent maltreatment, would better shape the kind and number of choices families are offered at intake, the pace at which change is then expected, and the way service dosage and duration is presented.^{xvii}

To maximize the opportunity for *Hello Baby* to advance the field, implementation should be carefully assessed and the link between program characteristics and participant outcomes monitored. In many respects the ethical or appropriate use of the PRM hinges on the expectation that the program will improve outcomes for children, including a reduction in subsequent maltreatment, the need for placement, and sustained cognitive, emotional or physical injury. Even if the family continues to require formal child welfare involvement and oversight, children may experience more positive outcomes in terms of their health and development and the parent's capacity to form a positive relationship with their child and manage their own lives. Some of the families enrolled in *Hello Baby Priority* may indeed be reported to child protective services because that is the choice required to insure a child's safety. If enrollment in *Hello Baby* allows such a report to occur sooner, before a child is harmed or seriously injured, this outcome is as valuable and ethical as preventing the need for the report or placement. In monitoring early implementation efforts, several issues should be carefully considered including the following:

- **Weighing costs and benefits:** What are the costs associated with fully implementing *Hello Baby*? Are these costs offset by savings accrued in the child welfare system? Does the program increase the number of child maltreatment reports? How does enrollment of high-risk families alter the staffing and costs associated with delivering various evidence-based programs, such as home visiting?
- **Long term success:** What is the family's trajectory and child welfare contacts after the child's third birthday? Does the program provide the participant adequate skills in assessing needs and managing service markets such that appropriate resources can be secured in the future without the assistance of a navigator?
- **Defining and tracking "failure rate":** What proportion of families could not be sufficiently supported to avoid the need for mandated child protective service interventions? Do these families suggest a more robust *Hello Baby* program is needed, or do they suggest that some high-risk families may not be amendable under any reasonable circumstances to successfully utilizing voluntary prevention services?

HUMAN SUBJECT CONSIDERATIONS

In soliciting recruitment in voluntary prevention services, it is important that participants understand why they are being offered services, what they will receive or experience, what potential benefits and risks are associated with their involvement and how their privacy will be maintained. If others will be contacted as a result of their involvement in any activities, families need to be informed as to what will trigger this communication and what information will be provided. While not all outcomes associated with an intervention can be predicted, the burden on the provider is to be as transparent and direct as possible at the onset of services and address any questions participants raise in a complete and honest manner.

Consent Issues Regarding Universal Services

Hello Baby's universal hospital contact primarily involves the provision of standard information on a range of parenting services and support available in the county. The hospital outreach worker should address any questions parents may have about a specific intervention but a detailed discussion about the relative merits of these options is not necessary. New mothers and other family members will be free to accept or refuse the material provided by the outreach worker and to follow up in any manner they so choose.

Consent Issues Regarding "Opting Out"

The one element of the discussion with new parents in the hospital which does require careful attention in terms of securing informed consent is the use of administrative records to determine a family's subsequent need for additional prevention services. As discussed earlier, families will be given the opportunity to "opt out" of the PRM process. The county is electing to use "passive consent" presumable to maximize the number of births available to be screened using the PRM. This approach is considered appropriate only if the intervention or strategy involves minimal risk to the participant and if obtaining written approval for the procedure is not practical or feasible. It is not clear if this approach has already been approved by the county's Institutional Review Board. If it has, then the approach has been judged appropriate in this instance. If it has not, the county will need to make the case as to why it is not asking parents to "opt in" for the screen. The PRM does not represent any additional risk to a family or added surveillance; it will be used to determine if additional prevention services are needed.

While some families will be given an opportunity to enroll in *Hello Baby Family Support and Priority Tiers*, others will be excluded based on the PRM results. The multiple offers of services provided all families through the program's universal component mitigates in some ways the impacts of a specific family not being offered the most intensive level of support. Also, the relatively small number of slots available for *Hello Baby Priority* requires some form of service rationing. Given that some method is needed to allocate these scarce resources, the PRM applies consistent selection guidelines across the full population.

Consent Issues for *Hello Baby Family Support and Priority Tiers*

With respect to securing informed consent for *Hello Baby Family Support and Priority Tiers*, a major challenge will be explaining how the family was selected (they may or may not recall any conversation in the hospital at the time their baby was born) and the risks and benefits associated with accepting these services. As outlined above, the outreach worker who will be the initial point of contact for these families, will explain what the program can offer in terms of ongoing parenting assistance and concrete services. They will present these services as fully voluntary and remind families that they are not required to accept them. To be fully transparent, however, the outreach worker also should explain how the county is allocating services and discuss each family's specific challenges. These discussions can be general (such as "new parents who have unstable housing options can find it difficult to maintain a safe and secure home for their baby") and also include any strengths the family may bring to the table (such as "your baby is really healthy" or "I see you are being very responsive to your baby"). However, the discussion also should outline in general terms what information the county has used to ensure that all families receive an opportunity to access any services they may need. These discussions also need to include the standard elements of informed consent such as:

- **Benefits:** Participants will be able to access a range of services including parenting education classes,

individualized home visiting services, and other resources designed to help them meet their needs and the needs of their baby. In working with parents similar to those being offered *Hello Baby Priority* these community resources have demonstrated an ability to improve relationships between mothers and their babies, help mothers and fathers manage daily stress, help families access a range of basic supports around housing, food and medical care, and overcome other challenges that can make it difficult to care for young children. The efforts are designed to increase a parent's ability to provide consistent care for their baby and manage their own wellbeing.

- **Obligations:** Many of these services will ask parents to participate on a regular basis and to follow-up with additional referrals when needed. While parents are free to leave any program at any time, outcomes will be better if a family participates as fully as they can.
- **Risks:** Sometimes parents may feel uncomfortable talking about specific topics or feel they are being asked to do too many things and follow too many rules. If any time a parent feels overwhelmed, they can talk with the *Hello Baby* staff and they will work with the parent to find a solution. Generally, everything a parent shares with the *Hello Baby* staff or other providers will not be shared with others. The one exception to this will be if a service provider determines a parent or child is being harmed or in danger of being harmed. If they do observe something that concerns them, they will talk with the parent about the situation before talking to others.

I am not sure how one could fully explain the PRM process to most families at the time they enroll in the program other than noting that they are being offered the program because they have faced several challenges in the past. Rather, the important messages to convey during early engagement include (a) you believe the parent is facing a number of challenges, many of which may reduce her ability to care for her child and keep him safe; (b) the options being offering will shore up a parent's capacity to care for herself and her child; and (c) while the parent can stop services at any time, continuing to work with the program will strength the odds of success. If a family is already an active CPS case, you will need to review with them how refusing services or dropping out of the program will impact their CPS status. For all families, you need to be clear that certain conditions or challenges, if unaddressed, may result in the need to file a child maltreatment report. You are offering services to avoid that outcome. However, if a report does need to be made, you will do that in partnership with the family and will continue to work with them to insure the best possible outcome for their child.

SUMMARY

As the nation's child welfare system seeks to minimize the need for out-of-home placements, and as early home visiting programs ponder how to more successfully identify, recruit and retain the most challenged new parents, Allegheny County's *Hello Baby* program offers a promising innovation in modeling an integrated system of care. If successful, the model will engage a greater proportion of new parents with a prior history of child welfare and justice system involvement, periods of housing insecurity and other risk factors in appropriate preventive services. By reaching families before they require a formal report for child maltreatment or before their infant is harmed, this realignment of prevention resources could result in families avoiding the most costly and intrusive child welfare services and prevent children from serious physical and emotional injury. While much will be said about the use of predictive analytics to identify (some might say target) those high-risk families who will be offered these prevention opportunities, equally important for the field is the program's multi-tiered service delivery system in which all new parents will be made aware of resources that can help them meet their parenting obligations. Those families who require additional assistance in discerning their needs, setting priorities, and navigating the county's service continuum will be offered a level of assistance that matches their needs. Using administrative data on a family's prior behavior to "predict" their need for preventive services is controversial. As discussed in this review, the model will not only screen some families in for additional assistance but also will screen others out. Many of these screened out families will be struggling to care for their children. And, in many cases, these "less risky" parents may be more amenable to the current pool of programs designed to improve parental capacity, strengthen parent-child interactions and enhance a child's development. The use of predictive analytics may also heighten concerns that prevention services are a "gateway" to the child welfare system, primarily offering additional surveillance rather than meaningful help.

Not all of the fears associated with the use of predictive analytics in a field as sensitive and consequential for families as mandated child welfare services can be fully addressed. However, many of the implementation features embedded in the *Hello Baby* service delivery system mitigates against the worst outcomes and generates positive community and family benefits. These features include:

- **A multi-tiered prevention system, that builds on the benefits of a universal platform that extends offers of support to all new parents.** *Hello Baby's* goal is not simply to identify those families at highest risk for subsequent maltreatment. Rather the goal is to raise expectations that talking about your parenting concerns is acceptable and normative and that the system responding to such requests is inviting, accessible and capable of completing the task at hand.
- **The voluntary nature of all services.** No family will be required to accept *Hello Baby* or any subsequent service referrals.
- **The structure of *Hello Baby Priority* itself and its emphasis on relationship building between the service team and program participant and the use of a "navigator" to assist the family in understanding and efficiently utilizing a full array of service options.** Families are not being enrolled in a single evidence-based program; they are being enrolled in a process designed to help them maximize the benefits of existing prevention services.
- **The explicit partnership the model has developed between the child welfare agency and community service providers.** Joint ownership of the program among diverse groups, including

parent advocates, creates the public will necessary to successfully implement and sustain any innovation or system reform

Over and above these structural elements, careful documentation of the implementation process will be critical in creating the information needed to flag unanticipated consequences and allow the county to adjust the program as necessary to maximize both participant and system outcomes. Challenges that need to be carefully monitored include:

- **Examining the number and characteristics of those parents who elect to “opt out” of the PRM review.** As discussed in the report, the county might consider working with staff at the relevant birthing hospitals to obtain aggregate information on the proportion of refusals that include first time parents, those with late or no pre-natal care, low birth weight infants, or teen parents. Also, the county should track the number of current child welfare-involved families that “opt out” of the review and clarify how they will address these cases. If appropriate, one strategy would be to automatically refer them to *Hello Baby Priority*, offering them an opportunity to access additional prevention information and services after leaving the hospital.
- **Working with community based services and other local health and social service providers to increase prevention service capacity such that all families who seek out or request additional support will find it available.** The *Hello Baby program’s* universal component is designed to raise awareness about the existence of prevention services among all new parents, a new awareness that most likely will create increased demand. Building the capacity of the county’s network of Family Centers and parent support services to respond to this demand will be key in insuring the model achieves the type of normative change that will make it easier and more acceptable for all new parents to seek help to enhance their parental capacity and support their child’s healthy development.
- **Monitoring participant enrollment and retention rates, particularly among *Hello Baby Priority* families.** Understanding is limited as to why or under what conditions families facing significant challenges enroll and remain in voluntary service programs. This initiative offers the field an opportunity to identify and test various engagement strategies that might maximize early enrollment and full service participation.
- **Tracking the surveillance effect.** Do workers, particularly those working in prevention programs, react differently to families once they are fully aware of their prior adversities and child welfare experiences? The added surveillance by the proposed navigator might result in a self-fulfilling prophesy as families who are unable or unwilling to change their behaviors are referred to the child welfare system and, in some cases, lose custody of their children. The county should carefully examine the characteristics of those families who are reported and why. This information can then be used to determine if additional worker training may be needed.
- **Recognizing when *Hello Baby Priority* is not working. Not all families will respond to voluntary offers of assistance.** Not all maltreatment can be prevented without the use of mandated child welfare services. As such, child welfare involvement and possible foster care should not be viewed as a system failure but rather as an outcome that may not always be avoidable. The model offers an opportunity to better understand why such reports are needed and if these patterns suggest the need for changes in how prevention services are structured.
- **Exploring the needs of first time parents.** Those having their first child (about 40% of all births) may appear to be at lower risk, in part, because they have not had the opportunity to create the

type of history that would yield a high PRM score. Depending on their immediate circumstances and level of social support, first time mothers can be particularly responsive to offers of assistance. Serving this population provides an opportunity to potentially prevent initial child welfare involvement, not simply lower re-incidence rates among current clients.

Through strong and sustained partnerships across agencies that support all aspects of family life, including not only traditional child welfare and family support services but also preventive health care and an array of primary supports all or most parents utilize (child care, adequate housing, sufficient income, support from family members and friends), the county can shape the public's understanding around collective parenting and improve both participant- and population-level outcomes. The data generated by tracking how families respond to all components of the program (who engages and what services do they successfully access) will provide the community rich real-time information on what parents say they need the most, as well as the community's collective capacity to meet those needs. Such data would offer both child welfare and preventive services an empirical basis to assess their investment strategies and redirect their efforts to reinforce one another's missions. Under this scenario, child protection can become a broadly shouldered responsibility in which child welfare is but one player in a network of institutions committed to shoring up parents and ensuring the safety and wellbeing of all children.

ⁱ Huntington, C. & Scott, E., (2015). "Children's Health in a Legal Framework," *Future of Children* 25 (1), 177–97.

ⁱⁱ Michalopoulos, C., Crowne, S. S., Portilla, X. A., Lee, H., Filene, J. H., Duggan, A. & Knox, V. (2019). *A summary of results from the MIHOPE and MIHOPE-Strong Start studies of evidence-based home visiting* (Publication No. 23171787025b46589a5e545fb45db441). Washington, DC: Office of Planning, Research, and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

ⁱⁱⁱ Daro, D., Dodge, K. A., Haskins, R. (Eds). (2019). Universal approaches to promoting healthy development. *Future of Children*, 29(1).

^{iv} Daro, D., McCurdy, K., Falconnier, L., & Stojanovic, D. (2003). "Sustaining New Parents in Home Visitation Services: Key Participant and Program Factors," *Child Abuse and Neglect* 27, 1101–25, <https://doi.org/10.1016/j.chiabu.2003.09.007>; McCurdy, K., Daro, D., Anisfeld, E., Katzev, A., Keim, A., LeCroy, C. & Park, J. K. (2006). "Understanding Maternal Intentions to Engage in Home Visiting Programs," *Children and Youth Services Review* 28, 1195–1212, <https://doi.org/10.1016/j.chilyouth.2005.11.010>.

^v For an overview of the outcomes achieved by home visiting programs based on rigorous research, see the Home Visiting Evidence of Effectiveness (HOMVEE) website, <https://homvee.acf.hhs.gov/>.

^{vi} National Research Council (2014). *New Directions in Child Abuse and Neglect Research* (Washington, DC: National Academy Press).

^{vii} A description of the tool and its use is available at:

<https://www.healthyfamiliesnewyork.org/Staff/Documents/05022017NY2%20-%20Stress%20&%20Strengths%20Checklist.pdf>

^{viii} Stucky, B., Ngo, V., Kranz, A., Garber, C., Castro, G., Huang, W., & Marks, J. (2017). *A Psychometric Study of the Modified Bridges for Newborns Screening Tool* (Santa Monica, CA: RAND). https://www.first5la.org/postfiles/files/RR1817_Compiled%20Report.pdf

^{ix} Dodge, K.A., Goodman, W.B., Murphy, R.A., O'Donnell, K., & Sato, J. (2013). Toward population impact from home visiting. *Zero to Three*, 33(3), 17–23.

^x Fong, K. (2019). Neighborhood inequality in the prevalence of reported and substantiated child maltreatment. *Child Abuse & Neglect*, 90, 13–21. <http://doi.org/10.1016/j.chiabu.2019.01.014>; Coulton, C. J., Korbin, J. E., Su, M., & Chow, J. (1995). Community Level Factors and Child Maltreatment Rates. *Child Development*, 66(5), 1262–1276. <http://doi.org/10.1111/j.1467-8624.1995.tb00934.x>; Maguire-Jack, K. (2014). Multilevel Investigation into the Community Context of Child Maltreatment. *Journal of Aggression, Maltreatment & Trauma*, 23(3), 229–248. <http://doi.org/10.1080/10926771.2014.881950>

^{xi} Daro, D. & Dodge, K. (2009). Creating community responsibility for child protection: Expanding partnerships, changing context. *Future of Children*. 19(2), 67-94.

^{xii} While breastfeeding's health benefits for infants are well documented, the ability of women to breastfeed, particularly those who expect to return to low-wage service sector jobs within six months of childbirth often makes this option less desirable. In addition, normative support for breastfeeding is less common in many low income and African American communities.

^{xiii} Chambliss, J. W. (1998). An experimental trial of a home visiting program to prevent child maltreatment (Doctoral dissertation, Georgia State University, 1998). *Dissertation Abstracts International*, 61(03B), 152-1628. (AAI9967277); Green, B. L., Sanders, M. B., & Tarte, J. (2017). Using administrative data to evaluate the effectiveness of the Healthy Families Oregon home visiting program: 2-year impacts on child maltreatment & service utilization. *Children and Youth Services Review*, 75, 77–86; DuMont, K., Kirkland, K., Mitchell-Herzfeld, S., Ehrhard-Dietzel, S., Rodriguez, M. L., Lee, E. & Greene, R. (2010). *A randomized trial of Healthy Families New York (HFNY): Does home visiting prevent child maltreatment?* Rensselaer, NY: New York State Office of Children & Family Services and Albany, NY: University of Albany, State University of New York.

^{xiv} Daro, D. (1993). "Child Maltreatment Research: Implications for Program Design", in *Child Abuse, Child Development, and Social Policy*, Cicchetti, D. & Toth, S. (Eds). (Norwood, NJ: Ablex Publishing Corporation), 331–67.

^{xv} Healthy Families America includes the use of "creative outreach" in its fidelity criteria. http://www.dhs.state.il.us/OneNetLibrary/27896/documents/GATA_2018Grants/FCS_NOFOs/2018_2021HFABestPracticeStandardsJuly2017_.pdf

^{xvi} The Nurse Family Partnership model (NFP) utilizes a Strengths and Risk Framework (STAR) in identifying areas that are high priority for a family and ones in which the family has specific strengths in addressing. https://events.mphi.org/wp-content/uploads/2015/04/103-STAR_DETROIT_Maddie-Pt-2.pdf

^{xvii} Gennetian, L., Darling, M., & Aber, J. L. (2016). Behavioral economics and developmental science: A new framework to support early childhood interventions. *Journal of Applied Research on Children: Informing Policy for Children at Risk*, 7(2), 1–35.