

An Assessment of Differential Response:
Implications for Social Work Practice in Diverse Communities

by

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Abstract

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Traditionally, the American child welfare system intervenes in cases of evident and severe child maltreatment. Families in need of help, but who have not yet reached a crisis level, are excluded from most government-provided family support services. Practitioners and researchers have recently promoted the incremental development of a complementary system. Under Differential Response (DR), families assessed as low-to-moderate risk are referred to community-based agencies that offer voluntary, home-based services and social service referrals. This study examined the first DR program implemented in the state of California, at three sites in Alameda County. The research addresses community aspects of the program's implementation, outcomes for children and families, and staff and parent experiences with service delivery.

A mixed-methods design was used. Interviews were conducted with all administrators (n=15), focus groups with all direct line staff (n=12), and telephone interviews with a convenience sample of clients (n=50). Transcripts were analyzed for emergent themes. A quasi-experimental static group design was used to examine client outcomes. All clients who completed services formed the treatment group (n=161); a

comparison group was constructed with all families reported for child maltreatment in the same timeframe who were eligible for services, but were not referred because of program capacity (n=447). Survival analysis was used to compare rates of re-report and substantiated re-report for the treatment and comparison groups. In Differential Response, the community context plays a significant role. Geographic Information Systems software was used to analyze patterns in social service availability in the three DR target neighborhoods.

Based on interviews with staff, the program appears robust and maintains fidelity to the model; social science theory also supports the model. However, while there was a trend toward positive effects of the intervention, it was not statistically significant. These findings are in line with meta-analyses of child maltreatment prevention studies, and other studies of DR. The intervention may achieve beneficial outcomes with regards to proximal goals including, for example, families' connections to resources, however, the study design did not allow for examination of these effects.

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CHAPTER 1 : INTRODUCTION TO THE PROBLEM

Child welfare is a high stakes field. With limited resources, administrators and workers have no choice but to target services to those families at greatest risk of child abuse and neglect. Yet the cost of doing nothing may be the greatest of all, if the development and well-being of children is threatened by lack of resources and poor parenting skills, or in the worst case scenario children die from parental injury or negligence. Mounting research indicates that a large proportion of children initially screened out by the child welfare hotline, or unsubstantiated after investigation, eventually come back into contact with the child welfare system (Drake et al., 2003; Wolock, et al., 2001; Inkelas & Halfon, 1997). Desperate families do not just go away and endemic problems do not resolve themselves. Whether lingering at the precipice where intervention is warranted, or tipping over to the area of full-fledged risk, the millions of families referred yet unserved by the child welfare system represent a population in need of help. When to intervene and what type of help to offer is a critical issue now under discussion in the child welfare field.

Differential response is a fairly new approach to child welfare. Under the differential response paradigm, agencies sort families by risk levels and offer services to those deemed at moderate levels of risk, who under traditional child welfare services would receive nothing. The differential response approach is characterized by voluntary provision of services, greater respect for families, and increased community involvement. This new way of doing business is catching the imagination of policy makers and child welfare administrators throughout the country. About a dozen states have begun to

incorporate differential response into their child welfare systems, with California as one of the newest states to take on this challenge.

While Differential Response offers a new perspective and changed philosophy on how to engage and serve families, it is not an intervention per se. Agencies must decide, based on the identified needs of their clients and available agency resources, how best to prevent the occurrence or recurrence of maltreatment. In California, one pilot Differential Response program called Another Road to Safety (ARS) provides an intensive home visiting program which offers families concrete services and emotional support. The program ultimately seeks to ensure child safety, improve child development, and strengthen family functioning. This dissertation describes a study of the ARS program that focused on community aspects of the program's implementation, staff and parent experiences with service delivery, and outcomes for children and families.

Scope of maltreatment in the United States

In 2005, 3.3 million child abuse and neglect referrals concerning 6.0 million children were made in the United States. Slightly more than one-third of these referrals were screened out at the hotline level, without further attention from child protective services (CPS). Of the remaining two-thirds, more than one half (60.3%) were closed and given the disposition "unsubstantiated" because of insufficient evidence that a child was maltreated or at risk of future maltreatment. Only 5.6% of reported cases were given the disposition of substantiated, meaning that evidence existed to support the finding that children were maltreated (U.S. Department of Health and Human Services, 2007). From the high volume of referrals, one may infer that a large number of mandated and other

reporters recognize that families need help, though their problems may not rise to the level of statutory child maltreatment.

Researchers have in recent years begun to focus on the substantiated/unsubstantiated distinction, questioning whether the two populations differ significantly. The evidence is mounting that families with substantiated and unsubstantiated allegations experience similar trajectories in terms of recurrence of child maltreatment reporting and contact with the child welfare system. The national prevalence of re-report among initially unsubstantiated/unfounded cases is not known. While recurrence of maltreatment (defined as a substantiated report following an initial substantiated report) is tracked by states and reported in the annual publication of *Child Maltreatment*, current federal law does not mandate that states report statistics on initially unsubstantiated or unfounded reports (U.S. Department of Health and Human Services, 2007).

While California, like other states, typically does not make public information on the later child welfare trajectories of initially unsubstantiated reports, the California Child Welfare Archive ran a series of special reports in 2005 on the request of a senior child welfare administrator. These reports indicate that cases in which reports were initially substantiated tend to return to the system at higher rates than other reports, but other report types have frequent re-reports which in some instances result in substantiation. Of all cases initially referred and substantiated between January 1, 2002 and December 31, 2002, 9.4% were re-reported and substantiated within 12 months and 13.6% within 24 months. For cases within this timeframe that were initially evaluated out without investigation, 4.8% were subsequently substantiated for child maltreatment within 12

months and 6.9% within 24 months. Cases that were investigated and given the disposition of unfounded were re-reported and substantiated at a rate of 4.1% within 12 months and 6.7% in 24 months. Unlike many states, California also has an "inconclusive" category; of initial reports with this disposition, 6.4% were re-reported and substantiated within 12 months and 9.9% within 24 months. From these findings, a pattern emerges of initially substantiated cases having the highest rates of additional substantiated report within 24 months, followed by inconclusive cases, then evaluated out-cases and unfounded cases at a similar rate (Needell et al., 2005).

Research on initially unsubstantiated cases comes mainly in the form of non-population based studies which track reports and their outcomes over time. A study of 238 families in New Jersey tracked from time of first report over a period of about seven years found that there were no significant differences in family risk factors between those who had substantiated and unsubstantiated re-reports. In this sample, an average family had four reports within a five year time frame, with slightly more than one-third of these reports substantiated. Reports for a given family were random, not systematic, regarding when a substantiated report would occur, leading the researchers to conclude that a given report may not represent a family's risk (Wolock et al., 2001). A study of families first reported to the Missouri Division of Family Services in 1993 and 1994 and tracked for 54 months came to a similar conclusion. Nearly half of all children (and more than half of all cases) were re-reported to the system. Unsubstantiated victims and cases experienced substantiation at a rate only slightly lower than substantiated cases, but made up the largest volume of re-reported events. For three-quarters of cases in which the child was eventually taken into care, the case was unsubstantiated during the first CPS contact

(Drake et al., 2003). When cases are tracked for a longer period of time, as with the Wolock at 7 years and Drake at 4.5 years, the re-report rates appear higher than those observed in California within a 24 month timeframe.

A longitudinal study of 12,329 investigated child maltreatment referrals in Washington State tracked over an 18-month period found that prior CPS involvement greatly increased the likelihood of re-referral and the rate of re-referral increased with number of prior referrals, regardless of whether the initial referrals were substantiated or unsubstantiated (English et al., 1999). A related study examined risk factors for multiple referrals within close proximity to the original referral for 120,000 referrals received by Washington State between July 1, 1994 and December 31, 1997. Time to re-referral decreased with increasing numbers of prior reports and the time to first re-report differed significantly from subsequent re-reports. These findings lead researchers to conclude that that referral to CPS reflects conditions that, at least initially, increase the likelihood of future referrals to CPS; reasons may include increased awareness among mandated reporters in families' lives and desensitization of families' concern about CPS intervention (Marshall & English, 1999).

Two studies examine reasons why children may cycle through the child welfare system without receiving services. Using samples of approximately 650 Emergency Response cases discharged in California in three time periods (1985, 1989, and 1993), researchers found that while 50% of cases opened were given a finding of substantiated, the majority (67.2%) of these cases were discharged after an initial investigation and risk assessment, without further provision of services. The researchers speculate that "recidivism may be a threshold phenomenon," with families hovering near a level of

maltreatment for which services such as family preservation or out-of-home care would be offered by the CPS agency (Inkleas & Halfon, 1997, p. 154). A related study examined report investigation at intake based on case reviews of three random stratified samples (n=557) of cases from Alameda County, California. Certain types of allegations that are more difficult to support with evidence, such as emotional maltreatment, were more likely to be screened out. The researcher concluded that services are provided based on legal standards of evidence rather than assessment of family's needs, and that unsubstantiated cases may benefit from services (Lawrence-Karski, 1999).

Efforts to address maltreatment

Why do some families repeatedly come to the attention of child welfare services without receiving an intervention? Theoretically, the system accounts for three levels of risk. Reports with perceived lowest risk are dismissed without services. At medium risk, Family Maintenance or Family Preservation services are provided for children who can be maintained safely in their homes. In families whose children are at imminent risk of harm, the highest level, out-of-home care is provided to the children and Family

- Reunification services are provided to parents.

Before considering the possible extension of in-home preventative services to low-risk families, it is worth reviewing outcomes associated with in-home Family Preservation services for medium risk families. Family Preservation services are often court-mandated and attempt to address family functioning and stability so that children may safely remain in their homes. Influenced by a variety of theoretical frameworks including the ecological model and cognitive and behavioral theories, Family Preservation attempts to address the multiple causes of child maltreatment.

Consequently, both concrete and therapeutic services are provided to families. There are two basic program types that target different populations: Rehabilitative Family Preservation serves families who do not present an imminent safety risk but whose problems may require that a child be removed from the home, whereas Intensive Family Preservation serves families where children could not be safely maintained without provision of services or in which a family is preparing to be reunited with a child who has been placed in out-of-home care. The latter program type, as per the name, is more staff-intensive and time-limited, with staff carrying small caseloads so as to be constantly available to their clients. It is also the intervention type which has been most studied, particularly the "Homebuilder" model from Washington State (McCroskey & Meezan, 1998).

Research findings on Intensive Family Preservation have been mixed. Randomized control studies have not found a significant difference in rates of child placement, indicating that many families would not have entered the system in the absence of services and that the intervention may not have been effectively targeted to those families at imminent risk of placement. However, studies have found modest but significant effects in other domains, including on the child's experience in the foster care system (e.g. fewer days in placement); family functioning (e.g. supports available to families); and child development (e.g. children's school attendance). These findings suggest that Family Preservation can not be seen as a "panacea": better risk assessment and case planning is needed to match services to family needs (McCroskey & Meezan, 1998). Findings from a study of Illinois' Intensive Family Preservation program support this assertion; researchers could not identify patterns linking service components and

outcomes for client sub-groups, raising the possibility that the fit between client needs and services may be more important than the breadth or array of services (Littell & Schuerman, 2002). While still poorly understood as a construct, the importance of tailoring services to client needs at various risk levels is clear.

There is a growing consensus among researchers that what is needed in the child welfare system are services for the third level of risk, for those families whose allegations of maltreatment do not meet the statutory definition or for which there is insufficient proof, yet there is a clear need for support. The implicit reasoning behind this argument is that, in the absence of intervention, problems in the family will escalate, degenerating into full-blown abuse and neglect. Evidence on the similarities between substantiated and unsubstantiated cases indicates that the finding of substantiation should not be the gatekeeper to services (Drake et. al, 2003). The movement towards implementing differential response begins to fill this gap in the child welfare system. Rather than waiting until such cases are in severe crisis and warrant coercive intervention by child protective services, differential response offers an opportunity to engage families in voluntary services which address their identified risk factors.

The differential response paradigm

Under the DR paradigm, a number of families who are currently screened out at the hotline level are offered voluntary, community-based services. A DR system involves a minimum of two pathways for families reported to the child maltreatment hotline. Families assessed as high risk continue to receive a mandatory investigation. Low to moderate risk families, who are generally screened out under the traditional CPS system, are referred to community-based agencies that would assess their needs and offer

services. DR is comprised of three main characteristics: screening by risk level, voluntary provision of case management and other services to lower risk families, and a less punitive and authoritative approach than traditional child protective services. Rather than the one-size-fits all approach that has been typical of CPS services, families under DR receive a customized approach, with services tailored to their unique problems and strengths (Waldfogel, 1998b).

A primary strategy for implementation of differential response involves partnerships between child protective services and community institutions and networks to share responsibility for serving families. Families referred to CPS often have a multitude of needs that cannot be addressed by one agency alone. These partnerships involve both service providers such as police, schools, and public and private agencies, and informal helpers, such as neighborhood associations, congregations, and families themselves. Instead of a collection of workers operating independently, families are served by a team of community and CPS representatives who would collaborate in their work. Depending on the level of risk for a family, either CPS or a community agency assumes the role of lead agency for coordinating a family's services (Waldfogel, 2000).

Differential response holds great promise for families. By addressing needs early rather than waiting until a crisis point, the psychological, cognitive, and biological sequelae of maltreatment can potentially be averted and the family can be kept intact. Resources can be used to provide families with parenting skills education and concrete resources such as childcare, rather than costly payments to foster care providers and group home facilities. The differential response paradigm makes certain inherent assumptions about how the recurrence of child maltreatment may be prevented. First,

there is an assumption that risk of child maltreatment can be reduced by addressing the presenting needs of families. As will be discussed in chapters 2 and 3, these may include unsatisfied basic needs, such as for food or shelter, and challenges in the parent-child relationship, related to poor bonding and attachment. Second, DR assumes that needs may be addressed through referrals to community institutions that provide services such as medical treatment, education, recreational opportunities, among others. Third, this paradigm assumes that families benefit from the social support they receive from service providers and informal helpers. Chapter 3 will examine the theoretical basis for these intervention components.

Evaluations of differential response programs

In states with some experience providing differential response, unique approaches have been taken in the organization and delivery of services. Case management may be provided to lower risk families through public child welfare agencies (Missouri, Virginia, North Carolina, Florida), through community-based agencies contracted by child welfare (Washington, Michigan, South Carolina), or may be mixed in the state and may depend on the county (Minnesota, Louisiana) (Schene, 2001). One worker may stay with a case from the assessment through service delivery phase, or a case may be reassigned after assessment. The distinct attributes which define an intervention as differential response are: screening by risk level, voluntary provision of case management and other services to lower risk families, and a less punitive and authoritative approach than traditional child protective services (Waldfoegel, 1998a). The varied nature of program models must be kept in mind when interpreting research findings.

Evaluations of the model have been conducted in Missouri (Loman & Siegel, 2004b), Minnesota (Loman & Siegel, 2004a), Virginia (Virginia Department of Social Services, 2003), North Carolina (Center for Child and Family Policy, 2004), and Washington State (English et al., 2000). All of these evaluations incorporate a cohort design for the outcomes study, and several supplement this methodology with surveys and interviews to assess the qualitative experiences of workers, supervisors, community members, and families. With the exception of Virginia, each of these states developed comparison groups, either through matching a pilot and business-as-usual county/community (Missouri, Washington, North Carolina) or through random assignment of lower-risk families to differential response or traditional response (Minnesota).

Each of the studies considered outcomes for children and families. Several states also included qualitative studies which assessed organizational, behavioral, and attitude change for the child welfare agency; community reactions; and family responses to differential response. A cost analysis was also conducted in Minnesota (Loman & Siegel, 2004a). The main outcome measures assessed by these studies were improvement in perceived child safety (based on observations by workers, community stakeholders, and families), reductions in child abuse and neglect report recurrence, reductions in rates of investigation, and reductions in out-of-home placements.

Findings from studies on differential response are equivocal. With reference to the comparison group, families receiving differential response were statistically less likely to be re-referred in Minnesota (Loman & Siegel, 2004a) and Missouri (Loman & Siegel, 2004b), while no difference was observed in North Carolina (Center for Child and

Family Policy, 2004) and Washington (English et al., 2000). Findings for placement in out-of-home care were mixed, with families who received differential response more likely to have their children removed in Missouri (Loman & Siegel, 2004b), less likely in Minnesota (Loman & Siegel, 2004a), and no difference in Washington (English et al., 2000) (this outcome was not measured in North Carolina). Researchers for two studies highlighted possible limitations of differential response. In Missouri, families with chronic child abuse and neglect appeared unaffected by either differential response or traditional services and according to researchers may have needed sustained intervention beyond the capacity of the child welfare system (Loman & Siegel, 2004). Researchers in Washington observed that the risk level and severity of some of the cases referred to differential response was inordinately high, and cautioned that voluntary community services are not designed to address severe problems (English et al., 2000).

Qualitative studies conducted in Minnesota, Virginia, and North Carolina largely found positive opinions of differential response. Agency staff were surveyed or interviewed in each state, while families were also interviewed in Minnesota and North Carolina, and community partners were surveyed in Virginia. In all three states, a majority of workers and administrators reported that the differential response system was better than traditional child welfare services, though differential response was frequently reported to increase workload and costs (Virginia) or present other initial challenges to staff (North Carolina). Minnesota also reported initial cost increases, but found that differential response was more cost-effective and resulted in a cost savings in the long-term. Families reported high levels of satisfaction with how they were treated and the services they received from differential response workers (Minnesota & Virginia).

Responses from community providers in Virginia were mainly positive or sometimes mixed.

The U.S. Department of Health and Human Services (2005) conducted a study on case-level data reported to the federal government (through the National Archive of Child Abuse and Neglect Data System) for six states (Kentucky, Minnesota, Missouri, New Jersey, Oklahoma, and Wyoming) that offer both differential response and traditional investigation. This is the first multi-state study of differential response. Cases reported in 2002, roughly equally divided between differential response and traditional investigation, were compared to identify similarities and differences with regards to case characteristics, circumstances of reports, and outcomes. Some similarities were noted in the use of differential response. Across states, differential response was observed to be more frequently used in cases reported by nonprofessionals or school sources (rather than social workers, medical personnel, or legal or criminal justice sources) and cases with allegations of neglect/medical neglect or emotional/other/unknown maltreatment. Differential response was less likely to be used in cases in which sexual abuse was alleged. Cases referred to differential response were more likely to be provided with in-home services than families referred for investigation. Six months subsequent to initial report, re-report rates appeared to be similar between those cases assigned to traditional investigation or differential response, with the exception of Oklahoma, where rates of subsequent reporting were lower.

Results from these studies of differential response programs have been somewhat mixed. While rates of re-referral do not appear to be increased by participation in differential response services, participation may increase, decrease, or have a neutral

effect on likelihood of child removal. This may be because the term "differential response" encompasses a range of intervention models. A study of the ARS model would contribute to the literature by examining outcomes for a mature model with highly-trained paraprofessionals utilizing a home-visiting intervention, which the literature suggests is a promising practice in the prevention of future child maltreatment (McCurdy, 2000).

As of spring 2001, more than a dozen states had implemented or were in the process of implementing differential response (Schene, 2001). California is a relative newcomer to implementing the differential response model. The California Child Welfare Redesign, a three year planning effort by 60 stakeholders to re-envision child welfare services, recommended a shift to differential response (CWS Stakeholders Group, 2003). The predominant version of differential response currently being implemented in California involves three "tracks" or service responses. Moving away from the substantiated/unsubstantiated distinction, the new approach offers services to families based on their assessed level of risk. Track 1, called "Community Response," is for cases that do not meet the statutory definition of child maltreatment, yet are experiencing problems which could be addressed by services from a community-based organization. Track 2, "Child Welfare Services and Community Response," involves a partnership between the county child welfare agency and a community agency to provide services for families whose reports meet the legal definition of maltreatment but in which the risk of future child maltreatment is low to moderate and the family agrees to voluntary participation. "Child Welfare Services Response," or Track 3, is most similar to the traditional child welfare response, in which the county agency provides voluntary

or court-mandated services to families at moderate to high risk of future maltreatment (Foundation Consortium, 2005).

The "Another Road to Safety" program

Pre-dating the California Child Welfare Services reform movement, Another Road to Safety (ARS) has since August 6, 2002 provided a two-track differential response. The Another Road to Safety (ARS) program uses a differential response model to screen the risk at the county child maltreatment hotline and to offer services to families screened out of traditional investigation who reside in certain designated zip codes in South Hayward, East Oakland, and West Oakland. ARS clients receive up to nine months of intensive home visiting, with services that include assistance with basic needs, promotion of parent-child relationship development, social support, and referrals to social services within their neighborhoods. The ultimate goal of ARS is to promote family safety and stability to ensure positive child development.

The ARS approach to differential response resembles the predominant California model in that there is a Track 1, for moderate to high risk cases screened out of the public child welfare system and diverted for community services, and a Track 2, for very high risk cases which indicate the need for court-mandated services. Since this study was conducted, Alameda County Social Services Agency has added a third track to the ARS program, to serve families who receive an in-home investigation but are deemed to be low to moderate risk.

ARS has several unique attributes that make it worthy of study. First, ARS was implemented before the CA Child Welfare Redesign, making it the first pilot differential response program implemented in California. Second, the ARS model is unique

compared with differential response programs in other states and California counties with regards to staffing (by paraprofessionals), and service delivery strategy (intensive home visiting). Third and finally, because ARS is conducted by a different agency in each community, it is highly tailored to the neighborhood context. As the differential response model involves connecting families to local formal and informal resources, the ability of agencies to form connections with other service providers and neighborhood institutions is a key element of program design.

Data provided by the county are intriguing. Of the 1,032 families referred to the program by February 2007, 32% were engaged in services (n=329) (C. Hwang, personal communication). An earlier examination of the program tracked clients enrolled in the program from May 2002-December 2004 and found that clients who received services did not have subsequent contact with the Alameda County child welfare system in 90% of cases (First 5 Alameda County Staff, 2004), although it is unknown whether these families would have had subsequent child welfare contact absent the ARS program. To date, the ARS program has not been evaluated. By now, sufficient time has passed for the ARS program to achieve maturity and for a fairly sizable cohort of families to have received and completed services. Evaluation to examine program outcomes in contrast to a comparison group who did not receive the intervention is necessary to determine whether ARS can serve as a model for implementation elsewhere in the state and country.

This study makes use of county administrative data and other data sources and focuses on community aspects of the program's implementation, in addition to examining outcomes for children and families, and staff and parent experiences with implementation and service delivery. Three distinct questions are addressed:

Question #1: What are the experiences of ARS staff with service delivery and clients with the services they receive, focusing on the main interventions of social support and connection to institutional resources?

Question #2: What is the resource distribution in Alameda County and how might institutional resources in neighborhoods influence ARS implementation?

Question #3: Is ARS successful in preventing future child welfare system involvement?

Organization of the study

This dissertation is organized into eight chapters. Following the introduction, chapter two provides an elaboration of the program model and critically assesses the literature base for different aspects of the ARS intervention. In chapter three, theories related to the two main ARS interventions of social support and connection to neighborhood institutional resources are discussed with reference to potential for changing child and family well-being. The study's methods are described in chapter four. Study results are provided in chapters five, six, and seven, organized by research question. The dissertation concludes with a discussion of the major findings and implications for social welfare policy and practice, as well as study limitations and directions for future research.

CHAPTER 2: MODEL DESCRIPTION, PROMISING PRINCIPLES & LITERATURE REVIEW

Background

The ARS program is a collaborative effort among five agencies. The program was jointly designed by the Alameda County Social Services Agency (SSA) and Alameda County First 5. Each California county has a First 5 commission, dedicated to enhancing services for children under 5 and their families through use of public funds generated from a tobacco tax. Alameda County First 5 initially funded the program, from 2002-2006, along with supplemental federal grants. Funding and oversight shifted to Alameda County Social Services Agency in 2007. Alameda County First 5 continues to be involved with the program through provision of database administration, training, and case consultation. Three community-based organizations administer the program: La Familia Counseling Service in South Hayward, Family Support Services of the Bay Area in East Oakland, and Prescott Joseph Center for Community Enhancement in West Oakland.

A competitive process was used to select contracted agencies for each neighborhood, based on a review of proposals. For South Hayward, La Familia Counseling Service was chosen as the service provider. Since 1975, the agency had been providing culturally and linguistically appropriate mental health services to the Latino community of Hayward. The agency's participation in the South Hayward Neighborhood Collaborative, an association of nonprofit agencies committed to linking community resources through capacity building and services integration, assured that ARS clients would have access to a range of resources and services. In East Oakland, Family Support Services of the Bay Area (FSSBA) was selected to provide services. FSSBA is based in

Oakland and has extensive child welfare experience, including "Family Reclaim," a program with similarities to ARS, but targeted toward families reunifying with their children after foster care. The Prescott Joseph Center for Community Enhancement, the newest ARS agency, has an array of services, from health to education to arts and culture, benefiting West Oakland.

ARS serves families reported to the Alameda County hotline for child maltreatment who meet certain criteria (see program diagram, Figure 1): screened out of traditional investigation and residence in the Eastmont neighborhood of East Oakland (zip codes 94603, 94605, 94621); the Harder-Tennyson neighborhood of South Hayward (zip codes 94541, 94544, 94545); or West Oakland (94607). These zip codes were chosen because they have among the highest rates of child maltreatment reports in the county. If a Social Services Agency supervisor approves the referral to ARS, the case is forwarded to the community-based organization. When the program was initially developed, referrals were restricted to families with a child under the age of five and/or a pregnant mother. When Prescott Joseph began to provide services to families in West Oakland in 2005, they began by providing services to families with children up to age 18. For FSSBA in East Oakland and La Familia in South Hayward, eligibility was expanded to families with children up to age 18 in January, 2007.

Description of the ARS Model

When a family is referred for services to one of the agencies, a paraprofessional home visitor is assigned to the case. The home visitor maintains a caseload of 7-13 and sees each family for a minimum of one hour a week. Although parents are offered services on a voluntary basis, families who decline services are referred back to CPS for possible

follow-up. After conducting mental health and substance abuse screens, the home visitor and the family jointly develop a "Family Care Plan" which outlines goals and steps to achieve them. Goals fall under one of the following categories: Child safety; child growth and development; parenting; school readiness; health and wellness; building family strengths; self-sufficiency; relationships; and nutrition. These same goals are contained in ARS's accountability matrix and are the basis for program evaluation. The program's logic model is described in Figure 2.

With the Family Care Plan to guide the intervention strategy, home visitors have an array of referrals they can provide for families. When clients have needs that cannot be met through a referral, home visitors have access to a basic needs fund. Funds may, for example, be used for food, household items, diapers, or even partial rent payments. The concept behind the basic needs fund is to prevent the crisis of an urgent and unaddressed need and the stress it induces.

Beyond concrete forms of help such as referrals and basic needs funds, the home visitor develops a friendly visitor/caseworker relationship that is the intervention tool with the family. They model healthy relationships and build trust by becoming a consistent and supportive presence in their client's lives. Home visitors use "teachable moments" to help parents better understand their child. This leads to improved parenting skills because lessons are concrete, not theoretical. By helping families meet realistic short-term goals, the home visitors hope to plant the seeds for deeper, more systemic changes in family functioning. ARS services are offered for a relatively brief nine-month timeframe (with three month extensions granted on a case-by-case basis), so the goal is to

use this period to incubate changes in parenting and life skills that will promote child and family safety and well-being.

Aspects of program structure and their literature base

The next section will critically examine the literature base for key aspects of the ARS program model. None of the intervention types discussed are required for the differential response paradigm, though many have been utilized in the five states that have completed evaluations and made their findings publicly available (Loman & Siegel, 2004a; Loman & Siegel, 2004b; Center for Child and Family Policy, 2004; Virginia Department of Social Services, 2004; English et al, 2000). Table 1 outlines the use of these intervention methods in the five states which have implemented and evaluated differential response. Without testing, it is unknown as to whether outcomes associated with the ARS program model may be attributed to a particular intervention type, or the various interventions in combination with the differential response pathway structure.

"Voluntary" child welfare services

ARS engages its clients "voluntarily": clients may choose to accept or refuse services, though they are informed that in cases of refusal, child protective services will be notified and may choose to take action. This approach differs from the usual course of action in child welfare which involves court-mandated parent involvement in services. The child welfare system has a "dual role structure" (Pelton, 1998, p. 127); that is, agencies hold the responsibility of investigating maltreatment allegations and removing children who they consider unsafe, while simultaneously promoting family preservation and offering family support. Parents who may perceive concerns in their parenting are more likely to

hide from a system which bestows labels of abuse and neglect rather than voluntarily seek out involvement (Pelton, 1998).

The ARS point of contact through the hotline report and the possibility of re-referral to CPS should the family refuse services throws into question whether participation can truly be considered "voluntary." While services are provided by community-based agencies rather than child protective services workers, the specter of formal child protective services involvement still remains. Few studies have examined the veracity of the "voluntary" claim in child welfare services; the studies that do exist hint that some level of coercion may still be involved. In an examination of voluntary and court-mandated foster care services in several states, Yoshikama and Emlen (1983) found that parents who voluntarily placed their children in foster care tended to do so for reasons of family conflict or parental incapacitation due to illness or financial difficulties, and that the majority reported strong influence or coercion by child welfare workers or family members in making their decision.

What are the benefits and drawbacks of offering child welfare services on a nominally voluntary rather than mandatory basis? Provision of voluntary services is viewed by the field as holding promise for greater levels of client motivation (Thomas et al., N.D.), leading to higher rates of engagement and retention in services. The field of child welfare is just beginning to examine the concept of engagement as it relates to non-voluntary clients. From a pilot test of a multidimensional measure of client engagement in non-voluntary child welfare services, Yatchmenoff (2005) reported findings which indicate the presence of four underlying factors related to the latent variable of engagement, all of which were moderately to highly correlated with each other:

investment in services; expectancy in the change process; receptivity to services; working relationship between client and child welfare worker; and mistrust, an anti-engagement dimension. Of these five dimensions, investment in services and expectancy in the change process were so highly correlated that they were combined into a single dimension labeled "buy-in." The dimension of buy-in had the strongest predictive relationship to behavioral engagement, as measured by self-reported compliance with mandated services. Based on these preliminary findings, one may cautiously infer that community-based organizations offering voluntary services to families previously reported to the child welfare system would do best to target those clients who are receptive to change and do not need coercion to comply with services. Further, since CBOs do not have the power to remove children, the interference of mistrust in the helping process is likely minimized. However, this supposition may not hold if CBOs have an arrangement to refer families who do not engage in services back to CPS.

Research into voluntary family support interventions has identified a host of factors at the parent, home visitor, and community levels that influence engagement and retention of clients. Daro and her colleagues (2005) found that initial enrollment is most significantly predicted by intent to enroll, which in turn is influenced by the client's readiness to change, attitude towards seeking help, and prior service experiences. Beyond enrollment, the findings of Wagner et al. (2003) based on interviews and focus groups from a multi-site home visiting program indicate that client engagement can occur at different levels, suggesting that the construct of parent engagement is more complex than merely participation or attrition.

Since parents can opt to leave services at any time, retention is a challenge for voluntary family support programs. Daro et al. (2005) report that service participation in home visiting programs is influenced by different factors at different time periods. At the point of service engagement, the mother's perception of her infant's health risk is the most important factor. Over time, other factors assume greater importance, including the subjective experience of receiving services, the objective value of services received, the characteristics of the provider and the program, and the characteristics of the community. With regards to the community, families living in more chaotic communities were less likely to make use of voluntary family support for extended periods of time. This finding was replicated in a study by McGuigan et al. (2003), which found that retention for one year in a voluntary child abuse prevention program was negatively associated with community violence. Clearly, factors at the individual, agency, and community level influence engagement and retention of families in family support programs. With differential response, it will be important to gain a greater understanding of how families perceive preventive services associated with a CPS referral, their readiness to change, and how feelings of coercion may play a role in decisions to participate in services.

Home Visiting

Home visiting has a long history as a primary service delivery strategy with at-risk families. The first record of home visiting as a formal social intervention in the United States dates back to the 1880s and the Charity Organization Societies' "friendly visitors" (Sweet & Appelbaum, 2004). In modern times, home visiting has been heralded as an effective way to address or prevent a host of social problems; prominent supporters include the U.S. Advisory Board on Child Abuse and Neglect and the Canadian Task

Force on Preventive Health Care (Bilukha et al, 2005). In light of the ARS focus on preventing maltreatment, this section will review research findings on home visiting programs with similar goals.

In a review of outcomes research for child maltreatment prevention programs that used home visiting, Olds & Kitzman (1993) found that of the six studies they identified with a randomized control trial methodology, none demonstrated a difference in child maltreatment reports using state CPS records. However, three studies did identify differences in rates of emergency medical services and other factors which appear to indicate a pattern of reduced parenting dysfunction. The researchers conclude that lack of findings using CPS records is not indicative that the programs failed to reduce child maltreatment risk; this measure may indeed be problematic due to the greater surveillance of participating families, which might skew reporting and inaccurately bias the rates of reporting among participating and non-participating families.

Another meta-analysis of home visiting identified mostly positive findings for home visitation child maltreatment prevention programs. To assess the effectiveness of home visiting as a violence prevention strategy, Bilukha et al. (2005) conducted a systematic review of home visiting programs that served children ages 0-2 years old and their families and specifically measured violence outcomes in studies with a control or comparison group. Child maltreatment subsequent to completion of services was measured directly, through reports from child protective services, parents, or others, and by proxy, through emergency room visits and hospitalizations for injury or ingestion, reported injury, and out-of-home placement. Of the 21 qualifying studies (with 26 intervention arms measuring different outcomes), 20 intervention arms measured the

effect of home visitation on reports of child abuse and neglect by child protective services or by home visitors; five measured the effect on rates of injury, trauma, or ingestion of poison through medical records or mother's reports; and one measured the effect on out-of-home placement. Members of the treatment group had lower rates of child maltreatment than the comparison group in 19 of the intervention arms, with an overall median effect size of -38.9% . In the remaining 7 intervention arms (of which 6 measured reports of child abuse and neglect and 1 measured out-of-home placement), the treatment groups had a higher rate of child maltreatment than the comparison group. Of the 21 studies included in the meta-analysis, 13 used a randomized control design. Looking at these studies alone, the overall median effect size was -27.5% (Hahn et al., 2005). As with the Olds and Kitzman review, Bilukha and his colleagues note that surveillance can bias the child maltreatment report outcome. Consequently, the researchers argue that the identified effect sizes we identified were probably underestimates of the true impact associated with intervention.

The ability to target child maltreatment prevention through home visitation was addressed by two meta-analyses. Sweet and Appelbaum (2004) conducted a meta-analysis of home visiting programs for families with young children. Of the 60 studies reviewed, 18.3% were of programs with the primary goal of child maltreatment prevention. The outcome of child abuse prevention was measured as three categories: actual abuse (for cases reported or suspected by service providers), potential abuse (for medical treatment that may have been associated with an incident of abuse), and parental stress (for the potential that higher stress related to parenting may result in child maltreatment). Child maltreatment "potential" was significantly reduced for participants

in programs which listed this as a primary goal, as compared to other types of home visiting programs ($Z=3.34$, significant at $p<.001$); however, effect sizes for abuse and parenting stress were not significant ($Z=1.13$ and $Z=1.25$, respectively). Interventions which targeted specific populations rather than offered universal enrollment had higher effect sizes on child cognition and potential child abuse outcomes, but lower effect sizes for parenting behavior outcomes, a finding that the authors describe as "contradictory and hard-to-interpret" (p. 1447). These findings highlight the challenges of assessing outcomes of home visitation programs due to the complexity and variation of program design, a problem that is amplified when results of many studies are combined in meta-analysis.

In a similar vein, Guterman (1999) conducted a meta-analysis to investigate the connection between universal vs. targeted enrollment strategies and reported outcomes for child maltreatment prevention home visitation programs. Using both measures of maltreatment reports and parenting skills, the population-based programs (enrollment through broadly available services systems, such as hospitals, or enrollment using demographically-based eligibility factors, such as low socio-economic status) showed a clear trend of greater effect-size for treatment groups as compared to screening-based programs (enrollment based on screening for demographically-based and/or individual-level psychosocial risk factor). One reason for this may be that programs enrolling families based on psychosocial screens inadvertently screen-in families least likely to change from the services offered and screen-out families more likely to benefit from the intervention.

Duration of service may also contribute to client outcomes, though Olds & Kitzman (1993) have stated their belief that quantifying number of visits and total hours of visitation is likely less important than visit content. Findings on the impact of duration are mixed. In the sub-sample of home visitation programs in their meta-analysis of programs for the promotion of family wellness and child maltreatment prevention, MacLeod & Nelson (2000) found that effect size fluctuated by number of visits, with low effect size for programs with 1-12 visits, high effect size for programs with 13-32 visits; low again for programs with 33-50 visits; and high again for one study on a program with more than 50 visits. A meta-analysis of home visiting programs for families with young children by Sweet and Appelbaum (2004) found that the differences in child maltreatment between treatment families and controls decreased as program length increased. In an outcomes study of a child neglect home visitation prevention program, DePanflis & Dubowitz (2005) found no significant difference in numbers of CPS reports between clients randomly assigned to 3 months of intervention versus 9 months. Longer duration of services may not result in differences among client outcomes if the knowledge of the short duration makes staff and clients work harder to achieve goals during the program's timeframe. Staff in programs of short duration may also make efforts to connect families to ongoing support and services in the community that may be similar to the types of services received by clients in programs of longer duration, eliminating substantive differences between the interventions received (DePanfilis & Dubowitz, 2005).

Olds and Kitzman (1993) conclude that experimental data have yet to reveal the optimal duration or intensity of services. While the findings on home visiting as a

strategy to prevent child maltreatment are equivocal, home visitation has been shown to be beneficial and to produce robust outcomes in other domains of parenting. These include, for example, improvements in health care usage and child health in programs targeted to low-income families.

There are differences in the observed effects of home visiting on different populations, with often greater effects on higher than average risk groups such as low-income unmarried teenagers. Program effects also vary by provider type; this topic will be addressed in the next section.

Service delivery by paraprofessionals

Home visiting as a service strategy relies on the formation of a helping relationship between the visitor and family (Wasik, 1993). Therefore, staffing of home visiting programs is a critical component in achieving beneficial outcomes. After repeated validation by randomized control trials, home visiting by public health nurses of at-risk families with infants and young children (note: there are almost no studies of home visitation of families with older children) is described as a "proven practice" by the Promising Practices Network due to statistically significant treatment group effects on subsequent child injuries, environmental safety, childbearing, use of public assistance, and other health and social measures (Promising Practices Network, 2002), whereas evidence of success by paraprofessionals is more in doubt. Yet some researchers hypothesize that paraprofessionals may be the better candidates for home visiting to at-risk mothers because they may better reflect the community (Sweet & Appelbaum, 2004, Wasik, 1993), may better relate to and empathize with clients if they have also experienced challenges as a mother (Barth, 1991; Hiatt et al., 1997), and may be able to

offer the types of concrete services and problem-solving approaches that clients need (Barth, 1991). Because of these qualities, paraprofessionals may have a "reduced social distance" with their clients (Hiatt et al., 1997) and an easier time establishing trust (Wasik, 1993) compared to professionals, which may aid in relationship formation and maintenance (Hiatt et al., 1997). They may also be viewed as role models for the clients they serve (Wasik, 1993; Hiatt et al., 1997). On the downside, paraprofessionals may have more difficulty in achieving objectivity and setting boundaries (Wasik, 1993; Hiatt et al., 1997) and may not know how to intervene with families in ways that promote mental health and self-sufficiency (Wasik, 1993).

Researchers have noted that it is difficult to quantify the effects of paraprofessional service delivery across studies, since the term blankets a variety of individuals who differ by educational background, training received, supervision, and duties (Hiatt et al., 1997; Wasik, 1993). Paraprofessionals may be defined as having no post-high school education but plenty of life experience and familiarity with the local community (Musick & Stott, 1990; Hiatt et al., 1997), or having an educational background ranging from no high school degree to an advanced professional degree (Wasik, 1993, Wasik & Roberts, 1994). Regardless of formal education, researchers agree that training is a critical component to develop the necessary skills for intervention with high-risk families (Wasik, 1993; Hiatt et al., 1997). In a national survey, with 1,492 respondents (46% response rate), Wasik & Roberts (1994) found that of the programs employing only paraprofessional home visitors, 43.4% reported providing in-service training, with 12.4% of these programs supplementing training through written materials. Seventeen percent of programs employing only paraprofessionals reported offering no training, as compared to 47.6% of

agencies employing only professionals. These findings suggest that training is perceived as particularly important for paraprofessionals. Some form of supervision was reported by 73% of all agencies (Wasik & Roberts, 1994). The question is: with sufficient training and adequate supervision, can paraprofessionals provide similar services and achieve comparable outcomes to their professional counterparts?

Two randomized control trials of paraprofessional home visiting programs for at-risk families found minimal impact on child maltreatment outcomes. In a study by Barth (1991), trained paraprofessionals provided six months of home visiting services to pregnant mothers with identified risk factors for child maltreatment. At the conclusion of services, no significant differences were found between the controls and participants in self-reported and officially reported child maltreatment. Barth concluded that the program's lack of success may have been due to the inabilities of paraprofessionals to deal with the needs of highly distressed families and the short duration of services to make long-term change in family functioning. Similarly, a randomized control trial of Hawaii's Healthy Start, a voluntary paraprofessionally-staffed post-natal home visiting model widely implemented throughout the United States, also found the intervention to be ineffective in reducing rates of self-reported and officially reported child maltreatment (Duggan et al., 2004). Duggan and her colleagues attributed the intervention's minimal success to issues of program implementation and conceptualization.

Comparing the effectiveness of different service providers, two randomized control trials tested differences between home visitation provided by paraprofessionals and nurses. Korfmacher (1999) found differences between the provider types in the areas of engagement, retention, and visit content. Compared to nurses, paraprofessionals had

higher passive refusal and drop-out rates. During visits, paraprofessionals spent a larger proportion of time on environmental health and safety issues than nurses and a smaller proportion on parenting. The researcher also noted that turnover was higher among paraprofessional staff. A similar study conducted by Olds and his colleagues (2002) tested the effectiveness of nurse vs. paraprofessional home visitation on maternal and child health outcomes. Mother-child pairs served by paraprofessionals evidenced only one statistically significant effect: mothers with low psychological resources interacted with their children more responsively than counterparts in the group served by nurses. For most the health and social outcomes, the effect size by paraprofessionals typically was about half that of nurses, and effect sizes rarely achieved statistical significance. Since the intervention was the same, the different outcomes are likely due to the type of service provider. Nurses may have greater legitimacy and authority with the clients they serve than paraprofessionals, particularly given health-related concerns of new parents that may help them leverage behavioral change (Olds et al., 2002).

A meta-analysis examining the effects associated with professional vs. paraprofessional home visitation staffing found that visitation by professionals (nurses and mental health workers) was associated with lower rates of child maltreatment reporting, child injury, and out-of-home placement as compared to visitation by paraprofessionals. Program duration was also associated with effect size, with programs of a longer planned duration more likely to produce positive results in reduction of child maltreatment. In combination, visitor type and duration suggested strong effects; visitation by paraprofessionals was found to be effective only in programs of two years or longer (Bilukha et al., 2005). Another meta-analysis identified different findings, with

paraprofessional visitation associated with higher effect sizes than professionals in programs addressing potential for child abuse (Sweet and Appelbaum, 2004); however, this study utilized a weaker design by combining experimental, quasi-experimental studies, and pre-experimental designs.

Researchers do not yet fully understand the factors associated with effective paraprofessional home visitation. Implementation studies may help to explain some of the mixed findings. Hiatt et al. (1997) conducted an implementation study of a home visiting program originally designed for public health nurses and adjusted for paraprofessionals. Program administrators recruited women without a bachelor's degree who were mothers and older than age 18. The researchers hypothesized that due to "shared experience" and "reduced social distance" paraprofessionals would create relationships with their clients that differed from those of nurses. Some of the same qualities that uniquely suited paraprofessionals for the role of home visitor (e.g. shared experience of motherhood) created challenges for the staff in taking on this new role. Paraprofessionals struggled with issues of gaining credibility among professional collaborators, balancing work and home life, and adjusting to a professional culture. Residing in the same neighborhoods as their clients brought benefits and drawbacks to clients and paraprofessionals; while paraprofessionals could offer an insider view, they also became hurt and defensive when professionals expressed concerns regarding the safety of the communities. When compared to nurse implementation of the intervention model, paraprofessionals were found to have spent twice as much time on environmental health (e.g. safety of living conditions) and less time on personal health issues of the mother during pregnancy. High staff turnover (50% in two years) was a problem among

paraprofessionals; retention was greater among those who had previous home visiting experience. Overall, studies which compare outcomes achieved through nurse or paraprofessional home visiting favor nurses and show negligible results for paraprofessionals.

Current knowledge base in DR

The research literature supports certain aspects of the ARS model while casting doubt on others. Researchers speculate that voluntary provision of services in child welfare may enhance client motivation and better target services to those parents ready to change, yet an often heard concern in voluntary home visitation programs is that client engagement and retention can be challenging. Findings in the literature suggest that families residing in chaotic and violent communities are harder to keep in programs, a factor important to consider in programs such as ARS that are targeted to neighborhoods with high child maltreatment rates. While services provided by the ARS program are voluntary, they are still targeted rather than universal. Screening-based studies have demonstrated smaller effect sizes than population-based studies (Guterman, 1999). Home visitation is a promising intervention strategy, though the promise is not always demonstrated (Olds & Kitzman, 1993). The research on home visiting programs that seek to prevent maltreatment is equivocal, with meta-analyses finding no difference related to treatment (Olds & Kitzman, 1993) as well as identifying a majority of programs with positive effects (Bilukha et al., 2005). Different program services and personnel configurations may explain these mixed findings. Home visiting services staffed by paraprofessionals have achieved mixed outcomes (Sweet & Appelbaum, 2004;

Bilukha et al., 2005; Guterman, 2001; Barth, 1991, Duggan et al, 2004), with stronger empirical findings for nurse home visiting.

While this literature review has not found profound evidence for all of the elements of the ARS program structure, there are many reasons to believe that this program model can achieve positive outcomes for the families it serves. It has a well-thought out theoretical base (addressed further in chapter 3) that connects service inputs to expected client outcomes. Staff members are hired with care, provided with extensive training, and immersed in support and reflective group and individual supervision. Visitation content is based on family empowerment and participation, with an eye to ensuring that basic and concrete needs are met so that families can go on to address underlying psychological and emotional problems. Family achievements are celebrated and strengths are recognized and enhanced through services. As a promising intervention, the next step is to empirically test the ARS model to determine its effectiveness and value for replication at other sites.

CHAPTER 3: CONCEPTUAL FRAMEWORK

ARS & the ecological model

In the history of research on child maltreatment, three major models have framed inquiry (Pecora et al., 2000). The psychodynamic model posits that the problem lay in the individual, either the abuser or abuse victim, or in the dyad. Guided by this paradigm, the researcher explores deviant behaviors, attitudes, and beliefs of abusive parents or the qualities of children that are associated with abuse. The sociological model considers the social contributors to maltreatment. Researchers influenced by this model inquire into the connections between stress induced by poverty, among other factors, and child maltreatment. Neither model fully accounts for the behaviors of abusive parents: some parents with psychodynamic or sociological factors linked to maltreatment do not exhibit abusive behaviors (Pecora et al., 2000). A more complex model, the ecological model, acknowledges that child maltreatment is multiply determined by factors in the parent, child, parent-child dyad, community, and culture. No one factor is considered predictive; the ecological model instead emphasizes that risk for maltreatment is linked to the interaction among factors at these different levels. While the environment influences the individual, the reciprocal is also true—the interaction is two-way. Further, the ecological model is dynamic—factors change over the progression of a child and family's development (Bronfenbrenner, 1979).

Ecological theory envisions individuals and their social environment as a series of nested structures. The immediate context of the individual is the 'microsystem' and consists of patterns of activities, roles, and interpersonal relationships in a variety of situations. For this level, the emphasis is placed on how individuals perceive and make

meaning of events rather than the actual events themselves. The interrelations between two or more settings in which the individual actively participates compose the 'mesosystem.' This may be, for example, the connections between an adult's workplace, family, and social life, taking forms such as communication between settings and perceptions that exist in one setting about another. The 'exosystem' is distinguished from the mesosystem because it involves one or more settings in which the individual is not an active participant but which affect or are affected by a setting in which the individual is actively involved, as in the case of a school board making decisions about a child's school. In the outermost setting, the 'macrosystem' consists of forms and content of systems that are consistent in the lower settings, as observed in different societies and sub-cultures, including related values and belief systems, such as values related to parenting (Bronfenbrenner, 1979). An intervention is ecological in nature if it addresses the parent, the parent-child dyad, and the family's environment. Primary importance must be placed on ensuring that the family has what it needs to function and provide appropriate parenting; namely, supports such as housing, adequate health care, proper nutrition, and employment (Bronfenbrenner, 1974).

The ARS intervention, with its implicit acknowledgment of the child, parent, family system, neighborhood, and societal contributions to the problem of child maltreatment, fits the ecological theoretical framework of child maltreatment. Interventions are made primarily at the micro and meso levels. The four main types of interventions provided to families are: assistance with basic and concrete needs; promotion of attachment in the parent-child relationship; provision of social support; and connection to neighborhood institutional resources. The first three interventions can be

located within the micro level of the ecological model, whereas the last spans both the meso-system (through influence on family systems) and micro-systems (through interpersonal relationships with community organization staff).

Basic needs

Help with meeting concrete and basic needs is an infrequent focus of child welfare services, even though clients have expressed desire for services that offer material assistance (Pelton, 1982). Resolution of immediate crises can be seen as necessary before moving on to deeper issues, such as lack of support or emotional problems (Duggan et al., 1999). Providing parents with cash assistance and vouchers can also offer psychological benefit to families involved in the child welfare system: having the freedom to use cash or vouchers as the family sees fit conveys the message that the family is valued, and that parents can be trusted to do what is in the best interests of their children (Racino, 1998). Cash and material assistance may make a difference in those cases where the help offered truly fits the families' needs. Indeed, help acquiring needed equipment such as a crib, or assistance in paying a bill, may be a more effective child maltreatment intervention than education on parenting skills or child development (Chaffin et al., 2001). However, in cases of great financial stress, a small handout or purchase of equipment may not tangibly improve the plight of families.

Maslow's theory on hierarchy of needs offers support for interventions that target basic and concrete needs. Frequently envisioned as a pyramid, the Maslow (1943) hierarchy of needs is based on the premise that "human needs arrange themselves in hierarchies of pre-potency," (p. 3) meaning that lower needs must be at least somewhat satisfied for higher ones to emerge. The base is constituted of 'physiological' needs for

food, water, and other forms of basic sustenance such as shelter and clothing. The safety needs come next, including freedom from physical threats and security that may come from a job and other stable routines. If physiological and safety needs are met, a desire for love and belonging arises, with both the giving and receiving of love. Need for esteem is the next highest level; this takes the forms of desire for achievement and reputation or prestige. The four needs previously described make up the 'deficiency' needs which, while unsatisfied, cause an individual feelings of anxiety. The pyramid is capped with the need for 'self-actualization,' also described as the 'growth' need, which consists of an individual expressing his full potential and making the most of his talents.

Motivation can be understood as dominated by the forces of deprivation and gratification: while unsatisfied, the need for which an individual is deprived tends to dominate until the individual is able to gratify said need (Maslow, 1970). The lowest need tends to dominate the individual until it is sated, at which time it loses its priority to the next need. These needs are assumed to exist in the same basic order for most individuals. Each of these needs may be unaddressed or thwarted; for example, an individual may have her lower needs met but be unable to fulfill the need for esteem and therefore lack self-confidence (Maslow, 1943).

The Maslow Hierarchy of Needs is widely accepted, though supportive empirical evidence is lacking (Wahba & Bridwell, 1976). A survey of the literature on motivation related to employment found little support for basic tenets of the theory. The study examined the literature related to: 1) Maslow's need classification scheme; 2) the deprivation/domination proposition that the importance of a need is directly related to its level of deprivation or deficiency for an individual; and 3) the gratification/activation

proposition that once a lower need is gratified, its importance wanes and the importance of the next highest need increases. Factor analysis and rank-order studies that attempted to test for the existence of the Maslow categories and their hierarchical arrangement found no support for the existence of five underlying need categories (though in some of the studies deficiency and growth needs clustered independently from each other) and no support for Maslow's hierarchical arrangement of needs (though the authors caution that rank-order is likely a poor test because the notion of conscious ranking is absent from the Maslow theory). A group of studies testing the deprivation/domination proposition through measures of job satisfaction and the relationship between satisfaction and job or environmental factors found at best partial support; findings suggest that the issue of need deprivation and domination of behavior are more complex than the theory's explanation. Among the studies testing the gratification/activation proposition, most have methodological flaws that render them a poor test of the theory; the best test comes from longitudinal studies that can examine whether satisfaction of needs in one category correlate with the importance of needs in the next level of the hierarchy over time. Still, Wahba and Bridwell are hesitant to draw conclusions based on these studies due to their limited time frame and examination of only two sequential needs at a time, when the hierarchy of needs may emerge over a lifetime. There is little clear or consistent support for Maslow's theory; however, the nature of the theory presents a challenge to empirical testing, and extant studies had conceptual, measurement, and methodological limitations. The authors conclude that the concept of need remains elusive, but that Maslow's theory provides a useful departure point for generating ideas and a framework for organizing diverse findings related to the concept of need.

While the preponderance of evidence from studies does not support Maslow's theory, it continues to be frequently invoked in a number of fields (Soper, Milford & Rosenthal, 1995). This may be because of its intuitive appeal, expressing a notion that people can recognize from their own experiences (Simons, Irwin & Drinnien, 1987). While the specific categories or ordering of needs may not hold in empirical testing, the theory may yet serve as a useful heuristic for understanding the types of needs individuals may experience, and how needs may relate to each other. Attention to what Maslow designated as the lower, basic needs is a central part of the ARS program approach. It may be the case that by addressing families' physiological needs of housing, food, and other basic necessities, the ARS program allows clients to work on "higher" needs related to safety and ultimately love. Maslow's theory also calls attention to relatedness and love as a central human need, which is also address by the ARS program; this will be discussed further in the next section on attachment theory.

Attachment in parent-child relationships

Attachment theory describes the formation of emotional connections among humans. This body of theory was largely developed through the work of John Bowlby (1969) and Mary Ainsworth (1973). Given consistent care from one or a small number of caregivers, infants typically form attachment relationships within the first two or three years of life. The attachment relationship provides children with protection from danger, food, and social relationships that are a tool for making sense of the world. Four recognizable stages of the attachment process in infancy can be identified. From birth to 2 months, infants exhibit prosocial behavior and an enjoyment for social interaction, though they do not yet show a marked preference for their primary caregivers. This

changes in months 3 to 6, as infants begin to recognize particular people and show increased preference and interaction with familiar persons. By 7 months to 3 years, children have a selective preference for one attachment figure, which they demonstrate through behaviors aimed at seeking out and maintaining contact with the attachment figure, such as smiling, crying and following. From age 3 years and onward, children develop a sense of emotional security about the attachment relationship and do not require the same degree of physical proximity (Howe et al., 1999).

While children progress through similar stages, their attachment relationships differ due to attributes of the parent and environment. Ainsworth advanced attachment theory through empirical testing and identification of attachment types. Using the "Strange Situation" procedure, Ainsworth (1978) and later researchers observed infants in scenarios where the infant and parent are alone, the infant is alone, the infant is alone with a stranger, and the infant is with the parent and a stranger. There are periods when the parent enters and exits, providing opportunities to observe separation and reunion.

Based on behavioral patterns during the Strange Situation, infants can be classified as presenting a pattern of secure attachment to the parent or a form of insecure attachment. Securely attached infants will explore freely and interact with the stranger when the parent is in the room, periodically checking in and using the attachment figure as a "secure base"; when the parent departs, the infant will become upset, but will be happy and easily comforted upon her return. Two types of insecure attachment were identified by Ainsworth (1978): anxious-ambivalent and anxious-avoidant. Infants characterized as anxious-ambivalent will be anxious about exploration and the stranger when the parent is present; upon her departure, the infant will become distressed, and

upon her return will act ambivalently by seeking proximity but resisting comforting and appearing resentful. Anxious-avoidant infants act disengaged from both the parent and stranger, showing little reaction to the parent's departure or return. The work of Main and Solomon (1986) identified an additional type of attachment: insecure-disorganized. Behaviors associated with this characterization tend to be inconsistent and confused; children may freeze or engage in stereotyped behaviors such as rocking when reunited with the parent. Children may have different attachment patterns with different parents or primary caregivers (Main & Weston, 1981).

Attachment type appears to be significantly correlated with parental sensitivity. The primary attachment figure for securely attached infants appear adept at reading the baby's cues and reacting in a manner that demonstrates sensitivity, acceptance, cooperation, accessibility, and availability. Insecurely attached infants, on the other hand, have developed defense mechanisms to cope with feelings of distress and anxiety. The parents of anxious-ambivalent children tend to be insensitive, unreliable, and inconsistent in their responses. To maintain contact with the attachment figure, such children show angry behaviors, demanding attention and protection. The experience of desiring emotional contact with an unreliable attachment figure incites feelings of frustration and ambivalence. Children with avoidant attachment experience their parent as rejecting, interfering, and controlling; displaying distress provokes annoyance or agitation in their caregiver, and behaviors such as rebuffing or aggressive attempts to control the child's behaviors. Children react by minimizing attachment behaviors such as crying in order to stay near the parent without annoying them (Howe, Brandon, Hinings, & Schofield, 1999). With insecure-disorganized attachment, children appear to

experience their parents as frightened or frightening. The insecure-disorganized child will both approach and take flight from the parent. This may result in disassociative behaviors (Main & Hesse, 1990). Studies of maltreated infants have identified a majority (around 80%) as belonging to this category (Carlson, et al., 1989; Lyons-Ruth, et al., 1991). Parents may also be the victims of trauma, which causes them to be frightened or disassociative in the presence of their child (Main & Hesse, 1990).

Attachment patterns established in infancy have a significant influence throughout the lifespan. Early relationships influence the development of internal working models of social relationships. These models organize social behavior by helping an individual make sense of the behavior of others and form expectations of what to expect, based on past experience. While largely stable, internal working models are also dynamic and can be modified by later relationships (Bowlby, 1988).

Attachment theory is widely accepted as the foundational theory in developmental psychology; one that provides an integrative framework for the understanding of socio-emotional development and personality formation through the prism of relationship (Howe et al, 1999). A large body of studies has been conducted to test the theory. Prospective studies of children tested in infancy and then again in later childhood or adolescence have largely found support for consistency of attachment style over time. Stability of classification during the period of infancy appears highest among infants cared for in upper socio-economic families providing quality care and lower with poorer families providing less optimal care (Bolen, 2000). To test attachment style in adults, researchers often use the Adult Attachment Interview. This instrument consists of thirty-six questions covering topics related to childhood background and experiences of trauma.

Responses are coded for consistency of descriptions, taking into account emotional regulation and informational content (George, Kaplan, & Main, 1985). Studies of adolescents who were tested with the Adult Attachment Interview after being tested with the Strange Situation protocol in infancy have found that the majority retains their original attachment classification; with attachment style, continuity appears associated with consistent negative or positive care and classification change with intervening life events and changes in the relationship with the primary attachment figure (Bolen, 2000).

Though widely embraced, attachment theory is not without its critics. The concept of working internal models and its use by attachment researchers has been described as vague and general. The Strange Situation testing scenario has been criticized for being culturally-specific, relying on the assumption that brief periods of separation have the same meaning for all children though in some cultures infants are rarely separated from their mothers. The test, which takes 20 minutes to administer, has also been criticized for being too brief a window on the attachment relationship to assess all its important dimensions. Coding of child behavioral patterns in four discrete categories has also been criticized, with the assertion that attachment may instead be better understood along a continuum. Children with abnormal relationship formation skills, such as children with autism or those raised in institutions may not fit neatly within one of the traditional attachment classification (Rutter, 1995).

Attachment theory suggests that sensitive and available parenting may be promoted by certain conditions. Adequate time and a relaxed atmosphere can help parents properly attend to their children. Parents need support themselves. In a number of cultures, women giving birth and caring for newborns are attended by female relatives

who take care of chores and allow the mother to focus on her baby. A home visitor may partially serve this role by providing "mothering" to the mother, and thereby encouraging her to better care for her own child. Modeling of sensitive parenting behaviors by home visitors may prove instructional (Bowlby, 1988). Parents may become more available to their children when their stress is reduced and they experience greater feelings of security, confidence, self-esteem, and social understanding. Children's emotional connection with their parents may therefore be improved by interventions that offer provision of emotional support, material support, opportunities to improve reflective functioning through conversation, advice, and advocacy, among others (Howe, et al., 1999). While ARS has a limited focus on parenting behaviors, there are ways in which the program may influence attachment relationships between parents and children. ARS creates opportunities for parents to delight in their children through special activities. By honoring the parent-child relationship, the program may encourage greater sensitivity and attention on the part of parents. The program also attempts to reduce stress, which may improve parents' availability to their children.

Social support

Lack of social support or negative social support appears to be associated with child maltreatment (Kotelchuck, 1982; Polansky et al, 1981; Polansky, Ammons, & Gaudin, 1985). Social support is a primary function of home visiting interventions for at-risk families because it is believed to be an effective means of leveraging behavioral changes, skill development, and formation of connections with community resources and service systems. As such, the relationship is a means to an end and not intended to be the primary source of social support in a client or family's life (Eckenrode & Hamilton,

2000). There are two distinct approaches to the study of social support in the research literature. The former involves activation of social support during stressful life events, and predominates in the family stress and coping literature, whereas the latter focuses on the role of social support in life course development/ personality and is more associated with the field of family relations. The two approaches to studying social support are distinct in their emphasis on the short and long-term effects of social support for psychological functioning (Pierce et. al., 1996). The role of social support during stressful life events will be the focus of this section.

Social support is believed to operate through perceptions of available support, rather than actual provision of support. Perceived social support (belief that love and support are available from significant others) appears to buffer the impact of episodic or chronic stress and is associated with more positive health and mental health outcomes. Perceived social support appears more correlated with personality variables than with aspects of the social environment, and it appears to be as stable as other personality traits when measured over time (Lakey & Lutz, 1996). Enacted social support (specific acts of social support) has been shown to have a weak relationship with measures of psychological symptoms, rarely demonstrating a stress-buffering effect. There is also little evidence to document a strong connection between perceived social support and enacted social support, as studies have consistently found only small correlations between the two. Perceptions of others as supportive to varying degrees appear less related to actual enacted support and more to inferences based on 'supportive' characteristics (Lakey, et al., 1996). These findings suggest that presence of a supportive person, rather

than explicit supportive acts, constitute the stress-buffering effects of social support (Thoits, 1995).

The provision of social support in relationships is theorized to consist of discrete types of support. Based on a taxonomy developed by House (1981), the concept of social support is most frequently operationalized as three main types: emotional, instrumental and informational, although these categories have been criticized as being too broad and vague for conceptual precision and empirical measurement (Barrera, 1986; Barker & Pistrang, 2002; Jung 1987). Emotional support has the broad goal of fostering mental health through comforting gestures intended to soothe anxiety, uncertainty, stress, depression, and hopelessness. Interventions that characterize emotional support include attentive listening, offering encouragement, and normalizing the situation by diverting attention from problems. Provision of instrumental support addresses specific identified needs. Such support involves tangible goods, such as food or shelter, or services, including transportation and physical care (Finfgeld-Connett, 2005). Information can be seen as the third type of social support (Hinson Langford et al., 1997), or an aspect of both emotional and instrumental support (Finfgeld-Connett, 2005). It can take the practical forms of facts and advice, or the more emotional forms of reassurance, empathy, and positive affirmation. The latter is sometimes characterized as 'appraisal support' for its role in helping to reshape self-evaluation. Informational support can be particularly useful in times of stress, as a means of problem-solving (Hinson Langford et al., 1997).

There are shared attributes that bridge across the social support types. Social support is context-dependent and embedded in relationships characterized by unconditional positive regard and caring. The process of social support involves

advocacy, as the provider encourages the recipient to act on their own behalf and promotes a sense of motivation through strategies such as affirmation, validation, and encouragement (Finfgeld-Connett, 2005). There is also a presumption of reciprocity, that help is neither unidirectional nor motivated purely out of altruism, but exchanged (Hinson Langford et al., 1997). However, a sense of reciprocity can be cognitively created by the provider, as with the belief that the recipient will provide help to another in the future (Finfgeld-Connett, 2005).

Before individuals can access social support, certain antecedents must be in place. On the part of the individual, there must be an acknowledged need for support and a willingness to accept help from others. Others must recognize this need and have both the willingness and ability to provide help (Finfgeld-Connett, 2005). The individual must participate in social networks that provide the structure wherein social support may be provided. Connections within a social network and their degree of depth and strength—the notion of social embeddedness—are avenues of potential support. Whether the atmosphere, or social climate, that characterizes social networks and their level of connectedness is promotive of helpfulness and protection also plays into the availability of support (Hinson Langford et al., 1997)

Relationships of both a personal and professional nature can provide social support. Family and friends are often a naturally occurring, informal source of support. More formal supports include groups and organizations within a community and individuals such as professionals and paraprofessionals in the medical and mental health fields (Hogan, Linden & Najarian, 2002). Support from medical and mental health providers can be envisioned on a continuum related to level of training (Eckenrode &

Hamilton, 2000) from intermediate (e.g., paraprofessionals) with on-the-job training to formal (e.g., therapists) with graduate training (Barker & Pistrang, 2002). Studies have consistently found that people express preference for informal over formal support, and desire professional help only when other forms of support are not available (Finfgeld-Connett, 2005).

On the informal end of the spectrum, some providers of support may be preferred over others. While social support generally has a positive connotation, some research findings have suggested that there can be demands associated with 'involuntary' relationships (e.g. relatives and co-workers) that outweigh the provision of support. Relationships which are voluntary, as with friends or members of one's church, may come with more manageable expectations and thereby have benefits that outweigh their cost (Thoits, 1995).

On the intermediary and formal ends of the social support spectrum, evidence suggests that support provided by paraprofessionals is equivalent, or perhaps even superior, to support from professionals for mild to moderate psychological problems (Durlak, 1979; Christensen & Jacobson, 1994; Hattie, Sharpley & Rogers, 1984). These findings may be the result of a speculated common process of psychological helping that produces largely equivalent outcomes across a range of treatments. Common elements of helping relationships across provider types may include the helper's attitude (e.g., positive regard, empathy), efforts at persuasion, and client self-disclosure (Christensen & Jacobson, 1994).

Similarities between client and provider may also provide a clue into the effectiveness of paraprofessionals. Evidence suggests that match may be important, with

regard to who provides support and the type of support given (Thoits, 1995). When guidance is desired and objective standards are lacking, individuals make comparative self-evaluations and seek guidance from others who are socially and experientially similar, when they are available. Such similarities may increase perceptions of confidence and applicability of the guidance offered, and the likelihood that it will be culturally acceptable. Common experiences may create a sense of empathic understanding (Thoits, 1986). Indeed, most people seek like others in their personal and professional environments to provide help with psychological problems rather than formal mental health providers (Cowen, 1982). Shared experience is also the core of self-help and mutual support efforts (Winefield, 1987). This suggests that preference for paraprofessional or professional help may be related to congruence in class and educational background between helper and clients. Individuals with less formal education may prefer a paraprofessional helper of a similar background, while those with greater amounts of formal education may prefer a professional with similar or higher educational attainment.

Paraprofessionals may have an advantage over professionals in forming trusting relationships with individuals and families, due to characteristics such as similar demographic backgrounds and shared neighborhood residence. Coming from similar backgrounds, paraprofessionals may have experienced and overcome similar stresses and, in the process, accessed local resources, thereby having relevant experience and wisdom which can act as the foundation for empathy. For families who feel wary or mistrustful of professionals, paraprofessionals can provide information sharing and education from someone perceived as a "friend." This advantage also comes with challenges, as

boundaries can be more difficult to maintain (Hiatt, et al., 1997). The theoretical literature suggests that paraprofessionals may have greater success than professionals in forming bonds and providing social support to clients of similar background, although research on paraprofessional delivery of child maltreatment prevention services has not always borne out this promise.

Interventions based on social support may take different approaches, depending on theoretical orientation. One particularly salient theoretical question is whether perception of social support is a characteristic of environments or individuals. The first hypothesis presumes that perceived support reflects enacted social support. Interventions with this theoretical basis frequently provide support (advice and/or reassurance) to the persons under stress, with the expectation that such support would help the person to cope more effectively, with fewer stress-related symptoms. This type of approach fits the 'stress-buffering' hypothesis. The second hypothesis of social support views perceived support as a characteristic of the individual, and holds that individuals have an interpretive bias with regards to enacted support. Interventions with this orientation often focus on social skills development.

Interventions that provide social support from staff have not shown effectiveness in changing naturally occurring social support networks, indicating that any protective effects of the support are unlikely to last longer than the intervention and no enduring stress reduction would have been provided. Success is limited to reducing immediate symptoms among people with particular stressors (Lakey & Lutz, 1996). With regards to home visitation models, social support absent concrete assistance in changing behaviors has not been found effective in promoting behavioral change (Olds & Kitzman, 1993).

For the ARS program, these findings imply that families may be helped during the intervention period, especially if trust has been established based on shared characteristics and families experience a sense of 'perceived social support.' However, without the establishment of continued social support from formal or informal sources after termination of the intervention, sustained effects are unlikely. A crucial piece of promoting positive parenting is helping families seek ongoing support from their communities. The next section will consider the influence of connections to neighborhood resources on family functioning.

Institutional resources

Local neighborhood factors including physical infrastructure, organizations that serve residents, and relationships between the residents themselves can have a powerful effect on family processes and outcomes (Furstenberg & Hughes, 1997). In the ecological framework, neighborhoods can influence human development at the micro-system (through direct interactions); meso-system (through indirect influence on settings such as the home and school); and macro-systems (through collective beliefs and norms in a neighborhood) (Gephart, 1997). Neighborhoods may have direct or indirect effects on children; direct through their relationships and activities with peers and other residents, or indirect through the ways that neighborhoods influence parenting. A number of theories have been developed on the mechanisms by which neighborhoods influence their inhabitants (Levanthal & Brooks-Gunn, 2000; Jencks & Mayer, 1990). Key commonalities among the frameworks are the importance of networks and resources. In a now classic and often-cited framework, Jencks and Mayer (1990) lay out three major

theoretical orientations on how neighborhoods affect residents: collective socialization, epidemic, and institutional resources models.

Collective socialization models of neighborhoods posit a mechanism whereby neighborhoods influence children and youth through their relationships with adults and the structures and routines that exist among residents (Jencks & Mayer, 1990; Shinn & Toohey, 2003; Levanthal & Brooks-Gunn, 2000; Gephart, 1997). Through collective socialization, networks may convey normative expectations for acceptable behaviors and thereby mediate the relationship between neighborhood disadvantage and outcomes such as adolescent prosocial behaviors (Elliott et al., 1996). Collective socialization may also influence the level of social problems such as child maltreatment (Freisthler, 2004) and delinquency (Kornhauser, 1978).

Epidemic models also focus on the influence of networks and transmission of norms, but between peers rather than between adults and children (Jencks & Mayer, 1990). Behaviors are seen as a kind of contagion to which individuals have varying degrees of susceptibility due to heredity, upbringing, or chance. The likelihood of developing bad behaviors is related to frequency of exposure. Peer influence is hypothesized to be strongest when other formal and informal community institutions are lacking (Levanthal & Brooks-Gunn, 2000). Studies have found negative effects of peer deviance on outcomes such as adolescents' school achievement (Darling & Steinberg, 1997).

Neighborhood institutional resources models (Jencks & Mayer, 1990; Levanthal & Brooks-Gunn, 2000) hypothesize that one mechanism of neighborhood effects on children is the presence of resources that promote stimulating learning and social

environments. This mechanism operates through the family, as parents must act as advocates for their children's access to community resources (Levanthal & Brooks-Gunn, 2000). Institutional models also exert influence through relationships with adults who come from outside the community to work in community institutions and the behavioral regularities that come from interacting with various institutions (Gephart, 1997). Institutional resources therefore influence children and families on the meso-system level, by affecting the family system, as well as the micro-system level, through direct interactions with staff of community organizations. Key community-based services for families include: learning, social, and recreational activities; child care; schools; medical facilities; and employment opportunities. There are four dimensions of importance regarding institutional resources described by Levanthal & Brooks-Gunn (2000): availability, accessibility, affordability, and quality. Competition for key resources is another aspect of this model described by Jencks & Mayer (1990). The ARS intervention attempts to connect families to resources in their neighborhoods. Relatively little emphasis is placed on the connections between families and networks. This section will parallel the ARS program by focusing on institutional resources.

Another way in which neighborhood institutions influence child outcomes is their relative ability to help residents access resources (Small, 2006). William Julius Wilson (1987, 1996) pointed out that neighborhood institutions, such as churches, recreation centers, and childcare centers, may offer access to resources that may be of particular benefit to poor or socially isolated individuals. Such institutions perform the role of "resource broker" by creating ties to businesses, nonprofits, and government agencies in possession of resources, and in turn giving access to these organizations and their

resources to individuals (Chaskin et al., 2001; Small, 2006). Resources may be defined as symbolic or material goods that benefit individuals and include economic capital, social capital, information, credentials, material goods, and services, among others (Small, 2006). Involvement with "resource broker" neighborhood institutions gives an advantage to children and families. Small argues that the "truly disadvantaged" may be those who lack access to such institutions. Certain factors may influence why a neighborhood institution does or does not become a "resource broker," including "normative pressures," relating to norms of organizational functioning that may encourage institutions or their staff to develop relationships with other providers, and "coercive pressure" from larger authorities or flinders that mandate collaboration (Small, 2006, p. 278).

Marked differences exist between neighborhoods with regards to their institutional resources. The primary reason for this may be the socio-economic characteristics of neighborhoods (Jencks and Mayer, 1990; Aber et al., 1997; Pembley & Sastry, 2003). Resources may both be less available and in greater demand in high poverty areas. Likewise, they may be of poorer quality. When a large proportion of residents are struggling to meet their basic needs, there may be little time left over to join together in collective efforts to demand that politicians address local needs for services (Fuller et al., 1997). Due to lack of financial resources, families may also not have the option to relocate (Tienda, 1991). There is some evidence that families in resource-poor areas are more likely to seek out and use services outside their neighborhoods (Jarrett, 1997; Coulton, 1996). Parents may see the effort of locating resources as a worthy investment in their children's potential for success (Burton & Jarrett, 2000). Through

relationships with kin who live in more affluent areas, families may learn of and have access to resources beyond their own neighborhoods. Parents may, for example, choose to send their children to live with kin in order to benefit from better schools and recreational opportunities (Jarrett, 1997). Usage of resources outside of one's neighborhood presumably diminishes opportunities to develop neighborhood-based networks of support (Coulton, 1996).

Neighborhood services may have a number of effects on children. Services related to learning may influence a child's cognitive development. Social and recreational activities may promote children's physical and socio-emotional well-being. Child care can impact children's learning experiences, behavioral functioning, and physical health. School environments may be influenced by the social and ethnic makeup of neighborhoods, and may in turn affect children's developmental outcomes through factors such as school quality, climate, and demographics. Access or lack thereof to medical services may be another way that neighborhoods affect children's health and mental health. The opportunity for employment in the community is a mediator with particular importance for adolescents with regards to outcomes involved with the transition to adulthood (Levanthal & Brooks-Gunn, 2000).

The level of neighborhood risk, as related to poverty, residential instability, and childcare burden (i.e., number of available adults to care for children) appears to indirectly affect parents' views and usage of neighborhood resources. Complementing an aggregate analysis of Cleveland neighborhoods that connected demographic factors with outcomes such as child maltreatment, crime, and other social problems, an ethnographic study using in-depth interviews and neighborhood observation found that parents in high-

risk neighborhoods were less likely than parents in low-risk neighborhoods to use local resources such as parks and organizations. Parents in high-risk neighborhoods frequently expressed the belief that these places were dangerous, of poor quality, or unavailable. Instead, they were more likely to travel outside of their neighborhoods to use such amenities (Coulton, 1996).

The climate of local social services agencies may mirror the social problems of neighborhoods, according to a study of two Chicago neighborhoods—one with child abuse rates above the city average and the other with rates below, but both with similar demographic and socioeconomic characteristics (Garbarino & Kostelny, 1993). The attitudes of residents seem to influence local social service providers: in the neighborhood with greater levels of child abuse reporting, a sense of negativity and hopelessness appeared to be associated with fragmentation in the social services network and lack of coherent community identity, whereas the more positive attitudes in the neighborhood with lower rates of child maltreatment seemed to be related to a climate among providers that was more supportive and interconnected. The directionality of the relationships between child maltreatment reporting, community attitudes, and interconnectedness among service providers was unclear. Fourteen community leaders were interviewed in both neighborhoods, using a 12-item questionnaire developed from prior research. In the neighborhood with higher rates of child maltreatment, the general tone of the interviews was negative, with respondents generally unable to come up with community strengths. Respondents neither knew much about available local services nor gave much evidence of strong informal or formal networks of family support. By contrast, respondents in the neighborhood with lower rates of child abuse acknowledged

challenges faced by the community but espoused more a hopeful view. Social service agencies were more abundant in the latter neighborhood, better connected, and evidenced strong formal and informal social support networks. A related study appears to bear out the hypothesis that community agencies respond to families' needs in the neighborhood context. Families living in neighborhoods with lower risk scores, developed on the basis of interviews regarding family stresses and supports, were more likely to use recreational and preventative community services as compared to families in neighborhoods with higher risk scores, who were more likely to use treatment and rehabilitation services (Garbarino & Sherman, 1980).

Perceptions of neighborhood resource availability may influence parental behaviors that promote positive child development. In a study with 429 inner-city families of African American and European American descent, African American parents with a high sense of efficacy were more likely to engage in activities designed to develop their children's skills and interests or provide them with positive experiences than were European American parents with a high sense of efficacy. The researchers speculated that differences in parental strategies had to do with differing racial perspectives on the community environment and responsiveness of local agencies. African American parents did not generally find communities to be supportive, and therefore had to develop compensatory strategies, whereas European American parents could rely on more neighborhood resources (Elder, et al, 1995).

In a study of 368 families recruited in poor communities and schools where children were at elevated risk for conduct disorders, researchers collected questionnaire data on neighborhood characteristics, social networks, danger, and family context

variables to examine their relationship with child and parental behaviors (Pinderhughes, Nix, Foster & Jones, 2001). Less dissatisfaction with public services (in this case, police protection, garbage collection, the quality of schools, and public transportation) was found to be significantly associated with consistency of parental disciplinary action and more parental warmth in initial bivariate correlations. Greater dissatisfaction with these public services was found to be significantly associated with more harsh parenting interactions. In hierarchical regression analyses, dissatisfaction with public services was found to be a unique contributor to outcomes in the case of appropriate and consistent discipline and harsh interactions, but not with parental warmth. The authors suggest that dissatisfaction with public services may sap the energy of parents, leaving them less able to engage in parenting that is warm, appropriate, consistent, and non-harsh.

The majority of studies that have examined the relationship between child-level outcomes and neighborhood-level factors have done so with cross-sectional administrative data from sources such as the census. Consequently, these studies have generally focused on the sociodemographic characteristics of neighborhoods rather than their array of institutional resources (Gephart, 1997). Empirical measurement of institutional resources are rare (Levanthal & Brooks-Gunn, 2000), and those that exist have largely been focused on simply the presence of resources, rather than connecting these resources back to outcomes (Sampson, Morenoff & Gannon-Rowley, 2002). A limited number of studies that do explore or hint at the connection between child and family outcomes and the particular types of institutional resources identified by Levanthal and Brooks-Gunn (2000)—learning, social, and recreational opportunities; medical facilities; schools; child care; and employment—will now be reviewed. This

review excludes studies that examine the connections between these resource types and child outcomes outside the neighborhood context; for example, the effect of school quality on children, without consideration of neighborhood factors. Table 2 describes whether the study addresses the dimensions of availability, accessibility, affordability or quality.

Children and families' access to and usage of learning, social, and recreational opportunities in their neighborhood context are types of institutional resources believed to influence a range of outcomes, though studies in this area are sparse. Participation in after school activities may deter children, particularly adolescents, from dangerous or anti-social behaviors and provide a chance to develop talents and strengths (Ellen & Turner, 1997). An examination of the association between recreation centers and crime in Columbus, Ohio census tracts revealed that the presence of recreation centers had virtually no effect on violent crime when the level of neighborhood deprivation was very low to moderate, but as level of deprivation worsens, the crime-reducing influence of recreation centers increases (Peterson, Krivo & Harris, 2000). Researchers attribute this to the social control function exerted by such institutions. From this finding, one can speculate that, in areas of extreme deprivation, the presence of recreation centers may reduce the risk that children and adolescents will become victims of or complicit in violent crime.

In the Moving to Opportunity study, in which families residing in public housing or project-based Section 8 were randomly assigned to an experimental group (with a housing voucher that could only be used in low-poverty areas with counseling assistance to find and adjust to new housing) or a control group (with an unrestricted Section 8

voucher and no counseling), children in the experimental group had lower rates of injury (Katz, Kling, & Liebman, 2001). One reason for this may be the quality of play spaces in neighborhoods. A quote from one mother was revealing: "The place was not safe for the children to play. They had swings on concrete. Everything was on concrete. And that's where most of the accidents happened" (p. 636).

While social, learning, and recreational resources are no doubt important, their effects should also not be overestimated. A study looking at the effects of neighborhood and family factors on early childhood (ages 1-3) developmental test scores with families enrolled in an infant health and development program for infants with birth weight under 2500 grams (n=347) found that the availability of learning activities inside the home outweighed the influence of learning, social, and recreational opportunities outside the home (such as museums, parks, and libraries) (Klebanov, et al., 1998). These findings are not surprising for children of this age; as children grow older and gain independence, the presence of such opportunities may become more influential.

Studies on the association between health and neighborhood residence have proliferated in recent years (Diez Roux, 2001), but access to medical facilities by neighborhood of residence has been an overlooked area. Local medical facilities may impact children and adults by providing routine medical care and reducing days out of work or school, as well as treating chronic conditions such as asthma that might otherwise remain untreated (Ellen & Turner, 1997). A study of health care use among a cohort (n=619) of three year old children born premature with low birth-weight found that neighborhood poverty affected health care usage controlling for family income (Brooks-Gunn, et al., 1998). Mothers living in poor or middle-income neighborhoods

reported a higher number of emergency room visits than mothers in affluent neighborhoods, possibly influencing the quality of care provided to their children. Researchers believe this finding is most likely attributable to neighborhood characteristics such as fewer doctors and clinics, fewer facilities with convenient hours, and greater community acceptance of emergency room services.

While studies have looked at the effects of neighborhood stressors on school performance (for example, Dubow et al., 1997; Garner & Radenbush, 1991), the effects of neighborhood schools on children and families has less frequently been a focus of study. Coleman (1968) points out that the home, neighborhood, and school environments are the three key locations where a child may access educational resources; the need for any one is dependent on the contributions of the other. Therefore, having access to a good school and good teachers may be more important to children who come from deprived home and neighborhood environments. Children are most likely to attend their local neighborhood school, and may be more or less academically prepared and enthusiastic about learning depending on the school's quality (Ellen & Turner, 1997). Findings from the Moving to Opportunity study supports this hypothesis: children who moved from public housing to both more affluent neighborhoods (experimental group) and neighborhoods with moderate numbers of poor neighbors (Section 8 group) were more likely to attend schools with higher achievement test pass rates than their peers who remained in public housing, a finding which researchers attributed to a greater number and higher quality of resources available to these higher functioning schools (Ludwig & Ladd, 1997 in Levanthal & Brooks-Gunn, 1997).

Few studies have looked at characteristics of neighborhood schools on children's educational outcomes; the impact of neighborhood socioeconomic and demographic factors has more frequently been an object of study (Jencks & Mayer, 1990). One study that looked at neighborhood demographics made the connection to institutional resources as a possible mechanism. The presence of affluent neighbors was found to positively influence three- and four-year olds' performances on IQ tests, leading the researchers to speculate that a stronger economic base in the community is likely related to greater availability of public and private services and community resources that contribute to children's cognitive development (Chase-Lansdale et al., 1997). A similar finding was identified in a study of high school graduation rates for African American children, with high percentage of neighbors in white-collar employment associated with greater likelihood of high school completion for African American males, controlling for family background, early school performance, adult supervision, and substance use (Ensminger, Lamkin & Jacobson, 1996). Indeed, the most consistent finding on neighborhood effects on children's educational outcomes has been the positive effects of high income neighbors on children's school readiness and achievement outcomes, particularly for European American children (Levanthal & Brooks-Gunn, 1997). Two possible mechanisms could be responsible for associations between the physical and social conditions of neighborhoods and the quality of children's education in neighborhood schools: an economic mechanism that allows for a greater number and quality of resources, related to local tax revenues from commercial, housing, and income sources; and the quality of staff in schools, related to the potential applicant pool available to the

school and the attractiveness of the school as an employer (Connell & Halpern-Felsher, 1997).

Like schools, child care is another setting highly influential to child development that may vary by neighborhood with regards to availability and quality. Child care facilities in poorer neighborhoods are more likely to have smaller and less experienced staff, fewer developmentally appropriate toys and materials, and less volunteer support from parents. Children may consequently receive less adult attention and stimulation in more deprived settings, which may impact school readiness outcomes (Ellen & Turner, 1997). Fewer staff to care for children in lower-quality child care settings is also associated with tolerance of aggressive behaviors by children and possibility of injury. Conversely, high-quality child care and early intervention programs have demonstrated positive impacts on children's cognitive and socio-emotional outcomes as well as parenting, to some extent (Levanthal & Brooks-Gunn, 2000).

A couple of studies have identified variation in availability of child care by neighborhood residence. A study of child care across California yielded the finding that access to child care depends largely on geographic location, affluence, and race/ethnicity. Some counties have a much greater supply of child care than others; for example, the poorest areas of San Francisco had about the same quantity of child care as the most affluent parts of Los Angeles. However, generally speaking, upper income families were found to have the greatest access to local child care, with the middle and lower-middle income families faring somewhat better than the poorest families with regard to access. Across race/ethnicities, White and Black families had nearly twice the access to child care as Latino families (Fuller et al, 1997). In New York City, a study of the locations of

all licensed child care centers and their association with neighborhood poverty revealed a contradictory finding (Small & Stark, 2005). The census tracts with the highest poverty had the highest availability of affordable licensed child care centers, particularly publicly-funded child care such as Head Start. Neighborhood residence appears to matter with regard to child care availability, but the relationship between location and availability may vary regionally and may depend on state, county, and city policies (Small & Stark, 2005).

Geographic location may influence child care quality as well as availability. A study on the quality of child care centers and family child care homes in the states of California, Florida, and Connecticut found that quality of the child care arrangements selected by mothers was strongly associated with geographic location. Quality of care was assessed by factors such as providers' education levels and the intensity of structured learning activities. Indeed, geographic location had a stronger association with quality than most individual and family-level factors, indicating that low-income families may be more greatly influenced by institutional forces governing the quality and availability of child care supply than by other selection factors. Localities appear to differ in their abilities to promote high quality child care and to make such care available to low-income families (Fuller et al., 2004).

Employment opportunities within neighborhoods are a type of institutional resource that is of particular importance to adolescents. Mechanisms related to employment operate on a community-level (actual employment opportunities) as well as an individual level (adolescents' expectations regarding opportunities for employment). Research with low-income youth has identified a number of benefits associated with

employment, including access to economic resources and adult mentoring, which can positively influence outcomes such as increased school engagement and decreased delinquent behaviors. Attitudes adolescents develop towards employment may also influence behaviors regarding school, substance abuse, sexual activity and fertility, and criminal activity (Levanthal & Brooks-Gunn, 2000).

The notion that fewer jobs are available per worker in predominately Black neighborhoods, as compared to White neighborhoods, is called 'spatial mismatch.' According to this hypothesis, jobs have shifted out of inner cities to suburbs, creating transportation and other barriers to employment for African Americans. A review of the spatial mismatch literature finds strong support for the finding that spatial mismatch plays a substantial role with regards to adolescents' access to employment. For adults, spatial mismatch is also significant, but the research is less clear on the degree of its influence and possible differential effects on males and females (Ihlanfeldt & Sjoquist, 1998). Results on the social outcomes of participants in the Gautreaux Project, involving the relocation of Chicago public housing residents to the suburbs (n=224) or within the city (n=108) using Section 8 housing vouchers, also support the impact of residential location on employment opportunities for youth. Youth who moved to the suburbs were more likely to gain employment than those who remained in the city. In addition, relocated youth were able to secure better quality jobs, as measured by earning potential (Levanthal & Brooks-Gunn, 2000).

While empirical studies associating institutional resources types with child and family outcomes are lacking, there is a strong theoretical basis supporting the proposition that access to resources such as recreational facilities, child care, and medical facilities

can benefit children and families. For an intervention like ARS that seeks to connect families with resources in their communities, the question is whether such resources exist and meet the criteria of availability, accessibility, affordability, and quality.

Conclusion: Theoretical basis of differential response

Differential Response is a response path, not an intervention type per se. Jurisdictions which choose to adopt the DR model have the flexibility to create interventions that best address the contexts of families they serve. Nevertheless, commonalities emerge across DR programs. Most DR programs that have been studied make implicit use of an ecological framework and involve some combination of interventions emphasizing basic needs, the parent-child relationship, social support and connection to institutional resources.

In the design of this dissertation research, the theories of needs, attachment in the parent-child relationship, social support and institutional resources will be examined with reference to the implementation of the ARS program and the experiences of staff and clients involved with the program. In the qualitative portion of the study, data from focus groups with line staff, interviews with administrators, and interviews with clients is analyzed with reference to these theories and related findings are reported. A portion of the study looking at neighborhood resources using Geographic Information Systems software explores the relative availability of different resource types across the three ARS neighborhood sites. For the outcomes portion of the study, aggregate referrals to community resources provide some backdrop to clients' trajectories of involvement with the child welfare system.

CHAPTER 4: METHODS

A mixed-methods design was used for this study including qualitative and descriptive data to answer Questions #1 & 2 and for quantitative data in response to Question #3.

Question #1: What are the experiences of ARS staff with service delivery and clients with the services they receive, focusing on the main interventions of attention to basic needs, promotion of attachment in the parent-child relationship, social support, and connection to institutional resources?

Question #2: How does the availability of institutional resources in neighborhoods influence ARS implementation?

Question #3: Is ARS successful in preventing future child welfare system involvement?

Study site & population

As described in chapter 2, the Another Road to Safety program is implemented in three diverse, low-income neighborhoods in Alameda County, California. The program is operated by a different agency in each neighborhood: La Familia Counseling Services in South Hayward; Family Support Services of the Bay Area in East Oakland; and Prescott Joseph Center for Community Enhancement in West Oakland. Two agencies are involved with program administration, training, and data management: Social Services Agency of Alameda County and First 5 of Alameda County.

The study population for question #1, on the experiences of staff and clients with interventions provided by the ARS program, includes all current administrators, line staff, and clients. Administrators were invited to participate either by phone or during a

monthly oversight meeting that involves administrators from the Social Services Agency and First 5. Staff from the three community-based organizations were informed of the study by their supervisors and invited to participate in two voluntary focus group sessions. Staff invited clients to participate in the study during a routine home visit. Current administrators, staff, and clients were selected for participation, rather than staff involved in the past or clients who have completed services, to prevent memory bias.

Question #2, on the influence of institutional resources on program implementation, is addressed through Geographic Information Systems (GIS) data collection and analysis. This portion of the study involves using GIS to compare service need (operationalized as child maltreatment reporting rates) with service availability (operationalized as the location of services relevant to families). The population involved in the GIS portion is all reports of child maltreatment in Alameda County, aggregated by geographic location to the census tract or zip code. Data were available for three years by zip code (2003-2005) and for two years by census tract (2004-2005) from the California Child Welfare Archive. Housed at UC Berkeley's Center for Social Services Research, the Child Welfare Archive is the repository of data on child welfare services and clients for the state of California.

To answer question #3, on the child welfare-related outcomes of ARS clients, data were collected on clients who were referred to and accepted services from the most established ARS program site (La Familia in South Hayward) from May 1, 2002 to November 15, 2007. The beginning of this timeframe corresponds to the program's initiation. The end of this timeframe allows for the passage of nine months of ARS services, plus a three month window of time to assess subsequent child welfare

involvement, for the clients with the latest enrollment dates. Analysis was restricted to ARS-South Hayward because the researcher and ARS administrators concurred that the program model was most established and mature, with the least staff turnover. Outcomes for a comparison group of clients who were eligible for treatment, but not referred due to program capacity, are contrasted to those of ARS clients. Data were drawn from the Child Welfare Services Case Management System by Alameda County Social Services Agency staff.

Sampling

Sampling for the qualitative study (question #1) included all current administrators, staff, and clients involved with the ARS program (see Figure 4). The entire population of staff was included in data collection. Interviews were conducted with administrators at the three community-based organizations and the two oversight agencies (n=16). Two focus groups were conducted with line staff at each of the three agencies, with six focus groups in total, involving 12 staff members.

A non-probability accidental sample (Hoyle, Harris & Judd, 2002) was assembled for client interviews. All English and Spanish-speaking clients enrolled from April 1, 2007 until April 1, 2008 were invited to participate by their home visitor. During a regularly scheduled home visit, staff described the research study to clients, using a script developed by the researcher for guidance. Staff distributed a brochure to clients, which clearly outlined the purpose of the study and the participants' rights, as well as two copies of a consent letter and a stamped, self-addressed envelope to return a signed copy of the letter to the researcher. Clients elected whether or not to participate in interviews. A total of 50 clients participated in telephone interviews.

Sampling for the GIS portion of the study (question #2) involved all cases reported for child maltreatment in Alameda County over the 2003-2005 timeframe. The entire population that fell within this parameter was included. Data were aggregated by census tract and zip code for addresses reported.

The sample for the outcomes portion of the study (question #3) is composed of 161 clients who were referred to and retained for services with ARS-South Hayward from May 1, 2002 to November 15, 2007 (see Figure 5) "Retained for services" means that families at least initially agreed to participation in services, though they may not have completed services. Only one sibling (from a sibling group) was kept in the treatment group to preserve the statistical assumption of independence, making this a family-level, not child-level, analysis. The entire population that met these criteria was kept for the treatment group. The comparison group is composed of 477 cases initially reported to the Alameda County Child Abuse hotline and evaluated-out of investigation between May 1, 2002 and November 15, 2007. These cases met eligibility criteria for the ARS program (child ages 0-5 and residence in South Hayward) but were not referred due to program capacity. Like the treatment group, only one sibling was kept in the analysis. This comparison group represents the population of cases that meet the ARS eligibility criteria but were not referred to the program, with the exclusion of siblings.

Study design

Research Question #1 was addressed using qualitative research methods. The experiences of administrators with program design and implementation were assessed through in-person interviews. Interviews were guided with a standardized script of mostly open-ended questions. Front-line staff were asked about their experiences of

serving families and the influence of the neighborhood context during two 1.5 hour focus groups. A script was also used, with open-ended questions. Telephone interviews were conducted with clients to explore their experiences with ARS services and neighborhood organizations, as well as their experiences of raising children in their neighborhoods. Interviews lasted approximately 30 minutes, and were guided by a script with a mix of open and closed questions.

In Differential Response, the community context plays a significant role with regards to the availability of institutional resources to which families may be connected. Preliminary interviews with staff indicated that the three neighborhoods where the program is implemented (South Hayward, East Oakland, and West Oakland) differ significantly by demographics and social services availability. To supplement qualitative findings on institutional resources, question #2 involves looking at neighborhood social services arrays using Geographic Information Systems (GIS) software for data management and analysis. Based on comments from line staff and clients about the most commonly needed services, and the Levanthal & Brooks-Gunn (2000) framework of institutional resources types, address data were collected on services relevant to children and families (see Table #3). Data on neighborhood resources were geocoded to identify the geographic coordinates for each service location, using ArcGIS 9.0 software. A layer was built for 'service availability' using these geographic coordinates and aggregating to the zip code and census tract levels. Service availability was categorized by quantiles as 'low,' 'medium,' and 'high,' with equal numbers of zip codes/census tracts in each category. These categories were automatically calculated by ArcGIS 9.0 to ensure that each contained one-third of the total services. A layer was also built for 'service need'

based on average rates of child maltreatment reports, by zip code and census tract, over several years. Service need was also categorized by quantiles as 'low,' 'medium,' and 'high,' with equal numbers of zip codes/census tracts in each category. 'Availability' of services was compared to 'need' for services by examining spatial patterns and running correlations. Descriptive patterns of service availability and service need were analyzed for the county, particularly with reference to ARS target zip codes.

Research to address Question #3 on client outcomes utilized a quasi-experimental static-group comparison design (Hoyle et al., 2002). An experimental design was not possible, because this researcher could not control assignment of clients to the treatment. Comparison groups of referrals similar to ARS clients were instead selected. All clients who were referred to the ARS-South Hayward program and agreed to participation (as indicated by a signed consent form) constitute the treatment group; four comparison groups were chosen from the California Child Welfare Services Case Management System (CMS/CWS) and matched on month of child maltreatment report and one or both program referral criteria: child aged 0-5 or pregnant mother in home and residence in ARS target zip codes. While there are inherent limitations to a study in which treatment group assignment cannot be controlled, this design maximizes the comparability of groups by matching on referral month and program criteria. Comparison group #1, consisting of families who met both program criteria but refused the intervention or were unable to be contacted, controls for child age and zip code of residence, as does comparison group #4, which consists of families eligible but not referred for ARS services. Comparison group #2, made-up of families with children ages 0-5 who reside in a non-ARS zip code, controls for age of the child. Composed of families who reside in

the ARS-South Hayward target zip codes with children ages 6-18, comparison group #3 controls for zip code of residence. By selecting four comparison groups, the statistical power is increased because the "n" size is larger.

Data collection, data management, and analysis

Question #1 was answered through face-to-face interviews with administrators, focus groups with line staff, and telephone interviews with clients. Interviews with administrators and clients were typed verbatim during interview sessions. Focus groups were either audio-taped and later transcribed, or transcribed during the focus group session. All interview and focus group records were entered into *Atlas.ti* for data management and analysis. Data analysis for staff interviews and focus groups and client interviews involved coding for emergent themes. Records were reviewed using inductive and deductive processes to identify major themes. Coding was conducted by the doctoral researcher and by a graduate student researcher, to increase reliability and validity. Regular debriefings were held to detect and prevent bias and negative case analysis, and to ensure the development of an audit trail (Padgett, 1998).

Question #2 builds on the examination of institutional resources through an analysis of spatial patterns of neighborhood resources and their relationship with child maltreatment report rates. Data on social services locations in Alameda County were procured from a number of sources. The data collected were the name of the agency, the service type, and the address (some sources also included additional information not utilized in the analysis). The most comprehensive source of data was Eden Information & Referral, a nonprofit agency that collects data on social services and makes this information available to the general public. Child care data were accessed through the

three Alameda County child care resource and referral agencies. Data on health and mental health agencies contracted by the county were provided by Alameda County Behavioral Health and the Health Care Services Agencies of Alameda County. The final source of data was the internet, for data on resources such as churches and Alcoholics Anonymous and Narcotics Anonymous meeting sites that were not otherwise available. Zip-code level and census tract child abuse and neglect referral rates were provided by the California Children's Services Archive, a child welfare data repository housed at U.C. Berkeley.

Once the geographic data were acquired, they were cleaned and prepared for analysis. ArcMap 9.0 was used for geocoding, to convert street addresses into geographic coordinates, using the ESRI Streetmaps USA as the reference file. For unmatched addresses, Google Maps was used to check the address in order to determine if part of the data, such as the zip code, was incorrect and preventing a coordinate match. An overall match rate of 99% was achieved, using these methods. Once ready, the geocoded service locations data were joined to a zip code and a census tract file for Alameda County, using the option "falls completely within polygon." After joining the data, frequencies were run of the social services data for each zip code and census tract. With the realization that administrative boundaries such as zip codes and census tracts are artificial barriers, a 1 mile buffer was constructed around each zip and tract polygons and all services within the buffer area were calculated. Using the frequencies with the buffer and the area of each census tract or zip code and its buffer, a new variable of service density was calculated.

Maps were constructed for the county. Maps were developed by census tract and zip code for service availability, categorizing the service density variable as low, medium, or high. The same was done for maps depicting service need, categorizing the variable of average annual child maltreatment reports as low, medium, or high. These maps were visually analyzed for trends related to service availability and service need. Data were extracted from the GIS file format and entered into SPSS. Correlations were run for the relationship between service availability and service need, again by zip code and census tract.

In response to Question #3, data were drawn from administrative records in CMS/CWS in the Alameda County Social Services Agency. The referral identifier numbers for all families who agree to receive ARS services from ARS-South Hayward were checked for records of contacts with the child welfare system (in the form of a re-report) post-completion of ARS. The same was done for comparison group families who were referred to the program in the same timeframe.

Survival analysis was used to compare the re-report rates and substantiation rates for clients who agreed to services with ARS-South Hayward and completed services in different time frames. For longitudinal event data, survival analysis is superior to ordinary multiple regression in its capacity to account for censored data (for those cases in which the event of interest did not occur in the observed timeframe) and time varying explanatory variables (Allison, 1984). Failure events were counted beginning nine months after referral to ARS (for the treatment group) or nine months after initial evaluate-out report (for the comparison group). Measuring the outcome post-service rather than post-referral minimizes the "surveillance bias" (Socolar, Runyan, & Amaya-

Jackson, 1995), since ARS home visitors are in their clients' homes weekly and must report any incidents of child maltreatment as mandated reporters. The lasting effects of service completion are also evaluated by the choice of this timeframe.

Measures and instrumentation

The dependent variables for question #1 are the main ARS interventions of attention to basic needs, promotion of attachment in the parent-child relationship, social support, and connection to institutional resources. These variables were operationalized based on the theoretical framework outlined in chapter 3, which was used to develop codes for thematic analysis.

Comments were coded for basic needs when the concept of concrete need for materials such as food, shelter, clothing, etc. was mentioned. Codes for basic needs included:

- Basic needs types
- Referral for basic needs
- Use of basic needs fund

Interventions focused on strengthening the parent-child relationship or creating opportunities for parents to delight in their children were coded as promotion of attachment in the parent-child relationship. These codes were:

- Information on child development
- Modeling of appropriate parenting behaviors
- Activities for parents and children

Social support was considered to be perceptions or acts of social support provided by staff to clients. The following codes were developed for social support:

- Perceived social support
- Supportive characteristics of staff
- Enacted social support: Emotional
- Enacted social support: Instrumental
- Enacted social support: Informational

Connection to institutional resources was operationalized as referral to social services assistance in following-up on service enrollment. Codes as follows were used for connection to institutional resources:

- Institutional resource type: Learning, social, and recreational activities
- Institutional resource type: Child care
- Institutional resource type: Schools
- Institutional resource type: Medical facilities
- Institutional resource type: Employment opportunities
- Availability of institutional resources
- Accessibility of institutional resources
- Quality of institutional resources
- Affordability of institutional resources
- Competition for institutional resources

These variables were measured through focus groups with line-staff and interviews with clients. To guide the focus groups and interviews, scripts were developed that included questions on basic needs, parent-child relationships, social support, and institutional resources. Both tools were developed with reference to the

ARS manual and in consultation with ARS staff, thereby increasing construct validity by drawing on the same information in both cases.

The dependent variable for Question #2 is child maltreatment report (for aggregated populations by zip code and census tract), with service availability as the independent variable. The independent variable is operationalized as those services most frequently used by ARS families, according to focus groups with staff, and those resources hypothesized to improve child and family outcomes, according to institutional resources theory (Levanthal & Brooks-Gunn, 2000).

The dependent variable for Question #3 is involvement with the child welfare system for families who accepted ARS services, compared to similar families. The variable is operationalized as a re-report after 9 months of ARS referral (or initial evaluated out report for the comparison group), investigated re-report, and substantiated re-report. The independent variable is acceptance of ARS services, by both agency and family. Other factors, such as child's ethnicity, gender, and number of prior reports, were examined as potential confounders of treatment effects.

Human subjects

Approval for this study was secured from Berkeley's Committee for the Protection of Human Subjects. Permission for the qualitative portion of the study was provided on July 21, 2006 (CPHS Protocol #2006-5-21). Renewal for the qualitative study and permission for the outcomes study was provided on August 8, 2007 for data collection and analysis through August of 2008 (with the same protocol number). Measures were taken to protect human subjects through the data collection, data management, and analysis phases of the study. For the qualitative study, client

participation in interviews was voluntary. Clients were invited to participate in interviews by their home visitor. Home visitors also distributed literature on the research project, in the form of a brochure describing the study and the participants' rights and a letter of consent. Clients were told verbally and in writing that refusal to participate would not affect service delivery and that their comments would be kept as confidential as legally possible. Prior to interviewing ARS staff, administrators, and collaborators, the researcher verbally informed them as to the voluntary and confidential nature of their comments. Quotes from ARS clients or staff that appear in this dissertation or related publications are not attributed. Consent forms from clients and staff were kept in a locked file cabinet at the Center for Child and Youth Policy. No human subjects issues were raised for the map development, as all sensitive child welfare data were in aggregate and non-identified forms. For the outcomes study, client identifier numbers and records of child welfare histories were kept on an external hard-drive on a non-networked computer and stored in a locked filing cabinet when not in use, as were hard copies of client information.

CHAPTER 5: RESULTS (QUESTION #1)

ARS programmatic interventions focus on four primary domains: basic needs, attachment in the parent-child relationship, social support, and connection to institutional resources. In practice, these categories are not always distinct; specific interventions may blur the line. For example, assistance connecting with a food bank may fall within the category of basic and concrete needs as well as connection with institutional resources. Findings from interviews with managers, focus groups with line staff, and interviews with clients will now be discussed and organized around these four themes.

Basic needs

Attention to basic needs takes precedence over other types of interventions, according to staff. A number of ARS workers suggested that families first request help to address basic needs, and that these must be addressed before moving on to deeper issues. A staff member described this as "a progression from basic to deeper needs." One clinical supervisor referred to the Maslow hierarchy of needs, and explained that many families are at a lower level of the pyramid, with unmet needs for food and shelter. Needs such as these can not be ignored or bypassed; as one clinical supervisor suggests:

To build the relationship and try to meet people's needs, you have to seem real to them and if you're not at every place that they are, struggling with the issues with them, if you can't help them with those issues, then it's hard for them to feel supported to do work and make change.

Identifying families' unmet basic needs and offering immediate assistance is crucial to the engagement process described by all three agencies. Staff ask families what they need, and explain what they can offer. In the case of ARS-East Oakland, this takes the form of an offer to help supply the family with basics like food, as well as services and referrals. At the very first visit, the ARS-East Oakland clinical supervisor

mentioned that they will bring diapers for families with very young children and school supplies for older children. She suggested that this thoughtfulness around family needs promotes connection with the home visitor. West Oakland staff also offer to help with housing, food, and clothes as part of their initial pitch to newly referred clients. ARS-South Hayward staff stated that they offer to help families with whatever it is that they need during the initial visit; the clinical supervisor emphasized that they leave families with the "promise of some tangible help." Helping families to address basic needs in a timely fashion may help facilitate engagement in services and cement the relationship between home visitor and client.

Many of the most typical types of family needs described by staff and administrators may be considered basic needs. When asked to list the most important needs faced by families, staff at all three agencies mentioned housing and employment. Families often live in substandard or overcrowded housing, staff report, and parents are frequently unemployed. Shelter falls under the physiological needs on the Maslow hierarchy, while employment falls under the safety needs by providing financial security and regular routines. Other physiological needs of families mentioned by staff include those for food, clothing, and basic health care. Additional safety needs cited by staff were protection from neighborhood and domestic violence. Needs at higher levels of the hierarchy (for love and belonging, esteem, and self-actualization) were mentioned less frequently, though staff in West Oakland emphasized that families lack in consistent support from the community.

ARS workers have a basic needs fund available to address one-time, acute needs; however, two of the three program sites have chosen to reduce this pot of money in order

to divert funds to other aspects of the program. Staff use the basic needs fund to pay a late electricity bill, provide a box of food, or purchase a bag of diapers. In summer months, staff often use the fund to pay for recreational activities or summer camp. In some cases, workers will even help clients with a rental deposit or a car repair bill. Staff at one agency stated that they will occasionally purchase monthly bus passes for their clients. Addressing acute needs with an infusion of cash may be a critical intervention. Staff at one agency cited the basic needs fund as one of the most important types of assistance provided by the program.

While staff sees assistance with basic needs as an important service to families, they also ensure that clients will be able to address their own needs in the future. For example, if an ARS worker pays for a late bill out of the basic needs fund, they work with the family to find out what is keeping them from paying their own bills. Staff points out that building self-sufficiency is a central goal of the program. One staff member explained:

Because the point of us being there is to help them kind of access resources, but we have to leave. So when we leave we need them to be able to rely on something or be able to go back there and access [resources].

Whenever possible, staff make referrals to community organizations rather than pay for goods and services directly. For example, rather than purchasing furniture staff may first try to solicit a donation from an organization that provides free furniture. After helping a family pay a high electricity bill, staff state that they will then assist with enrollment in programs providing discounts to low-income families. Above all, staff help families learn how to use resources in their communities so that they may return to these

organizations in times of future need. The process of referring families to services is further elaborated in the institutional resources section.

Clients frequently reported receiving assistance with meeting basic needs. These included assistance with food (e.g., food boxes or bags of groceries, food stamps, and special food for holidays such as Thanksgiving); clothing (e.g., for school); necessities for children (e.g., diapers, toys, and books); basic medical treatment (e.g., assistance in acquiring health insurance through MediCal and referrals to clinics); housing (e.g., providing housing listings and helping with applications for Section 8); employment (e.g., assistance with development resumes and print-outs of job listings); and income support (e.g., applications for CalWorks). A few clients mentioned that their worker will ask if the family needs basic things like food and diapers during home visits, and will respond quickly when such requests are made.

Several clients expressed their appreciation for assistance with basic needs, particularly with food and diapers. This kind of help, according to one mother, "took the pressure off and allowed her to make necessary changes in her life. One client reported that the offer to assist with basic needs encouraged her to accept the program:

I have had many problems. I sometimes didn't even have food or clothes for my children. I was really depressed. I felt like I wasn't worth anything. But when [ARS worker] came to my house, she told me that they can help.

Some families received assistance with moving into a new home, which frequently had a major effect on their lives. One client noted that with assistance from ARS, she was able to move from a cramped and overcrowded apartment in a dangerous area to a suburban home with more space and better access to good schools and parks. Another client mentioned receiving financial assistance from the basic needs fund to pay rent when the

father in the family was not working. When asked how ARS could be improved, one client emphasized a focus on basic needs: "Just to make sure that they [the families] have resources like bus passes, diapers, food... Stuff that we really need."

Critical assessment of ARS basic needs interventions

The ARS intervention reflects the tenets of Maslow's hierarchy of needs theory by its attention to addressing unmet basic needs, particularly physiological and safety needs, during the initial engagement process and throughout the nine month intervention. Fulfillment of basic needs is acknowledged by staff to be a necessary pre-requisite to working on parenting abilities, related to the higher need for love and belonging. Clients expressed appreciation of this type of intervention and many acknowledged that assistance from ARS in meeting family crises such as lack of food, substandard housing, and unemployment helped them better care for their children.

This study design did not test families for their presenting needs vis-a-vis the Maslow Hierarchy of Needs. As described in chapter three, empirical testing of needs classification has typically done a poor job of capturing the categories included in the Maslow schema, either because the theory or testing methods or both are lacking. The most that can be said, based on the client interviews, is that some clients reported feeling calmer (i.e., less anxious) and more confident in their parenting once their basic needs were met and family crises at least partially resolved. When asked what had changed in herself or her family after the ARS intervention, one client stated: "I'm more calm with my children, [better] able to deal with them." This mother had previously explained that her home visitor had been responsive in helping the family meet all the needs they had discussed, including for food and new housing. Another client, when asked about

changes in her life due to the ARS intervention, stated that there had indeed been changes: "Yes, in my life... because before I was always stressed because I couldn't buy this or that for my children...But now with the support, I feel more calm. Like when I don't have any diapers, Rosalinda does what she can to help me get them. I feel more calm and more reassured." Similar comments were made by other clients. These statements appear consonant with Maslow's presumption that a person will feel anxious about an unmet need until it is filled. Statements by clients also suggest that ARS helped them to meet lower physiological and safety needs and therefore allowed them to begin attending more to parenting and the related need for love and belonging.

The ARS approach generally emphasizes the two lowest levels of the Maslow's hierarchy, with some degree of attention to the third level of need for love and belonging, primarily through the work on the parent-child attachment relationship. Maslow's theory acknowledges that lower needs can regain primacy if they go unfulfilled after a period of being satiated. For this reason, the ARS focus on offering families information and skills to independently access services may allow families to maintain the gains they make during the program. While assistance from the basic needs fund is limited to the intervention period, the ability to access resources can help families sustainably meet their needs long after they have completed the program. This could conceivably allow families to continue to focus on their parenting and other higher needs, if lower basic needs continue to be met. Efforts by ARS staff to help families with parenting issues will be addressed next.

Attachment in parent-child relationships

Interventions related to the parent-child relationship were acknowledged by staff at all three agencies to be a sensitive issue. The degree to which staff focus on the parent-child relationship varies by agency. Related interventions include: offering general information on child development, giving specific advice related to families' issues, and providing opportunities for parents and children to spend fun time together.

ARS-East Oakland staff expressed feeling somewhat hesitant about making interventions related to parenting. This is in part due to concern that staff present the program as primarily providing connections to community resources and that parents might be offended by interactions emphasizing the parent-child relationship. Another reason is their own limited training as paraprofessionals. One staff member argued that the ARS staff were not qualified to intervene in attachment and bonding, as a specialist in child development would be. In her opinion, while the parent-child relationship is a major focus for First 5 Alameda County, ARS-East Oakland staff see the program's purpose as dealing with more basic family problems and are doubtful that their clients would be interested in working on the child's development and the parent-child relationship if the child is developing normally.

Staff at ARS-South Hayward appear to be more willing to intervene in the parent-child relationship when they feel that parents are open to such advice. They first spend time observing interactions between parents and children, attuned to signs that might indicate a problem; from First 5 trainings they have learned the signs of healthy relationships as well as red flags. Family science classes organized by ARS-South Hayward and the Lawrence Hall of Science (further described later in this section)

provide an opportunity to see whether parents are actively involved with their children or more removed. If ARS-South Hayward staff sense that parents are receptive and interested in help, they will provide parenting advice themselves or arrange for an in-home consultation with a First 5 child development expert. Staff acknowledged that some parents have issues with trust, making intervention more difficult. The process of offering parenting advice can be facilitated by completing child development assessment, such as the Ages and Stages Questionnaire. Having an assessment to refer to, rather than relying on observation alone, "makes the points more valid," suggested one staff member.

Unlike the ARS programs in East Oakland and South Hayward, which were initially focused on serving target children ages birth to 5 years old, the West Oakland program was originally conceived and implemented to serve target children up to age 18. This has implications for the way that ARS-West Oakland approaches the issue of the parent-child relationship. Unless parents initiate a discussion, ARS-West Oakland workers will wait until trust is established and basic needs addressed before delving into parent-child relationship issues. Once the timing is right, staff described taking a customized approach depending on the child's age. Work with families who have children under the age of five typically involves developmental assessments and education on how to promote their child's healthy development. For families with school-age children, the focus is often on the schools and ensuring that parents understand their rights. With teenagers, staff help to negotiate the parent-child relationship and diffuse tensions. Staff comment that some of their work promotes bonding, by providing families with tickets to activities and events so that they can enjoy

time together, but more frequently their work is directed toward helping families manage crises and trials that face them.

ARS-South Hayward clients seemed to comment on receiving interventions related to parenting most frequently, but a number of clients served by the other agencies also described parenting assistance provided by their workers. Parenting-related assistance described by clients primarily took the form of provision of child development information, discussions of parenting challenges, and suggestions for different parenting techniques. Clients reported receiving information on topics including children's developmental milestones, nutrition, baby-proofing, and activities to do with small children. A couple of clients referred to the developmental assessments conducted by their ARS worker, and referrals to developmental specialists at local public and private agencies.

According to comments by clients, suggestions and discussions related to parenting appear to have primarily dealt with disciplinary issues and difficult child behaviors. Several clients mentioned receiving assistance in learning other methods of discipline aside from spanking. This assistance took the form of watching a video on discipline for one client and then talking with her worker to learn how to put the principles in practice. Other clients described discussing their discipline challenges with their worker. One client explained that her worker had provided guidance and support around discipline because she and her children "were having a hard time communicating.. [and] were really in a bad situation." Clients also described receiving help managing their children's difficult behaviors. A grandmother caring for her teenage grandson cited the challenges she faced in raising such an "active" child, and stated that

support from ARS will allow her to rest. This same grandmother also cares for her granddaughter with Downs Syndrome and the ARS worker has helped her learn better how to relate to and redirect the child: "I am finding a way [to discipline and redirect] that suits her." A client who was having difficulty communicating with her children and managing their behaviors said that she received guidance from her worker: "Now I know how to calm my daughter down if she tantrums." The mother of a toddler said that her worker spoke with her about strategies for weaning him off his bottle.

Sometimes parenting interventions emphasized the good things that parents are doing. One client, a new mother, stated that her worker provided her with assurance that her child was developmentally on track. Others also expressed appreciation for the reassurances on their parenting provided by the ARS worker. This type of family intervention is further discussed in the social support section.

Regular opportunities for families to enjoy their time together, supported and encouraged by ARS staff, are a special service provided by the ARS-South Hayward program. This program has teamed up with Lawrence Hall of Science, a local science-focused children's center. ARS parents and their children are regularly transported to a location in the community to participate in organized science, art, and other group activities. These outings allow parents an opportunity to engage with their children in a meaningful and often playful manner. Children and their parents work on projects together and this experience is celebrated and honored by staff. The Hayward clinical supervisor describes these activities as "a formula that is magic in some ways." The experience of being together, and having their interactions and relationships honored, makes families feel more competent and open to help, according to her description. A

number of clients also described their experiences at Lawrence Hall of Science as a special time for themselves and their children. One mother said:

I really enjoyed the science classes.. It was a nice experience and it taught me that the kids come first—they bug you and bug you, but they just want 5 minutes of your time.. it was cool, I never had that when I was a kid. I'm always busy every day, then I have to go to work and clean, and only on the weekends is when I have time to do things with them.. that day was cool, because I got to be with them.

Critical assessment of ARS parent-child relationship interventions

While the ARS program clearly recognizes the importance of the parent-child bond, promotion of attachment may occur indirectly rather than directly. Direct interventions related to parenting tend to focus on practical approaches to address disciplinary or behavioral problems, rather than encouraging parental sensitivity that might lead to better attachment. ARS staff described helping families deal with specific issues related to their parenting, but did not emphasize training parents to pick up on cues from small children or encouraging them to engage in developmentally appropriate play activities. Only one client, a new mother, mentioned that her worker discussed attachment and playing with her baby. This lack of direct attention to parent-child attachment may be due to concern over lack of qualifications, as suggested by ARS-East Oakland workers, or family crises that trump a focus on parent-child bonding, as suggested by ARS-West Oakland. ARS-South Hayward appears to have the strongest focus on the parent-child relationship, but it is unclear whether staff frequently make interventions related to attachment when the opportunity arises or generally limit their parenting-related interventions to addressing presenting problems in the parent-child relationship, like challenges dealing with child behavior.

ARS provides services that may indirectly strengthen parent-child attachment. By helping families meet their basic needs and connect to community resources, the ARS program may help families decrease stress and provide parents with more time and emotional resources for their children. Tickets to activities or structured activities like the Lawrence Hall of Science program may provide families with time and space to enjoy each others' company. In these ways, the ARS program may improve the emotional relationships between children and parents. Attachment theory suggests that social support may also reduce parental stress and give parents the resources to better connect with their children. This intervention type will be discussed next.

Social support

Following distinctions made in the social support literature, ARS interventions involving social support will be separately categorized and discussed as related to perceived and enacted social support.

Perceived social support

Staff described the relationship they form with clients as one of the most important aspects of the ARS intervention. They explain that many clients have no one else to provide them with support. According to staff, the ARS program can give families the feeling of being supported, albeit temporarily. A clinical supervisor emphasized this point:

So many people we see feel isolated, whether because of culture, language, or feeling depressed. While they are in the program, there is the joining of home visitor and family, and the experience of being understood and accepted. Families are.. left with a feeling of being supported. It is a quick period of time, but that is what I think is most valuable.

Clients also talked about feeling supported—as though they had a friend, someone with whom to talk. They consistently described their relationships with ARS workers as positive. While clients acknowledged that staff are acting in a professional role, they often described feeling that their worker is more like a friend or family member. A statement by a mother was illustrative of this common sentiment: "I feel like I have a new friend. I can tell her anything. She can help me." A couple of clients described their relationship with the home visitor as therapeutic, with the worker somewhat like a counselor. More than one parent described her worker as an "angel."

Emerging from clients' comments was a sense that the relationship with the worker was one of trust and availability. Several clients commented that their worker would call them back right away, and would never leave them hanging. A number of clients remarked that they had trust that the worker would respond to requests for help. This statement by a client was typical of the sentiments of many:

It helps me to go on with my day easier by just talking to her, and knowing that there's someone who is willing to help. I know that someone is just there...to give you help whenever you need.

A helpful and supportive attitude seemed most important to clients. One client stated: "It's not the money or what they give that's important, it's the way they talk to you." Clients described a number of personal traits possessed by their worker that aided in relationship development. These included kindness, a non-judgmental attitude, interest in children, organization, patience, and dependability. Another quality was the willingness to go "above and beyond" the call of the job, which might mean anticipating a parents' need for diapers or providing a level of emotional support that seemed greater than that of a worker for a client.

Clients described the feelings which have resulted from their relationship with their ARS worker. A common theme was a general feeling of reassurance and calm. One mother described how the opportunity to sit and talk each week relieved her of burden. Another said that her worker had brought joy into her life. Clients described only positive repercussions of their involvement with ARS, and particularly of the relationship with their worker. Having the opportunity to discuss problems with a supportive person was described by many clients as a calming experience. For example, when asked how her life had changed as a result of participation in ARS, one mother stated: "Simply talking helped." Awareness that the ARS worker is available for support is sustaining, according to some clients, such as one who commented that knowing her worker is a just a call away is a source of "empowerment and strength."

The themes discussed by staff and clients related to the perception of support appear congruent with the theoretical literature. Clients tended to emphasize supportive qualities and characteristics rather than specific acts of support. Workers described making themselves available as key to the ARS intervention, instead of the provision of particular types of support. Some clients appear to have been open and ready for help when offered ARS services, a necessary antecedent for accessing social support, according to theory. For example, one client remarked: "They are here to work for kids, for orientation and support. I needed that very much." Some clients remarked on similarities between themselves and their worker that made them feel more bonded. These similarities may have helped clients see their workers more as a friend than as a professional helper. In this way, the paraprofessional status of the worker could have been a factor that promoted engagement. One mother, for example, commented that it was easier to relate to her

worker because they were of a similar age, while another commented on the shared country of origin as a factor which brought them together. It is possible that the presence of ARS staff in families' lives acts as a buffer against stress during the period of the intervention. Statements from clients hint at this effect. A number of clients said that awareness of the ARS worker's availability was reassuring and calming.

Enacted social support

Most often, clients stated that they accepted services initially due to the offer of enacted social support—usually informational or instrumental. Often this took the form of referrals to services such as child care or provision of material goods to meet basic needs. Some clients also acknowledged that they accepted services for the promise of enacted emotional support, as with one mother who said that she agreed to participate in ARS because she wanted someone with whom to talk.

The type of enacted support provided to families appears in line with what they need and request. For example, a first-time mom describes how her ARS worker brought her information on child development and parent-child bonding and attachment, as well as information on free activities in the community. A panoply of referrals and interventions were described, and all the families interviewed said that their workers had at least attempted to meet all their described needs. From the description of staff and clients, a picture of distinct types of enacted emotional, informational, and instrumental support emerged.

Emotional

Beyond simply being supportive and available to clients, ARS workers appear to engage in specific types of emotional support. These tended to follow the descriptions in

the social support literature. One type of support is giving parents the time and space to "vent" about the stresses and problems of parenting. This can be part of the engagement process, as ARS staff describe allowing parents to talk about their feelings related to the CPS referral without judgment. It can also extend beyond the initial phases of the relationship, with clients describing their appreciation of the opportunity to share their feelings with someone who is kind and caring. One client explains: "With her, I can vent and get my feelings out and she supports me."

Another type of emotional support is the provision of reassurance and compliments to parents. This type of support is also sometimes known as "appraisal support." One ARS staff member remarked that clients often lack this type of positive feedback from their own extended families. Pointing out and praising positive behaviors are one way that ARS builds clients' strengths into their interventions. One worker described how she will comment on strengths when her clients seem most confused and lost, while another said that he will give a small compliment at every visit. It is particularly important, according to staff, to remind clients of the progress that they have made.

Normalizing the experience of asking for help is another type of emotional support described by staff. One staff member explained that families might not be able to care for their children because they do not have adequate resources. In this regard, ARS workers can inform them of resources and reassure them that it is acceptable to seek out help. As one staff member tells her clients: "This is the help. You just didn't know about it and it's okay." One staff member commented that their image as a source of help and support distinguish them from common views of CPS, which people tend to think of

as simply removing children. Help may be more acceptable from ARS because staff make it clear that their purpose is to support, not to investigate, families. A number of clients said that receiving help from their ARS home visitor made them feel good because the worker was kind and non-judgmental; this comment from a client was illustrative: "I was impressed because she offered me help instead of asking me what went wrong and telling me things I should have done."

Informational

From the descriptions of staff and clients, several types of informational support can be identified as part of ARS interventions. One such type of informational support is the provision of factual information, such as on community services or on topics of interest to families such as child development. This indeed was one of the primary roles that ARS workers described for themselves. They might gather listings of housing rentals, track down information on a particular service, or find handouts on a topic such as discipline, depending on the needs of their client. Clients often commented on their worker's knowledge of resources and of child development, particularly in contrast to their own lack of knowledge. One mother commented that what was most helpful about the program was that her worker knew about community programs for young children and she, as a new mother and a newcomer to the neighborhood, benefited from that information. Several ARS staff expressed the view that knowledge of community services is particularly important for newcomers and immigrants. By providing information, staff attempt to connect clients to their communities.

ARS workers also help their clients make sense of information. In this way, they act as "another set of ears for them, when they have meetings where they might not fully

understand everything... [they] help them interpret, break it down for them," as one line worker put it. This kind of assistance may be provided to families during appointments or meetings, when the worker can help families understand what is going on and ask questions on their behalf. It may also be provided when families are struggling to complete paperwork, and the ARS worker can help explain the forms. One ARS worker explains that the staff have experience and knowledge of navigating systems that they impart to clients. Workers may also educate their clients by correcting misinformation, as with one example a worker gave of a mother who believed that she might jeopardize her efforts at establishing legal residency by accessing services for her child.

Clients described a number of examples of information requested and received from their workers. These included requests for referrals, such as child care; facts, such as developmental milestones; and advice, such as how to discipline children without yelling. A number of clients also mentioned that their worker provided valuable information on processes such as how to request an Individualized Education Plan for a child, or how to format a resume. Having the right information made a difference to families. As one client put it, her ARS worker "[fed] me the right info to make me strong and confident and aware of my abilities to support my family."

Instrumental

Offers of instrumental support were frequently described by both staff and clients as an initial hook for engagement in services. An ARS clinical supervisor explained that gift cards and other material goods can encourage clients to accept the program and bond with their home visitor. The line between informational and instrumental support is somewhat blurred, because clients are often provided with information on referrals to

meet their needs and expected to follow-up with support from ARS workers. Attention to basic needs could also be categorized as instrumental support, as could connection to institutional resources; see these sections for further discussion.

One type of instrumental support described by staff is encouraging parents to follow-up on referrals and helping them with the process. One way that staff do this is to break things down for clients and help them see the small steps they can take to meet their goals. A client describes one such interaction:

When I tell her everything that's going on, she'll say 'ok, what do you need to do first?' and if I say 'I don't know,' she says, 'c'mon Sarah (said with encouraging tone).' And then she'll help me if I need it."

Critical assessment of ARS social support interventions

The types of enacted support provided by ARS workers resemble those described in the social support literature. From the comments of staff, ARS appears to fall within a stress-buffering orientation. That is, specific acts of emotional, informational and instrumental support are expected to reduce feelings of stress and lead to the development of coping behaviors. While enacted support can provide particular instances of assistance when needed by families, in themselves they are not likely to make clients feel supported. This sense of perceived support appears to be created by the manner of ARS workers—their qualities such as warmth and kindness and their actions such as returning calls promptly and showing concern for families.

A question that arises from the remarks of staff and clients is how the feeling of social support will be sustained after the intervention. Social support from home visitors is intended to help families change attitudes and behaviors, not as an end in itself (Ekenrode & Hamilton, 2000). With ARS, however, sustainable sources of social support appear

* Client's name changed

lacking. The staff themselves are the primary means of support, and therefore the source of support is withdrawn at the termination of the intervention. Some clients commented with regret about the anticipated end of the relationship with their worker after nine months. However, some also acknowledged that termination was necessary, so that other families might benefit from the program. The dependence on the staff for social support is somewhat worrying, particularly for those who describe otherwise being isolated, such as one client who commented: "I used to be depressed and so alone. Now I can call [ARS worker]. Now I don't worry as much." Who, then, will provide support such mothers after the nine month ARS intervention?

Research has identified preference for informal social support, but ARS does not focus on making informal connections. A number of ARS staff remarked that they encourage families to use support if they have it, but acknowledge that their clients' extended family is often struggling. Because informal support is less available, that leads staff to rely on established organizations. The one example that workers gave of utilizing informal support was as a mental health intervention. For a grandmother experiencing depression, her worker recommended that she regularly attend her church to seek support from her fellow parishioners. Lawrence Hall of Science activities, conducted by ARS-South Hayward, provide one opportunity for families to form relationships with each other. However, ARS workers are not entirely encouraging of such friendships. Relationships between their clients can be problematic, if families compare what they get from the ARS workers. While ARS workers acknowledged that clients may have difficulty establishing and sustaining friendships due to poor boundaries and other poor social skills, they do not describe making specific interventions in this area.

The notion of reciprocity is embedded in the concept of social support. Families may feel the need to reciprocate the help that they received. One mother described how she enjoyed the chance to meet other families and build community at an ARS barbeque. She said that the event made her feel that she might be able to make a positive difference in the lives of others as the ARS worker had with her. Another client also said that her experiences with ARS made her wonder how she might make a difference for others. A third client remarked that her experiences in ARS made her want to help others, particularly other women with similar life circumstances. As an improvement to the program, a different client suggested that ARS make use of mothers like her who have completed services to outreach to other families. Comments such as these suggest that clients might appreciate a way to reciprocate the help they received from ARS by helping other families. One staff member commented that the best way that a program like ARS can help a community is to build self-sufficiency in families and position them so that they are able to teach others. This could indeed be a deliberate focus of the program, to encourage those families who are able and willing to give something back to their communities. In this way, ARS could have a great transformative effect on neighborhoods.

While the provision of support from the ARS worker lasts only nine months, ARS workers put their faith in community resources as an ongoing source of support. Access to services may not provide the warm personal relationship that families get with ARS, but they will at least give parents specific types of services that they need, according to staff. The role of institutional resources in the ARS intervention will now be considered.

Connection to institutional resources

In addition to the sense of being supported, ARS staff described connecting their clients to community resources as the most important aspect of their work. They discussed giving their clients a sense of what resources exist and introducing clients to the process of using those resources. That might mean, for a family in South Hayward, going with an ARS worker to the family resource center and meeting the family advocates there. The purpose of connecting families to institutional resources, according to staff, is to ensure that families have knowledge of where they can turn when in need of help as well as skills in accessing services. As one of the clinical supervisors put it: "There are some families that seem to be able, higher functioning to begin with, if they can get the skills to be able to use the resources and you can plant certain things in there that they can use, then nine months is fine."

According to ARS staff, they invest considerable time in locating and learning about available resources. They describe building their knowledge of resources systematically, often when first hired and learning about available services through colleagues or visits in the community, and also case-by-case, as their store of knowledge grows with each referral they make. One ARS worker referred to the "database in [her] head" that is activated when she talks to clients and they describe their needs. Staff may learn about services through networking with colleagues at other agencies during training sessions or meetings. Another way they learn of services is through internet searches and the Alameda County "Blue Book" service listing.

Participation in social services collaboratives appears to be particularly helpful for identifying resources and connecting families. ARS-South Hayward has long been a

member of the South Hayward Collaborative, a well-established association of nonprofit agencies committed to linking community resources through capacity building and service integration. Staff of this program repeatedly highlighted the benefits of participation. One benefit that was mentioned is having established contacts at other agencies and at schools, which eases the process of referrals and cuts down on the time that staff must spend navigating systems. One worker explained: "Just knowing or having a contact person.. .you can give to your client, and call them... It opens a lot of doors." Another benefit that staff described is the ability to connect families to a resource center which remains as a place where they can return for assistance after the completion of ARS services. Staff commented that they bring families to the local family resource center "So when we're not over there not visiting them anymore they know 'Oh, we go over there.'" Another benefit of the family resource center is the provision of a number of services and material goods, such as Medi-Cal registration, immunizations for children, and free clothing. Accessing services such as these at a 'one-stop shop' is an efficient way of helping clients, rather than shepherding them around to different county offices, according to staff.

Efforts to establish a collaborative have recently begun in West Oakland, with the participation of ARS-West Oakland. While the association is new and not as established as South Hayward's, staff are excited and hopeful about the new opportunities it has provided to learn about local services and network with other providers.

The service context in East Oakland differs markedly. Many public agencies are concentrated on the site of an old shopping mall that closed when it was no longer economically viable in the community. This "service mall" offers a centrally-located

resource for neighborhood residents in need; however, the sheer size of the building and its institutional image convey a different message from the community living room suggested by a neighborhood-based family resource center such as that in South Hayward. In addition to the mall there are a large number of smaller nonprofit and faith-based services and programs, but these are not coordinated in any fashion and they are not necessarily widely visible to community residents. ARS staff does not have designated liaisons at the public agencies, nor do they have regular contact with the smaller service providers in the community. As a result, when ARS staff works with parents, they must determine the availability and accessibility of services, along with the eligibility requirements for parents, slowing their work considerably.

Helping families acquire resources to meet their current needs is only half the task. As staff describe it, their real goal is to implant skills so that families will know how to meet their own needs after the ARS intervention is complete. This requires a fine balance of helping families while not creating dependency. One staff member acknowledged this by stating: "Myself, I don't do everything for them... I let them do it, because we are for 9 months in their lives, and if they don't learn how to do it, then they will go back to how they were when we entered their lives." Several workers emphasized the need to teach families positive habits, and then wean them off assistance.

Institutional resources referral types

According to the comments of staff, the types of resources that families need varies depending on children's developmental phases and the presence of any family issues. A clinical supervisor pointed out that chronic issues, such as mental illness and substance

abuse, occur in a significant number of cases. Staff take a customized approach to providing referrals, based on assessment of families' needs.

According to staff, when families first describe their needs, they tend to stick to those which are concrete. Families may mention the need for a mattress for a child, or assistance in acquiring health insurance. Willingness to engage is often related to the family's expectation of realizing material gain. Rarely will families ask for help with parenting at the beginning, according to ARS workers. This may come in time—as families establish trust, they may become more open with expressing their parenting concerns. As one ARS worker put it: "If we can show them that we come to the table with something to offer, they're more willing to talk about other stuff."

The referrals described by staff and clients tended to fall within the categories described in the institutional resources literature as important for children's development and well-being, with a few notable additions. Housing was a particular concern because of the lack of affordable housing in the Bay Area. Often families reside in sub-standard or overcrowded housing, lacking other choices. ARS workers stated that they frequently intervene with landlords to request maintenance work and address other problems, since a request from a third-party can be more effective than those from the family alone. Legal services were also a frequently-mentioned need, particularly for assistance with custody battles, incidents of domestic violence, or efforts to establish legal residency. Access to food was a concern for a number of families, to which ARS workers respond by providing donations of food from the basic needs fund, referrals to food pantries, and assistance in signing up for Food Stamps. Another frequent request is for assistance with cash support programs, such as Social Security Insurance payments for parents and

children with disabilities or Temporary Assistance for Needy Families. Part of the reason that these are frequently needed referrals may have to do with the ARS focus on the needs of parents as well as children. Institutional resources theory describes services and institutions that are generally important to children's development and well-being, not necessarily those that address the needs of parents.

Aside from the previously mentioned referrals, other types of referrals tended to fall within the main categories described by institutional resources theory: learning, social, and recreational activities; child care; schools; medical facilities; and employment opportunities (Levanthal & Brooks-Gunn, 2000). Learning activities referrals described by ARS staff and clients included tutoring services and after school programs. The ARS-South Hayward Lawrence Hall of Science program was described by several clients as a beneficial learning opportunity for their children. One client mentioned that the program helped to prepare her child for school. According to workers in West Oakland, parents often ask for opportunities to spend fun, recreational time with their children, such as tickets to the zoo or the movies. Organized recreational activities such as mommy-and-me classes are another type of referral mentioned by clients. A new mother commented that she enjoyed attending the mommy-and-me activities, free library story times, and other community activities that her ARS worker told her about. These activities provided her with valuable opportunities to enjoy time with her child, get out of the house, and meet other mothers. ARS workers also provide referrals and sometimes funding for summer recreational programs, to provide care and activities to children while they are out of school. Clients also mentioned referrals to programs like swimming lessons and computer classes.

Child care is an important need that ARS helps families address. Families are often unaware that they may qualify for subsidies, according to staff. One worker remarked that none of her clients whose children were of Head Start age had enrolled them. Workers also mentioned helping families enroll their children in preschool in order to promote school readiness. However, even when families are eligible for government subsidies, it can be a challenge to actually get childcare, according to staff. Staff refer families to one of the three child care resource and referral agencies in the county, but stated that subsidized child care is frequently full, with long waiting lists. A number of clients commented that their worker had helped them complete paperwork for Head Start or regular child care, but that they were still on a waiting list. Three clients mentioned receiving respite care. In at least one case, this respite care came from the ARS parent agency (FSSBA).

Schools are an important locus of activity for ARS. Staff and clients mentioned school-related referrals and activities including: help registering children for school, advocacy with Individualized Education Plans (IEPs), and discussions with teachers regarding children with poor academic performance. One mother stated that her son had been struggling in school, but after the ARS worker helped to arrange an IEP and transfer to a special education school, her son now loves attending school. At one agency, staff mentioned that they try to make at least one visit to the schools and request children's records to see if any problems can be identified. Staff may accompany parents on parent-teacher meetings or other school-related meetings, where they can help parents by interpreting information for them and advocating for their rights. As one worker pointed out: "Oakland school district is difficult to navigate.. Imagine if you don't speak English

or if you're non-native." Another way that ARS addresses school-related issues is by screening for developmental delays. ARS staff conduct developmental assessments for children and help parents access prevention and treatment services through schools if the children are over the age of five, or Regional Center if children are ages 0-4. For the ARS-West Oakland program, which since its inception has served children ages birth to 18, helping teens apply for college and financial aid is an important focus. If college is not the teenager's plan, ARS staff stated that they will help their clients plan for their future by telling them about Job Corp and other employment or training opportunities. ARS-West Oakland staff stated that they frequently help teens mediate their relationships with schools, particularly in cases of conflict or when a teen does not want to attend school.

A number of different types of assistance with health and mental health needs were mentioned by ARS staff and clients. According to staff, health insurance is a significant need among their clients. Families often request assistance with applying for Medi-Cal or other subsidized health insurance programs. An ARS worker told an anecdote of how offering a family help with health care access encouraged them to engage in the program. The family was initially reluctant to accept services, but the father shared that he had been frustrated in his attempt to acquire insurance for their newborn daughter. The ARS worker assured the family that she could help with the forms. Staff at ARS-South Hayward mentioned that they are able to sign their clients up for Medi-Cal at the South Hayward Collaborative's Family Resource Center, which makes their job easier. One client mentioned how much she valued her worker's help in such matters:

The program is very important. They stopped my Medi-Cal services and we needed daily medication. [ARS worker] helped with setting up Medi-Cal again. It was very hard for me and he helped me a lot.

Clients also mentioned instances when the ARS workers helped with getting children immunized or filling a prescription. One client mentioned a referral to an asthma education program, so that she and her child could learn how to manage his health needs.

Therapy was a need often mentioned by staff and clients. Several workers commented that their clients often experience depression, which may be identified by the assessments completed by staff or later in the case. A large number of clients mentioned that they, their partners, and their children are receiving therapy. Quite a few clients reported that therapy is provided in the home. Clients reported that they and their families had benefited from therapy. One mother told of how she and her son had experienced domestic violence and the resultant feelings of nervousness and anxiety, which therapy had helped to alleviate.

Employment is one of the three biggest needs for families, according to ARS staff (along with housing and child care). Helping parents get a job may involve referring them to a career center or job training program, helping to put together a resume, and bringing job listings to home visits. One client expressed her appreciation for her worker's assistance: "She's been a huge help with job search, like use of the computer, things that I don't have access to."

The connection between ARS referrals and subsequent child development is not systematically investigated, either by the ARS program or by this research project. It is therefore unclear if, by making referrals in these areas, children's outcomes are substantially improved. Nevertheless, the focus on addressing the types of institutional

resources identified as most important in the theoretical literature hints at the potential of ARS to positively impact children's emotional, social, and cognitive development. The qualities of institutional resources—their availability, accessibility, affordability, and quality—also affect their influence on children (Levanthal & Brooks-Gunn, 2000).

Discussion will now turn to how ARS referrals reflect these dimensions.

Institutional resources dimensions

Availability

Availability of services varies markedly by neighborhood, according to statements of ARS staff. Staff at ARS-South Hayward commented that services are less available in their city than in Oakland, with its greater concentration of social services agencies and its proximity to Berkeley, another service-rich area. The ARS-South Hayward clinical supervisor remarked that there are clearly gaps in services in South Hayward, and that available services often fill up. Staff commented that the lack of services in South Hayward may make families more receptive to ARS, for the unique resources they can provide, like participation in the Lawrence Hall of Science program. However, ARS-South Hayward staff did acknowledge that those services which exist in South Hayward are well-known to them and well-coordinated through the South Hayward Collaborative.

Likewise, in West Oakland, the consensus among staff was that resources are limited in the area. Clients must often leave the neighborhood and go downtown to get services. The staff stated that their lack of knowledge about resources was due in part to their relatively new status as a program and because of the here-to-fore lack of networking between ARS and other service agencies. Staff hope that this will change because of the

agency's involvement with the West Oakland Collaborative, which appears to offer opportunities to meet representatives of other agencies.

By contrast, staff in East Oakland expressed their opinion that the services that their clients need are generally plentiful in their neighborhood. One staff member related the difficulties of trying to help a client who relocated to Sacramento identify services compared to the task of finding comparable services in East Oakland:

I know here in East Oakland there's a lot of community-based organizations that are available for our clients. And you know, in addition to like the health services and mental health services and even daycare and anything. And I had a really hard time finding some of that stuff in Sacramento and I'm sure in other cities as well, you know.

While services are more available in East Oakland, ARS-East Oakland does not appear well-connected to other agencies. Staff commented on their lack of connections and liaisons with other agencies, which makes it more difficult to know about the availability of resources.

Different types of services appear to be more or less available than others. At all three agencies, staff commented on the difficulty of getting housing assistance for their clients. Staff in Hayward commented on the lack of rental assistance programs. In East Oakland, staff described the difficulties of getting public housing. West Oakland staff described the challenges of helping families look for alternative housing when they can not afford market rents. Employment is another area where staff struggle to help families. While they can provide rental listings, assistance in putting together a resume, or referrals to career counseling centers, staff in West Oakland point out that they do not have any real connections to employers and are not always successful in helping their clients gain employment. Child care can be tough to access. Staff in South Hayward and West Oakland commented that childcare in their areas often have lengthy waitlists. Staff

in South Hayward described having difficulty getting therapy for their clients, which was borne out by the experiences of clients, a couple of whom commented that they remained on waitlists for therapy.

Availability of services also appears related to certain populations and their needs. Services for mono-lingual Spanish speaking clients can be difficult to get, particularly therapy. Workers lamented that resources are difficult in most cases to acquire for undocumented families. The only subsidized service for which these families qualify is Head Start. Aside from emergency medical treatment, undocumented families can not get health care. A limited number of agencies will provide services to undocumented families, but these services generally have long waiting lists, according to staff.

Accessibility

It is not enough to know that services are available—it is important as well that families can access services. One mother shared that she now knows of services, because of her participation in ARS, but does not have transportation to get to services and consequently "feels stuck." ARS staff acknowledge that transportation is an issue, and therefore make an effort to identify and refer clients to local services. Staff in West Oakland commented that they make a particular effort to locate convenient child care, and will occasionally provide families with bus passes. Transportation was acknowledged to be a challenge in South Hayward by both staff and clients. The clinical supervisor in South Hayward stated that bus service is limited. Among clients, those in South Hayward most frequently described transportation as a challenge and a barrier to access services.

Services provided in a one-stop shop setting can be most convenient for families, allowing them to meet several needs in one trip. The Family Resource Center in South Hayward plays this role, according to ARS-South Hayward staff. Clients can apply for subsidized health insurance, get basic medical care like immunizations or medical tests, receive clothing and food donations, and learn about other available resources, all at one place. In East Oakland, a number of services, such as Food Stamps and Temporary Assistance to Needy Families, are co-located together in a former shopping mall converted to office space. This resource is a boon to the community, according to staff: "Eastmont Mall, which I think for that community is very good because it's... easily accessible by bus and also it's kind of a one-stop place that has a lot of services and it has, its name is known."

Affordability

Staff describe the majority of families served by ARS as poor and struggling financially to cover basics such as food and rent. The ability to pay for services is beyond the ability of many, particularly for costly things such as child care. Staff mentioned emphasizing to new clients that ARS services are free, as one selling point for the program. ARS staff also seek out free and subsidized services for their clients whenever possible. Most of the services to which clients are referred appear to be free or low-cost. For example, staff in South Hayward report trying to access free therapy for their clients by helping them enroll in Medi-Cal, and then making use of EPSTD (Early Prevention, Screening, Treatment, and Diagnosis) funds. Housing and child care are two resources that generally require some level of payment, which can be difficult for clients.

One worker remarked that even a sliding scale is too expensive for many of their families when it comes to child care.

Quality & Competition

ARS staff said little of the quality of available services. The single relevant observation was made by an ARS-West Oakland staff, who stated that quality mental health services can be difficult to acquire for families because subsidized therapy is often provided by student interns. Their frequent turnover and lack of experience can result in therapy that is inconsistent and poor quality.

Competition for services was mentioned by staff with regards to demands placed on scarce resources. Lengthy waitlists for some services, such as childcare, therapy, and housing appears to indicate their scarcity and high demand. When scarce resources are made available, such as public housing, word often travels fast. One staff member related a recent conversation with a housing authority staff member. When she asked about how housing lists were advertised, the staff member replied that advertising was unnecessary—getting the information out by word of mouth was sufficient to draw large numbers of applicants.

Critical assessment of ARS institutional resources interventions

Staff acknowledge that the ARS intervention is time-limited, and that resources must be available in the community after the intervention to support families. This is their rationale for teaching clients about the existence of community resources and skills of how to access services. Staff attempt to plant seeds of positive behaviors and new skills that with luck can be "just a brief exposure that may last for the rest of [their lives]." By emphasizing knowledge and skills development for accessing resources, the ARS

institutional resources intervention may have longer-lasting effects on families' lives than their social support interventions. This particularly may be the case since ARS focuses on connecting families to the types of institutional resources that are theorized to be most beneficial to children's development.

Participation on social services collaboratives appears to be highly beneficial to programs like ARS that focus on connecting families with local resources. The South Hayward Collaborative enhances services for ARS-South Hayward in two notable ways. First, the knowledge and networks that staff have built through their participation ease the process of referring their clients for services. Second, the Collaborative sponsors a family resource center that provides a number of services to families on a walk-in basis. After the ARS intervention, families in South Hayward will know where to turn in the future when in need of help. This can make the gains these families experience while in ARS more sustainable for the long-term. The West Oakland collaborative does not yet offer the same level of knowledge and networking, nor does it have a drop-in center for families, though these benefits may be realized over time. Families in East Oakland appear at a disadvantage for the lack of a social service collaborative, though services are generally more plentiful in their area.

Institutional resources theory suggests that services must be high quality, affordable, available, and accessible to positively influence child development and parenting. ARS, and differential response programs in general, do little to affect the service arrays to which they refer clients. Because ARS is "a resource more than a direct agency.. [the] service is to provide resources and linkages," as one staff member put it, the program might better serve clients by attempting to change and improve the array of available

services. The three community-based ARS agencies could do this by nurturing their relationships with other services agencies and helping to foster fledgling social services collaboratives like the one in West Oakland. Social Services of Alameda County, which commands greater power and funding, could play a role in supporting the development of new agencies. SSA has a vested interest in doing so, to enable families to receive services within their community so that they do not become involved with costly mandated child welfare services. By taking a leadership role to improve services across these dimensions, ARS could partner with the communities they serve, rather than simply putting new demands on existing resources.

Based on the comments of staff and administrators, there is reason to believe that availability of institutional resources differs by neighborhood. Because connection to institutional resources is one of the primary, and perhaps most important and long-lasting, of the ARS interventions, variation in availability of resources may influence the effectiveness of the program. The next chapter will examine the question of institutional resources availability in the three ARS target neighborhoods, using Geographic Information Systems software to organize social services data and analyze spatial patterns.

CHAPTER 6: RESULTS (QUESTION #2)

Why examine social service arrays?

The success of alternative/differential response relies upon the availability of neighborhood services to which families will be linked. From qualitative interviews with ARS staff described in the last chapter, it is clear that the unique array of resources in each neighborhood affects program implementation. ARS staff described prioritizing referrals within families' neighborhood of residence because many lack cars and may not follow-up on referrals out of the area.

This portion of the research seeks to understand the connection between resource distribution and ARS program implementation. The research question to be answered is: What is the resource distribution in Alameda County and how might institutional resources in neighborhoods influence ARS implementation? Analysis was conducted at two levels: zip code level, because ARS services are targeted by zip code; and census tract level, because this geographic designation may more closely resemble what people consider to be their neighborhoods. The eight zip codes served by ARS were prioritized in the analysis, as were the census tracts that make up the zip codes (see Figure 6 for a map of Alameda County, with ARS zip codes marked).

Two main concepts were considered by this portion of the research: need for and availability of social services. The concept of need for social services was operationalized as rates of child maltreatment reports. Need was interpreted in this way because ARS services are targeted to neighborhoods (designated by zip code) with the highest rates of child maltreatment reports. Availability was defined as total number of services in an area, taking into account the total area of the given zip code or census tract.

A one mile buffer was created around each zip code and census tract, and services located within this buffer were included in the total number of services available to residents in the given zip code or census tract. The buffer was added out of an understanding that administrative boundaries are invisible and easily traversed. Services within the area nearby a zip code or census tract are also understood to be available to those residents.

The types of services included in the analysis are a combination of those services identified as important for children's development by institutional resources theory (Levanthal & Brooks-Gunn, 2000) and those services acknowledged by ARS staff as most important to the families they serve. Data on need and availability were gathered and used to create "layers" of aggregated spatial data.

Data collection

Need

Data on child maltreatment report rates was acquired from the California Child Welfare Archive at the Center for Social Services Research, UC Berkeley. This archive contains data on all child maltreatment reports made in the state of California at the report-level, including demographic and address information for children reported as possible victims of child maltreatment. The data received were the total number of reports by zip code for 2004 and 2005, and by census tract for 2003 to 2005.

Availability

Data on social services locations were acquired from a number of sources. The data collected were the name of the agency, the service type, and the address (some sources also included additional information not utilized in the analysis). The first and most comprehensive source of data was Eden Information & Referral, a nonprofit agency

that collects data on social services and makes this information available to the general public on a free website and a 'blue book' available for purchase. Data were pulled from their records, for a fee, for certain service categories. Data on child care centers and family child care providers were provided from the three Alameda County child care resource and referral agencies. Alameda County agencies provided data on health and mental health services. The final source of data was the internet, since some of the desired types of data—namely, churches and Alcoholics Anonymous and Narcotics Anonymous meeting sites—were only available on the internet. Data from the internet were downloaded into text files. An AML program was used to clean the data, put it in a standardized format, and output the data into a delimited file which could then be read into ArcGIS 9.0. See Table 3 for a list of data types.

Data management

Need

Child maltreatment rates were averaged over the available time periods, and normalized by child population (as incidence per 1,000 children). The values were then divided equally into low, medium, and high categories. Zip codes targeted by the Another Road to Safety program were highlighted on the maps, using the symbology options, with a thick black border.

Availability

Once the necessary data on service locations and types were secured from the sources described above, they were cleaned by removing duplicates. Data were next geocoded using ESRI's Streetmaps USA as a reference file to acquire the geographic coordinates. Addresses that did not match were checked to see if parts of the data were

incorrect, using Google Maps. In a number of cases, the zip code was incorrect in the data file and substituting the correct one from Google Maps resulted in a match.

Availability was calculated as location within census tract or zip code and a one mile buffer. To calculate these totals, the geocoded service locations data were joined to a zip code file and a census tract file for Alameda County, using the option "falls completely within polygon." Using the Arc function of ArcGIS, coverages were built to determine the areas of each census tract and zip code. A coverage is a data model that stores related geographic features and automatically calculates the area of each polygon (in this case, census tract or zip code) in the building process (ESRI, 2006). An automated program was developed to create a 1 mile buffer around the zip and tract polygons (see Figure 7 for a picture of the zip codes and census tracts with buffers). Number of services within the buffer and polygon for each zip code and census tract was calculated, and normalized by area.

Data analysis & findings

Zip codes: Need for & availability of services

Descriptive statistics were calculated for each zip code as well as its respective buffer. The average number of services per ARS zip code (1415) was substantially higher than the average throughout the county (1027). Extending out to include the buffers, the average number of services available to residents of ARS target zip codes (1681) was again much higher than the county average (1172). ARS zip codes with their buffers differ by a margin of 492 available services, a large number, though smaller than the standard deviation for the county as a whole (551 for zip codes with buffers). See table 4 for numbers.

Spatial patterns were next examined for need and availability of services (see Figure 8). All zip codes in West Oakland and East Oakland were classified among the 1/3 of zip codes with the highest rates of child maltreatment reports. Of the South Hayward zip codes, two were classified as among the highest incidence and one as among the middle incidence for the county. These patterns reflect the original reason for selection of ARS target zip codes, as those neighborhoods with the highest rates of maltreatment reporting and thus need for secondary prevention services. With regards to service availability, West Oakland was categorized as among the 1/3 of zip codes with the highest number of services, which contradicts statements by staff in West Oakland that few services are available in their area. East Oakland has a mix of high and medium availability zip codes, supporting the statements by staff that resources are fairly numerous in their area. Likewise, South Hayward has a mix of medium and low availability zip codes, which is consonant with statements by ARS-South Hayward staff that fewer services are available in their area as compared to Oakland. To get a sense of the relationship between service availability and child maltreatment report rates, correlations were run in SPSS. There were no statistically significant relationships in the case of zip codes (p-value = 0.393).

Census tracts: Need for & availability of services

Viewing need and availability of social services data at the census tract level reveals pockets masked at a more aggregated level (see Figure 9). Census tracts did not perfectly fall within ARS zip codes, and for this reason descriptive statistics related to the ARS census tracts were not run. Looking at census tracts bounded by zip codes did reveal useful information on distribution of child maltreatment rates and social services density.

Zip code areas with high rates of child maltreatment reports are composed of census tracts that have a mix between high, medium, and even low incidence. West Oakland has a high incidence of child maltreatment report rates at the zip code level, but by census tract, about half the area is medium incidence and a small corner is low incidence. Similar patterns are evident for high incidence East Oakland and South Hayward zip codes.

Patterns of social services distribution also appear different at the census tract level. The West Oakland zip code is made up of census tracts that are mostly low availability, with higher availability census tracts concentrated in the areas close to downtown Oakland. This pattern corresponds with ARS-West Oakland staff descriptions. In East Oakland, services are centrally located in or near Eastmont Mall or near the freeways. ARS-East Oakland staff had commented that many public services were clustered in the Eastmont Mall, a one-stop shop for public social services. Mostly characterized by census tracts with low availability, Hayward appears to have fewer services than the northern county and the Berkeley/Oakland area, which also reflects the comments from South Hayward staff that fewer services are available in their community than those of the other ARS program sites.

There was a statistically significant correlation (Pearson's Correlation=0.145) between child maltreatment report rates and availability of services at the census tract level ($p=.009$). There appears to be more social services in areas with higher incidence of child maltreatment reports. While incidence and availability were normalized to account for population and area, this relationship may be related to urban density. There may be more child maltreatment reports as well as social services in urban areas, so the observed

relationship between child maltreatment reports and density of social services may be confounded.

Conclusion

Spatial data patterns reflected the resource distribution described by ARS staff, once data were considered at the census tract level. Since connection to institutional resources is one of the main interventions provided by the program and many families rely on local resources due to lack of transportation, differences in the availability of services within the different ARS neighborhoods may significantly influence experiences and outcomes associated with program participation.

These analyses have a number of limitations. Reports of child maltreatment was used as a proxy for understanding potential need for services because case-level data on client service need and usage could not be obtained. The cross-sectional design does not directly test the influence of resources on child welfare outcomes; this would be best tested with a prospective, longitudinal study. While there was a careful effort to gather all available social services data for Alameda County, it is difficult to know how many services relevant to families were actually captured by the analysis since a complete accounting of services does not exist.

There are few empirical tests of institutional resources theory. Future research on differential response could add to the literature on the quality, availability, affordability, and accessibility of institutional resources by examining these dimensions with regard to client outcomes. For the ARS program specifically, the next step with this research would be to disaggregate client needs by neighborhood in order to identify the principle needs of ARS clients and whether they can be addressed within their communities. For

example, if clients mostly need food or low-cost diapers, are there food banks and grocery stores in the area? This line of research could help identify situations where clients should be referred to other communities, or where county social services might invest to build social services infrastructure.

CHAPTER 7: RESULTS (QUESTION #3)

Background on statistical analysis method and hypotheses

While the ARS program has many proximal goals—increased connections with community resources, provision of temporary social support, elimination of unmet basic needs, and improvement of parent-child relationships—the overarching individual and systems-level goal is to reduce the likelihood that families will enter the child welfare system. Differential response evaluations have typically focused on outcomes associated with child welfare system involvement, with less attention to family changes in other domains, and this portion of the study follows that convention. The research question to be answered is: Is ARS successful in preventing future child welfare system involvement? Future child welfare system involvement is operationalized as re-report, investigated re-report, and substantiated re-report of child maltreatment following the nine-month ARS intervention. Differences in time to these events between the treatment and comparison groups are analyzed using the statistical method of survival analysis.

Survival analysis is a type of analysis used for data that conform to a structure with a defined time origin and end-point. Time origins often represent participant recruitment into a study, the beginning of participation in a treatment program, or diagnosis with a medical condition. The end point is generally considered a "failure" event and in medical research may represent death (hence the term "survival analysis"). Data of this kind are better handled by survival analysis than standard regression methods for several reasons. First of all, survival times of similar individuals are typically positively skewed. This pattern violates the ordinary least squares regression assumption of normal distribution. Second, for a variety of reasons, end point data may be

unavailable. This phenomenon is known as censoring. The most common form, right censoring, exists when an individual has not yet experienced the failure event when the study ends, or the individual is lost to follow-up. Left censoring occurs when the actual time at risk is less than the time observed; the origin occurs before a known failure date, but the exact origin time is unknown. Data may also have interval censoring in cases where measurements are taken at spaced intervals but the failure event takes place in between measurements (Collett, 1994). Longitudinal data analysis methods like survival analysis also do a better job of accounting for time-varying explanatory variables (Allison, 1984). An example of this kind of data would be age or any other covariate that is not fixed and may change over time. In this analysis, data are likely to be right-censored because families may experience the failure events after the period of time monitored (May 2002-December 2007). The covariate included in this model (prior reports) may vary over time, but this variable is only measured once at the end of the study period, so methods to account for time-varying variables are not used.

The hazard ratio is reported with its significance level for each type of failure event (child maltreatment re-report, investigated re-report, and substantiated re-report). This number represents the odds that a family, given treatment, will experience the failure event. It compares the hazard rates of the treatment and comparison groups. The hazard rate is the probability that the failure event, if it has not already occurred, will occur in the next time interval, divided by the length of the time interval. The time interval is made very short to provide a practically instantaneous rate. The Cox Proportional Hazard Model used in this analysis assumes that the hazard ratio is constant over time (Spruance, Reid, Grace & Samore, 2004).

The hypothesized effects of ARS treatment on subsequent child welfare system involvement are somewhat complex due to the potential bias that may arise from increased surveillance of families referred to the program. ARS clients may be more likely to be re-reported than members of the comparison group because they are known to the system and have ongoing contact with the community providers to whom they have been referred by the ARS program. For this reason, treatment may not reduce re-report and may in fact increase it (Chaffin et al, 2001). How treatment might affect investigation is also somewhat of an unknown: since investigation is limited only to cases in which children appear to be in danger or at significant risk, presumably fewer ARS clients would be investigated. Then again, the same surveillance bias may again arise, resulting in greater rates of investigation among families known to the system. The anticipated effects are clearest in the case of substantiation, the finding that a report meets the statutory definition of child maltreatment. The ARS program would be expected to reduce this outcome. However, due to the small sample size and the rarity of its occurrence, this study may have limited statistical power to address the outcome of substantiation.

Data collection

Data were provided by Alameda County Social Services Agency from the Child Welfare Services Case Management System (CWS/CMS) and from the Another Road to Safety ECChange database. Prior to receiving the data, a research assistant (MSW student Anna Geer) spent several days at the SSA office, assisting in data entry and cleaning. This process involved cross-checking the CWS/CMS and ECChange databases to confirm which families were referred to services, using identification numbers when

available or child names when they were not. A certain amount of error may have been introduced at this step, as children with names similar to children referred to ARS may have been misclassified. The first portion of data were provided on December 18, 2007; this initial run included the demographic and child welfare histories for all families whose files indicated that they had been referred to the ARS program, as well as families who met the eligibility criteria of child age, zip code of residence, and evaluated out report, but were not referred due to reasons of program capacity. A second data pull was made from ECChange on January 25, 2008. These data provided more accurate information on which referrals were received and processed by the ARS agencies and which were retained for services. This file also included demographic information, which was used in the analysis as it was more likely to be accurate than the data from the screening reports contained by CWS/CMS. Upon examination, it became apparent that this file contained some inaccuracies in the demographic information (for example, gender clearly did not match the child's presumed gender based on name), so the data were re-run on February 14, 2008, with only those individuals selected as part of the final treatment group.

For several reasons, the decision was made to restrict data analysis to families referred to the ARS-South Hayward program. Of the three ARS sites, this program is the most well-established according to SSA and First 5 administrators. It has also existed for the longest, as the host agency (La Familia) was one of the two agencies to participate in the original request for proposals. Administrators at SSA and First 5 also expressed the view that this site had maintained closest fidelity to the original model. For these reasons, administrators felt that the most valuable lessons could be learned by examining

this site alone. Analyzing data from only one site also minimizes variation of treatment that likely exists across program sites.

Data management

Data were provided in excel sheet format, and managed in this format and in Stata ".dta" format. The following steps were taken. First, the treatment and comparison group samples were constructed out of those files provided. Next, data were formatted in the manner required for Stata to conduct the survival analysis. Finally, the data were fit with nonparametric and parametric models, to analyze the effect of treatment on the outcomes of re-report, investigated re-report, and substantiated re-report nine months after the index date (either date of referral to ARS or date of first evaluate out report within the study period, for the comparison group). Failure events were assessed nine months or later post-referral (the length of the ARS intervention) in order to examine the full effects of treatment and minimize surveillance effects resulting from weekly ARS home visits.

Sample construction for the treatment group relied upon the criteria of being retained for services by ARS and including only one child per family in the analysis, to preserve the independence of the sample. At the initial home visit, the home visitor and clinical supervisor conduct an actuarial assessment and make a decision about offering services to families: families may be referred to community services if they are assessed as low risk; families may be retained for ARS services if they are assessed as moderate to very high risk; or families may be returned to SSA if they refuse services or if the decision is made that the families' safety or risk concerns merit action by child protective services. The original ECChange data file was sorted by disposition, and only those

families who were retained for services with ARS-South Hayward were selected (n=265). A portion of this sample had no CWS/CMS-assigned identifiers, meaning that it was not possible to get the records of their child welfare system involvement. SSA staff was able to locate identifiers for a portion of the cases, but 42 cases had to be dropped because identifiers could not be located, bringing the sample to n=223. Next, duplicates were dropped from the sample (10), bringing the total to n=213. Based on the common report identifier for families, siblings were hand-coded as " 1 " if they would be retained for the sample and "0" if they would be dropped. Siblings were dropped for several reasons. One reason is that child abuse and neglect is a family problem; often multiple children in the family are affected and included in maltreatment reports. Keeping siblings in the sample would have violated the assumption of independence between cases. Another reason is that ARS is a family-level (not child-level) intervention, since services are provided to all family members, not just a target child. By retaining only one sibling, this becomes a family-level analysis. Siblings were coded systematically, row by row: for the first set of siblings, the youngest child was retained and the oldest deleted, with the next set as vice-versa. Fifty-two children coded as siblings were dropped from the analysis, putting the treatment sample at n= 161.

The comparison group was constructed with families who, according to Alameda County Social Services Agency staff, would have been eligible for the ARS intervention but were referred during a period of program capacity. Families met the same referral criteria as ARS clients: screened out of investigation and residence in South Hayward target zip codes. The original file provided by Alameda County SSA included data on 1634 ARS-eligible reports made between May 2002 and February 2007. Of these,

children residing in non-South Hayward zip codes were eliminated (n=687). A cross-check of the comparison group with the treatment sample revealed that 20 children had been referred to the ARS-South Hayward program; these were shifted to the treatment group. Siblings were again coded in the same manner described above; all but one sibling from each family was excluded from the sample (n=208), resulting in a comparison group of n=477.

Data for the treatment and comparison groups were next organized and hand-coded. An initial date was selected: date of referral to ARS for the treatment group and date of initial evaluated-out report for the comparison group. A column was created with the date of referral plus nine months (approximated as 270 days), in order to determine the failure date. The first failure date that fell after the nine month mark was selected as the failure date. For clients with no subsequent re-report, the date which marked the end of the study (February 14, 2007) was selected. Data for only the first report was included for each client. In some cases, there was more than one re-report in a short period of time. Following the convention of Alameda County SSA, two reports within a five day span were considered to reflect the same incident of maltreatment. The most serious agency response within the five day period was counted as the failure event, according to the following hierarchy used by SSA: immediate investigation, 10 day investigation, or no investigation/evaluated out. Data on the maltreatment report, client demographics, and prior child welfare history were included in the final analysis file. Failure events were coded as binary data (1 for yes, 0 for no) for re-report, investigation of re-report, and substantiation of re-report. The following additional information was included for each client with regards to the "failure" maltreatment report: allegation (physical abuse,

sexual abuse, emotional abuse, or neglect); report response (immediate investigation, 10 day investigation, or no investigation/evaluated out); and investigation conclusion (not applicable for cases with no report or investigation, unfounded, inconclusive, and substantiated). Demographic information (date of birth, ethnicity, and gender) were included for each child. Total child maltreatment reports prior to the index date were tallied and included as a binary variable (0 for none, 1 for one or more).

After sample construction and coding, MSW student Anna Geer conducted a quality assurance check on the sample construction and data coding. She checked the treatment and comparison group samples to ensure the following: all participants met criteria for study inclusion, no participants were mistakenly excluded, index and failure dates were accurate, and data coding for number of prior reports was correct. Some errors were identified and as a result, 34 children were added to the comparison group who were found to be excluded without reason. One participant in the treatment group was identified as not meeting the criteria of residence in South Hayward and was dropped from the sample. Information was replaced for 21 children in the comparison group and 7 children in the treatment group because either the failure date or number of prior reports was incorrect. After corrections were made from the QA process, the final sample was n=160 for the treatment group and n=511 for the comparison group, for a total sample of n=671.

Data analysis & findings

Descriptive statistics

With one notable exception, the treatment and comparison groups did not differ significantly demographically. Gender distribution nearly equivalent: 50% of the

treatment sample and 55% of the comparison group was male (Chi-Square 1.32, $p = 0.251$). Primary ethnicity was also fairly similar: 39% of comparison group and 28% of treatment group were Hispanic (Chi-Square 6.91, $p=0.009$); 21% of the comparison group and 12% of the treatment group were Black (Chi-Square 7.06, $p=0.008$); 24% of the comparison group and 18% of the treatment group were White (Chi-Square 2.17, $p=0.141$); and 10% of the comparison group and 16% of the treatment group were Other (Chi-Square 4.52, $p=0.033$). The only significant difference with regard to ethnicity (Chi-Square 50.57, $p=0.000$) between the samples was that ethnicity was more frequently reported as unknown for the treatment group (27%) than the comparison group (6%), which is surprising given that the families in the treatment group had more sustained contact with workers. Better records on family demographics may be maintained by ARS-La Familia in a separate database or paper files. At the time of ARS referral or index report, the ages of children were largely equivalent: 28% of the comparison group and 38% of the comparison group were infants (Chi-Square 6.17, $p=0.013$); 55% of the comparison group and 45% of the treatment group were preschoolers (Chi-Square 4.88, $p=0.027$); and 1% of both the comparison and treatment groups were elementary school age (Chi-Square 0.0030, $p=0.957$).

The most significant difference between the treatment and comparison group is contact with the child welfare system prior to ARS referral for the treatment group, or index report for the comparison group. Ninety percent of the treatment group had one or more prior child maltreatment reports (with 31% of these having two or more reports), contrasted to 66% of the comparison group (of whom 13% had two or more reports) with Chi-Square 151.87, $p=0.000$. These numbers seem too dramatically different for mere

coincidence, suggesting that hotline screeners may have more frequently referred to ARS clients with a history of prior reports. This would hardly be surprising, given that prior re-report is a well-established risk factor for future reports (Marshall & English, 1999; Baird, 1988; Baird, Wagner, & Neuenfeldt, 1993; Schuerman et al., 1994). Because re-report is associated with referral to the ARS program as well as the outcomes of re-report, investigated re-report, and substantiated re-report, it is likely to be a confounder in the analysis. See Table 5 for the demographic data on the treatment and comparison groups.

The treatment and comparison groups were fairly similar in the experiences of subsequent re-report, investigated re-report, and substantiated re-report, with a few notable exceptions. In both cases, about 30% of the sample experienced a re-report (n=48 for the treatment group and n=163 for the comparison group; Chi-Square 0.20, p=0.652), suggesting that treatment was ineffective in preventing this outcome. Re-report tended to occur faster among the treatment group: the ratio of the average time to re-report for the treatment and comparison groups is 641:755 days. Neglect and physical abuse were the most common re-report allegation types for both groups. Re-reports were more likely to be investigated for the treatment group (n=38, 79%) than for the comparison group (n=66, 40%), though this difference was not significant (Chi-Square 1.28, p=0.26). The types of investigation were, however, quite similar: 58% of the treatment group got an immediate investigation, contrasted to 66% of the comparison group. Investigation conclusions were also similar, with no significant difference in substantiation (24% in the treatment group, 18% in the comparison group; Chi-Square 1.38, p=0.240). Neglect and sexual abuse were the most frequently substantiated allegation for the treatment groups (both at 33% of all substantiated reports), while

neglect and physical abuse were most frequent for the comparison group (61% and 22%, respectively). See Table 6 for a comparison of clients with re-reports, investigated re-reports, and substantiated re-reports.

Risk scores from the Standardized Decision Making tool (SDM) were available for ARS clients, though not for the comparison group, so therefore risk scores were not included in the statistical models. ARS home visitors, together with their clinical supervisor, complete the SDM at an initial meeting with the families. For the 160 clients included in the treatment sample, 29 were missing risk scores. Of those with risk scores, the majority fell within the moderate (40%) or high (33%) range, with small numbers in the tails of low (2%) and very high (8%) risk.

Outcome: Re-report

Two nonparametric approaches, which made no assumptions regarding time to event, were first used to examine the data. First, a log-rank test was conducted to see if there was evidence that one of the groups was failing faster. The null hypothesis is that the survivor functions of the two groups are the same. There was no evidence to reject the null (p -value=0.82). Actual totals for the failure event tended to be slightly greater than expected for the treatment group and slightly lower for the comparison group, but the variation was not statistically significant. A Kaplan-Meier survivor function was also plotted. The treatment group appeared to fail faster than the comparison group. Toward the 1500 day mark following referral to treatment, the survival for the treatment group begins to flatten out. The estimated hazard function shows that hazard starts out higher for the treatment group, but after the first couple of years following referral to treatment,

the hazard for the treatment group falls to a level below that of the comparison group.

See Figure 10 for plots.

In the first wave of parametric analysis, a Cox regression was fitted with treatment and other covariates. The initial model, with treatment alone, yielded a hazard ratio of 1.04 (confidence intervals 0.75, 1.4) and p-value 0.83. There is only a very slight trend of increased risk for the treatment group, and the confidence interval is fairly evenly distributed around 1, suggesting no effect of treatment on re-report. Binary variables representing the demographic information displayed in Table 5 were added independently with treatment to fit several models: Male gender (HR 0.98, p-value 0.89); Hispanic (HR 0.99, p-value 0.93); Black (HR 0.92, p-value 0.65); White (HR 1.4, p-value 0.025); Ethnicity-other (HR 0.92, p-value 0.72); Infant (HR 0.86, p-value 0.34); Toddler (HR 1.02, p-value 0.93); Preschool (HR 1.13, p-value 0.365). Sample sizes for reports with pregnant/newborn children and elementary school age children were too small to allow for inclusion. The only significant covariate was prior reports, with a hazard ratio of 1.78 (1.3, 2.4) and p-value 0.000; when adjusting for prior reports, the hazard ratio for treatment dropped to 0.74 (0.52, 1.06) with p-value 0.104.

The proportion of children with prior reports is significantly higher in the treatment group than in the comparison group, and number of prior reports may affect both assignment to treatment and the outcome of re-report. A variable representing the interaction between treatment and prior reports was created and added to the analysis with treatment and prior reports variables. This model provides evidence of interaction. Treatment effects differ depending on whether clients have prior reports. The effect of treatment on re-report among those with one or more prior reports is HR 0.69 (0.48,

1.01), p-value=0.05; for those with no prior reports the effect of treatment is 1.46 (0.54, 3.98), p-value 0.74. Because there is little information on clients without prior reports (n=16), the estimate of treatment effects for those with no prior reports shows poor precision, with a wide confidence interval that spans one. There is a non-statistically significant trend for treatment to prevent re-report among clients without prior reports.

Outcome: Investigated re-report

The next series of analyses examined whether treatment affected investigation. As was mentioned previously, it is conceivable that the treatment would not reduce re-report due to surveillance bias but would improve family functioning and the severity of a child maltreatment incident and thus likelihood of investigation. For the entire sample, 138 families experienced an investigation; of these, 100 were in the comparison group and 38 were in the treatment group. For the log-rank test, the p-value was not significant (p=0.12) and therefore the null hypothesis of equality of survival functions cannot be rejected; however, the log rank test suggests that fewer members of the comparison group, but more members of the treatment group, experienced investigation than would have been expected. The Kaplan-Meier survival curve showed that the treatment group experienced investigation at a faster rate than the comparison group, and the hazard function depicted a higher hazard of investigation for the treatment group until about 1250 days after referral to treatment (See Figure 11).

Fitting parametric models to the data with investigation as the outcome yielded similar findings to re-report as outcome. For the unadjusted model, there was a trend for treatment to increase risk of investigation: HR 1.34 (0.93, 1.96), p-value 0.119. Models fit with demographic variables were not significant, with the exception once again of

prior child maltreatment reports. Adjusting for prior child welfare reports, the hazard ratio associated with treatment was HR 0.96 (0.63, 1.47), p-value 0.87.

Rates of investigation were again found to differ depending on whether families had a history of child maltreatment reports. For families with prior reports, the effect of treatment is HR 0.89 (0.57, 1.39), p-value=0.63. With no prior reports, the effect of treatment is HR 1.84 (0.58, 5.91), p-value 0.3.

After looking at the outcome of investigation with the full sample of clients who received the treatment, another analysis was conducted to examine the rates of investigation only among those with re-reports. The question for this portion of the analysis was: Among those with re-reports, does treatment affect whether a family is investigated or not? Families were dropped from the analysis if they did not experience re-report. In this analysis, treatment appeared even more likely to be associated with investigation. In the log-rank test, the margin from expected was wider and the p-value was significant at the $p < 0.005$ level ($p = 0.002$), providing support to reject the null hypothesis that the survivor functions of the two groups are the same. The Kaplan-Meier curve for the treatment group fails dramatically faster, and the treatment group has an elevated hazard until about 1400 days after treatment. For the unadjusted model, treatment by itself is significant at the level $p < 0.005$ ($p = 0.002$), with a hazard ratio of 1.81 (1.24, 2.65). Adjusting for prior reports, the hazard ratio falls to 1.58 (1.04, 2.40) with $p = 0.33$. There was no evidence of interaction: treatment effects for those with prior reports was HR 1.58 (1.00, 2.48) $p = 0.045$ and treatment effects for those with no prior reports was HR 1.56 (0.49, 5.00), $p = 0.45$.

For those families who experience a re-report, treatment appears to increase the hazard of investigation.

Outcome: Substantiated re-report

Similar patterns were evident for substantiation as the previous outcomes, with the main difference being that substantiation is a rare event (n=9 in treatment group; n=18 in the comparison group), and so the power to detect differences between the two groups is smaller. For the log rank test, the null could not be rejected (p=0.17), though again values for the treatment group were higher than expected, and lower than expected for the comparison group. The survival curve for the treatment group was slightly lower than that of the comparison group, with concomitant higher hazard (Figure 12). The initial unadjusted Cox regression model with treatment alone suggested an increased risk associated with treatment, though the confidence intervals were wide: HR 1.75 (0.78, 3.89), p-value 0.17. None of the demographic variables were significant except prior child maltreatment reports. When adjusted for prior reports, there was a 0.88 (0.37, 2.09) hazard associated with treatment (p=0.78). There was evidence of interaction, with a 0.74 (0.30, 1.82) hazard associated with treatment for those with prior reports (p-value=0.519) and a 5.47 (0.65, 45.70) hazard associated with treatment for those without prior reports (p-value=0.117). Confidence intervals are again so wide, and the power of the sample so weak, that no definitive conclusion can be drawn. See Figure 12 for survival curves and hazard functions.

As with investigation, another analysis was conducted to examine the rates of substantiation only among those families who were investigated. This portion of the analysis sought to answer the question: Among those families who were investigated,

does treatment affect substantiation? The log-rank test was not significant ($p=0.23$), providing no support to reject the null that the survivor functions are equivalent. The survival estimates depict a slightly lower rate for the treatment group, and a higher degree of hazard. In the unadjusted model, there was a 1.63 (0.72, 3.67) hazard ratio associated with treatment ($p=0.239$); as with the previous analysis, the confidence interval was wide and spanned one, making it difficult to draw a conclusion about the effect of treatment. Adjusting for prior reports, the hazard associated with treatment dropped to 0.89 (0.37, 2.16), p -value=0.80. Another model was developed, with an interaction term for treatment and prior reports. The effect of treatment with no prior reports is 0.75 (0.29, 1.88) $p=0.539$; the effect of treatment with one or more prior reports is 4.39 (0.50, 38.37) $p=0.181$. Substantiation is again such a rare event that estimates are hugely imprecise.

Conclusion

Based on these analyses, the ARS-South Hayward program did not appear to have a statistically significant effect on outcomes related to child welfare system involvement. When holding the effect of prior reports constant, there is trend toward positive effect of services on the outcomes of re-report for families with prior child welfare system involvement. It has been suggested that the initial child maltreatment report may have an inhibiting effect on subsequent re-report for a period of time (English et. al., 1999). The small number of ARS clients without prior reports ($n=16$, 10%) makes any conclusion based on this portion of the sample questionable. For the portion of the treatment sample with prior reports, the trend toward a positive effect of treatment on re-reports is an encouraging sign. However, treatment had no significant effects on investigation or substantiation of re-reports.

Findings of a weak effect of treatment on subsequent child maltreatment are in line with the literature on child maltreatment prevention and differential response interventions. In Geeraert and associates' (2004) meta-analysis of 19 studies, and in MacLeod and Nelson's (2000) meta-analysis of over 50 programs, positive results were found, but the overall effect size (about 0.20 in both reviews) would be considered small by conventional standards. A majority of studies conducted on differential response have found that re-report rates are similar six months after treatment for families who receive treatment and comparison groups (Center for Child and Family Policy, 2004; English et al., 2000; U.S. Department of Health and Human Services, 2005).

The ARS intervention may have achieved beneficial outcomes with regards to the proximal goals, such as making families feel more connected to their communities. Certainly, the process portion of the study (Chapter 5) made clear that families appreciate ARS services and perceive a number of benefits associated with the treatment. However, the study design did not allow for examination of the program's proximal outcomes.

CHAPTER 8: DISCUSSION

Child welfare agencies across the state of California and throughout the nation are undergoing a historic reform process intended to promote safety and permanency of children through early intervention. While united under the umbrella term "differential response," program models vary dramatically along several dimensions. One is the population served, which may be families screened out of investigation, families referred at the hotline to a "family assessment track," or families whose allegations of maltreatment are found to be unsubstantiated. Another is who provides the service—a community worker or CPS staff member—and whether they have professional credentials or have paraprofessional status. Programs also differ by type of services offered (e.g., assistance with basic needs, attention to the parent child relationship) and whether services are offered in the home. The intensity and duration of services also vary by program. Child welfare seems to be following Mao Tse-Tung's directive: "Let a thousand flowers bloom." There may be advantages in allowing local jurisdictions to create the differential response that best suits their needs. Yet this diversity of program models can lead to a lack of coherence and difficulties in building an evidentiary base.

This dissertation research examined the Another Road to Safety program, which can be characterized as a differential response model serving families screened out of investigation, with four main types of interventions provided in-home by paraprofessional community workers. Three strands of inquiry made up this study: a qualitative portion that focused on the ARS program model and experiences of staff and clients with service delivery; a Geographic Information Systems (GIS) portion that addressed availability of services by neighborhood; and an outcomes portion that

examined child welfare systems involvement post-intervention for clients in contrast to a comparison group. The purpose of this final chapter is to summarize findings across methodologies and draw conclusions about potential implications. This is accomplished in several parts. First, limitations to the research are described. Second, major findings are reviewed, with reference to the current research literature. In conclusion, implications are discussed for social welfare policy, social work practice, and future research.

Limitations

Limitations apply to the research design and data collection, suggesting caution when interpreting findings and drawing conclusions. The main concerns that emerged have to do with sample construction, sample size, and the generalizability or transferability of findings. Issues related to potential error, bias, and interpretation and application of research findings are discussed, with methodologies for each research question treated separately.

Data for question one, regarding staff and client experiences with the ARS program, may have been compromised by the sampling procedure and biases in participants' responses. Recruitment was handled by ARS staff, who may have neglected to inform difficult clients of the study or more strongly encouraged participation by enthusiastic clients. Client participation was self-selected and may consequently be biased in ways that are unknown. Those who chose to participate could have been particularly positive or negative regarding their experiences. Clients' responses may have been subject to social desirability bias whereby they told the researcher what they believed was expected, or were less than honest out of concern for their ARS worker's

position. While current clients were selected to minimize recall bias, there were questions that asked clients to think back to their earliest experiences with the program. Recollection of early experiences and opinions may have been influenced by later program participation. Responses from workers may also have been influenced by social desirability and recall biases. Although staff were assured that their comments were confidential, they were also aware that administrators at the five partner agencies would be provided with aggregated findings. The effect, if any, of this awareness on their comments is unknown. While the qualitative aspect of the study offers valuable insight, findings may not apply to other populations receiving other models of differential response services. The reader can best judge the transferability of findings to other contexts, based on an understanding of the research processes and assumptions applied in this study.

The main limitations of the GIS portion of the study (Question 2) are related to data integrity and point-in-time data. Data were gathered on nonprofit and public social service locations and types from all sources known to the researcher. While due effort was made to ensure comprehensiveness, it is difficult to know how many services relevant to families were actually captured by the analysis because a comprehensive source of services in Alameda county does not exist. Moreover, data collection was conducted at a single point in time, so it does not reflect neighborhood change. The same study, replicated at a different time period, could result in different findings. Correlations between child maltreatment rates and service density run on this data are cross-sectional in nature, and causality cannot be inferred. It is possible that the observed correlation

between the two variables results from their connection to a third, omitted variable, rather than a direct relationship.

The ability to draw strong conclusions from the outcomes portion of the study (Question 3) is hampered by small sample sizes, which reduce the power of statistical modeling for the data. Child maltreatment reports have a low base rate, even among high risk populations (Guterman, 1997). Particularly when examining substantiation, a rare outcome, small sample sizes make it difficult to detect a significant effect of treatment. The findings related to substantiation in particular are indecisive at best.

Lack of control over assignment to treatment and the nature of the treatment received also throw conclusions on the program's outcomes into question. While staff at the Alameda County Department of Evaluation and Technology stated that comparison group families were not offered the intervention simply due to program capacity, the make-up of the two groups suggests selection bias. Almost all (90%) of the clients referred to ARS-South Hayward who were included in the treatment sample had a history of child welfare system involvement, whereas this was the case for only 66% of the comparison group. It is possible that hotline screeners referred families to the ARS program more frequently when they observed prior reports. Participation in ARS is voluntary, so the sample may have been biased by self-selection. It is possible that clients who were more troubled were more likely to opt for treatment, or alternatively, that clients who were better prepared to change their parenting chose to participate. Non-random assignment could have biased the sample in other unknown ways as well. Intervention types and dosage were not controlled, as they might have been for a rigorous randomized trial. While the lack of control over assignment and exposure to treatment

constitute threats to internal validity, these same conditions make the study more relevant to the real-world, messy contexts in which differential response programs operate.

Another caveat has to do with the outcomes selected. Child welfare system involvement may not equate with child maltreatment prevention, raising the question of construct validity. Child maltreatment has been described as an "iceberg phenomenon": only a small portion of actual cases are visible to the system, while the majority remains hidden. The proportion of "visible" cases may have been different between the treatment and comparison group for reasons not directly related to the treatment. Increased surveillance may occur in programs emphasizing weekly contact with a mandated reporter and referral to community services staffed by mandated reporters (Guterman, 1997). Such programs may prevent maltreatment recurrence in some cases while promoting early detection in others, but the early detection effects could mask the overall beneficial impact of services (Olds & Kitzman, 1993). At the same time, surveillance bias is not a catch-all excuse for null findings. Studies which have accounted for this source of bias in statistical modeling have typically found that its unique contribution is small (Chaffin, 2005).

The administrative data used to examine client outcomes is prone to certain types of errors and limitations that affect the research. As was mentioned in chapter 7, some hand coding was done to identify ARS recipients in the CWS/CMS database. When client identifiers were not available, child names and demographic descriptors were used to make the link. Cases could have been misidentified during this process. Further, 42 clients identified by the ARS ECChange database as having been retained for services could not be located in the CWS/CMS database and had to be dropped from the analysis.

Perhaps even more importantly, reliance on administrative child welfare data limits the scope of analysis. Only outcomes associated with child welfare system involvement could be examined due to lack of data on the comparison group in 'softer' domains, such as child health and parent-child interaction, that are tracked for ARS clients in ECChange. Reduction of researcher control over data completeness and variable measurement is characteristic of research on administrative child welfare datasets (Drake & Jonson-Reid, 1999).

Keeping in mind the limitations discussed above, this study has identified a number of key findings with significant implications for practice and policy related to differential response. Discussion will now turn to these major findings.

Major findings

Based on interviews with staff, the ARS program appeared robust and faithful to the original model. Clients expressed satisfaction with the program and described changes in their material well-being and parenting abilities that hinted at program success. However, participation in the ARS-South Hayward program did not affect families' subsequent involvement with the child welfare system. Of the three, this program site is considered the most mature and closest to the original model designed by First 5 and the Social Services Agency of Alameda County. For this reason, it may be extrapolated that client outcomes for the other program locations are similar (or perhaps even worse). It is possible that program effectiveness is affected by neighborhood, as there is evidence supporting variation in social service availability across the three neighborhoods. A more comprehensive study of all three program sites, with data on service referral and usage, might be able to capture differences by neighborhood. It is

also possible that the intervention achieves its proximal goals of increased connections with community resources, provision of temporary social support, elimination of unmet basic need, and improvement of parent-child relationship. These outcomes are not measured directly by the study and may indeed improve, based on comments by clients.

What might explain the lack of outcome findings for the ARS program? There is a clearly thought-out conceptual model (Figure 2). If service inputs do not lead to the expected client outcomes, is this due to faulty assumptions underlying the logic model? Research on child maltreatment prevention programs has been criticized for focusing more on hypothesized mechanisms underlying child maltreatment than on the behaviors associated with child maltreatment themselves (Chaffin, 2005). The same criticism could be made of interventions. Rather than directly intervening in maltreating behaviors of parents, the ARS program provides four interventions aimed at reducing social isolation, lack of connection to community resources, unmet basic needs, and poor parenting. By making improvements in these areas, services are expected to ultimately reduce child maltreatment. However, the empirical evidence supporting associations between the interventions provided and child maltreatment prevention are weak or lacking.

ARS staff and administrators described interventions related to basic needs as a necessary precursor to deeper work with families. Parents struggling with survival may not have the energy and focus to work on the relationship with their child. What is the evidence that meeting families' basic needs will lead to a reduction in child maltreatment? The effects of monetary or material assistance for families at-risk of child welfare involvement have been examined by a handful of studies. A review of family preservation and family support programs found that programs designed to help families

meet basic concrete needs were more effective at preventing recurrence of maltreatment than programs which offered parenting and child development-oriented services (Chaffin et al., 2001). The opposite finding was identified by a meta-analysis of child maltreatment prevention home visiting programs; programs identified as having a concrete needs component had a smaller effect size on improving family functioning than home visiting programs without such services. One explanation for this finding may be that offers of concrete aid are more frequently made in programs that serve families at greater levels of crisis and poverty, and creating lasting change may be more difficult with this population than with those families who have their basic needs satisfied (MacLeod & Nelson, 2000). Child welfare clients who participated in the Illinois "Norman" program, which provided direct cash payment and housing expenditures, were found to have a reduced rate of out-of-home placement, fewer days in substitute care, and a greater rate of reunification than families not receiving assistance (Eamon & Kopels, 2004). Participation in a home-based intervention focused on basic needs for families who met criteria for risk of child neglect was found to significantly reduce risk factors, notably in the areas of parenting and everyday stress, and improve protective factors, such as parental competence, from baseline to case closure and from baseline to the six-month follow-up. Families were assisted using a combination of referrals to community providers and direct monetary assistance from an emergency fund, and were offered assistance with emergency needs within one working day of the initial assessment (DePanfilis & Dubowitz, 2005).

The findings on concrete aid have generally been favorable. Cash and material assistance may make a difference in those cases where the help offered truly fits the

families' needs. Indeed, help acquiring needed equipment such as a crib, or assistance in paying a bill, may be a more effective child maltreatment intervention than education on parenting skills or child development (Chaffin et al, 2001). However, in cases of great financial stress, a small handout or purchase of equipment may not tangibly improve the plight of families. It is hard to say whether families will reap long-term benefits from the ARS basic needs interventions. Assistance from the basic needs fund may defuse a crisis that occurs during program participation, but what of later crises? Similar basic needs funds are not available from community providers. Families may be able to meet their basic needs more sustainably from the knowledge they gain of community providers and the skills they develop in accessing resources. However, it is unknown whether families continue to access social services after program completion. This is questionable given administrators' assumptions that families need nine months of intensive case management to get the services they require.

Poor attachment between parents and children is hypothesized by the ARS program to be a contributor toward the issue of child maltreatment. Is this assumption supported by the literature, and what types of interventions have demonstrated success in strengthening attachment? There is evidence that maltreated children are less securely attached to their parents than non-maltreated children (Morton & Browne, 1998). Moreover, attachment appears to be malleable, particularly early in life. Changing the stability of the mother and child's life can translate into improvements in the attachment relationship (Egeland & Sroufe, 1981). A meta-analysis of 16 intervention studies that aimed to improve parental sensitivity and parent-child attachment found that short-term, focused programs appear to have greater efficacy in affecting parental sensitivity and

parent-child relationship than longer term, broad-based program. Behaviorally-oriented approaches that provide modeling and/or feedback on video-taped parent-child interactions achieve greater success, at least in the short-term, than therapeutic approaches. Interventions with a primary focus on urgent survival needs appear to have a hard time simultaneously promoting maternal sensitivity, perhaps because such needs trump attention to caregiving (van Ijzendoorn, Juffer, & Duyvesteyn, 1995).

While interventions to promote attachment are promising, their connection to preventing child maltreatment is limited. In the context of ARS, this program component was perhaps the weakest link in the program's service array. On the whole, ARS workers seemed hesitant to directly address parenting. The approach to working with parents around their parenting skills is not well-defined or consistent, lacking clear guidelines or goals. Clients described receiving assistance with discipline and child behaviors, not feedback intended to improve parental sensitivity. ARS administrators might consider re-evaluating this component of the program, and potentially adding targeted behavioral interventions to provide feedback and modeling related to sensitive caregiving. While they may not remediate problems in the attachment relationship, providing families with fun opportunities like the Lawrence Hall of Science program may indirectly support the development of positive relationships. Clients expressed their appreciation and enjoyment of this aspect of the program.

ARS seeks to reduce social isolation and emotional stress through the mechanism of perceived support. The regular contact and the warm relationship established between families and their worker is intended to provide a general sense that help is available when needed. Families describe feeling calmer and less stressed as a result of their

participation in the program. Is there reason to believe that families would consequently be less likely to maltreat their children? A number of studies support the proposition that maltreating parents measure lower on perceived support than parents who do not maltreat their children (Daniel, Hampton, & Newberger, 1983; Egeland & Brunquell, 1979; Kotelchuck, 1982; Newberger et al., 1986; Polansky et al., 1981; Polansky, Ammons, & Gaudin, 1985; Turner & Avison, 1985). Yet the directionality and causality of this relationship, and its implications, are unclear.

There are several possible scenarios to explain the connection between child maltreatment and social isolation. Families may lack in social supports, in which case it may be logical to increase their social networks. There is some evidence that maltreating families identify fewer social contacts that are reliable or potential sources of support (Kotelchuck, 1982; Polansky et al., 1981; Polansky, Ammons, & Gaudin, 1985). Another possible explanation is that families have sufficient networks but fail to make use of the supports available to them, in which case social skills training may make more sense. A few studies have identified behavioral patterns that suggest distrust of society and parental preference for sequestering the family and handling problems independently (Elmer & Gregg, 1967; Young, 1964). A third possibility is that perceived social support is a stable personality trait (Lakey & Lutz, 1996) that is not malleable for intervention. Garbarino (1977) points out that social isolation, like most human phenomenon, is complex and multiply determined. As yet it is unclear which social support functions maltreating parents lack, and therefore which types of interventions could be most helpful (DePanfilis, 1996). However, there does not appear to be any empirical support for the assumption that grafting a temporary relationship with a worker onto families' lives will

ameliorate a low sense of perceived support in the long-term. A randomized control study of high-risk mothers provided with home visitation or no service found significant differences in overall social support, particularly in the domains of affective support, affirmation, and availability of concrete assistance; however, the researchers speculated that these gains came from the relationship with the home visitor alone, not from changes in the mother's social network (Marcenko & Spence, 1994). Overall social support for mothers participating in Hawaii's Healthy Start perinatal home visitation program did not increase as a result of participation in the program, as compared to a control group. There was a difference between the groups in perceived emotional support from a close adult; since the social network of participants did not appear to change, this support likely came from the home visitor (McCurdy, 2001). If increased social support is the goal, a more sustainable intervention than the relationship with the home visitor must be considered.

Referral to community resources is, perhaps, the greatest focus of attention by the ARS program. Why would administrators expect that this service might reduce the likelihood of future child maltreatment? The presumed mechanism underlying the connection between institutional resources and child maltreatment is unclear. There does appear to be some relationship between neighborhood conditions and parents' perceptions and usage of community resources (Coulton, 1996). Parents' perceptions of community resources may further be connected to parenting practices related to proactively finding positive opportunities for children (Elder, et al., 1995) as well as discipline and harsh behavior (Pinderhughes, Nix, Foster & Jones, 2001). However, ARS does not engage in activities to transform the array of neighborhood social services;

rather, the program shares information on resources with families and helps facilitate their connection to services. Connection to community resources seems intended to meet two of the goals previously described: provision of support through formal social services, and access to resources to meet basic needs.

As such, this type of ARS intervention is subject to similar criticism as the social support and basic needs strategies. The focus is exclusively on formal sources of social support and connections to formal institutions in communities, rather than informal connections to support and resources from peers and neighborhood groups. Exclusively stressing formal providers and resources could potentially attenuate informal ties in communities (McKnight, 1995), a source of support that is generally preferred over formal sources.

With regard to the theories underpinning the four main programmatic interventions, support on the connection between child maltreatment and connection to institutional resources is weakest. Attachment and child maltreatment appear to be connected, but it seems that more sensitive parenting leads to better attachment, not that better attachment leads to improved parenting (and thus less maltreatment). A growing body of evidence supports the provision of basic needs assistance, but the duration and amount of assistance needed to make a difference is not known. The evidence is strongest for an association between social support and child maltreatment, but even here, the literature does not support temporary relationships with workers. The meaning of these findings will next be explored, for social welfare policy, social work practice, and future research.

Implications for social welfare policy

There is neither strong empirical evidence nor robust theoretical support connecting the ARS program's four main interventions to the stated goal of child maltreatment prevention. Unfortunately, weak or neutral findings for programs seeking to prevent the occurrence or reoccurrence of child maltreatment are the rule rather than the exception. In Geeraert and associates' (2006) meta-analysis of 19 child maltreatment prevention studies, and in MacLeod and Nelson's (2000) meta-analysis of over 50, positive results were found, but the overall effect size on reducing maltreatment averaged only about 0.20 in both reviews — an effect size considered small by conventional standards (Cohen, 1988). A majority of studies conducted on differential response have found that re-report rates are similar six months after treatment for families who receive treatment and comparison groups (Center for Child and Family Policy, 2004; English et al., 2000; U.S. Department of Health and Human Services, 2005). The field of child welfare may need to be more realistic about what can be expected from a limited intervention regarding child maltreatment outcomes. Prevention of child abuse may require multi-modal, intensive services. The field is still searching for effective means of preventing child maltreatment occurrence and recurrence.

This study brings up the question of whether the child welfare system should be focusing its resources and attention on evaluated out or unsubstantiated cases. Looking at the population of California as a whole, re-referral among initially evaluated out cases is a low base rate phenomenon (Needell et al., 2005), making it difficult to demonstrate intervention effects and casting doubt on whether addressing this issue is the best use of scarce resources. However, as this and other studies (Drake et al., 2003; Wolock, 2001)

demonstrate, when you give families enough time, re-report is a problem—in this study, affecting 30% of cases. This volume of re-referral suggests that families screened out of investigation are troubled, and may need services and connection to ongoing support.

Programs such as ARS program may do better on outcomes related to child well-being and family support than child maltreatment prevention. Family support programs usually do offer modest benefits to families related to parenting attitudes, knowledge, and behavior as well as family functioning (Powell, 1994). Based on the model and client comments, it can be surmised that something beneficial is happening for families. ARS administrators will have to decide if these types of outcomes justify investment in the program. Indeed, this is also a question for the broader field of child welfare.

Differential response, with its emphasis on voluntary, strengths-based, community support for families suggests a family support approach (Tilbury, 2005). To justify public expenditure, particularly the diversion of funds from other child welfare activities through the Title IV-E waiver, child welfare administrators must clarify the purpose of differential response. If it is family support, then the field will have to be content with the goal of strengthening families who may have never entered the system as well as the portion who do (between 7-50%, depending on the study and the timeframe used). If the goal is child maltreatment prevention and fewer families entering the formal child welfare system, then services will need to be targeted and program models scrutinized to determine whether there is a clear causal chain between services delivered and outcomes expected. The enthusiasm for this approach could easily turn into cynicism if promises are not borne out by research findings, as was the case for an earlier child welfare "silver bullet"—family preservation services.

Differential response is part of a host of initiatives intended to reform the child welfare system by involving communities in child protection. Descriptions of DR emphasize community partnerships and reliance on community-based services, yet the neighborhood context tends to receive little attention in program planning and policy. This omission is surprising, given that the primary intervention is to connect families to community services. GIS findings from this study suggest that regional variation in resource distribution is a factor that may influence program implementation. Policy makers and program administrators might consider a number of steps to better account for the neighborhood context. Prior to implementing DR, community assessments may be useful for identifying what services are available, gaps, and accessibility challenges. In particular, child welfare agencies would benefit from looking at the match between client needs and available services. Using GIS to map services can help supply this information. To have a truly sustainable impact on families' lives, child welfare agencies might consider taking a leadership role to improve local service arrays, thereby improving availability and quality of services, and potential client outcomes. Comprehensive assessment of clients' experiences with DR would naturally include assessment of their experiences with referrals—whether they followed up on referrals, barriers they may have experienced, and their experiences and satisfaction with services from referrals. Without this information, there is an incomplete picture of the effects of DR programs.

Implications for social work practice

ARS may not yet achieve its ultimate goal of child maltreatment prevention. Yet there are common sense reasons why the programmatic interventions might benefit

families, even if the connection with positive outcomes is not documented in the research literature. Interventions in the areas of basic needs, the parent-child relationship, social support, and connection to institutional resources may contribute to strengthening families and helping them weather crises. A reconsideration of the ARS program model and the logical connections to proximal and distal goals is recommended. Ideas for improving the four main ARS interventions are offered below.

ARS seeks to address the three lowest levels of the Maslow Hierarchy: basic physiological needs, safety, and love. These needs could be addressed in a more concerted fashion if Maslow theory was brought more to the fore and families were specifically assessed on these types of needs. Examination of these need categories are currently folded into other assessment tools, but one idea would be to create a tool which breaks out needs according to Maslow's hierarchy. Assessment of physiological needs could encompass housing, food, clothing, and employment. Attention to safety needs would involve that of family members within the home—for example, household hazards for children and domestic violence—as well as safety within the community—such as exposure to theft and gang violence. Evaluation of families' need for love might involve assessment of family dynamics and networks of extended family and friends. Needs could be addressed sequentially, as per the Maslow hypothesis that satisfaction of lower needs can prepare people to address higher needs. This hypothesis could be tested informally, through staff observations regarding clients' progress, or more formally using psychosocial assessments (though the research reviewed in chapter 3 suggests that current tools imperfectly capture the concepts underlying the Maslow Hierarchy).

The parent-child relationship is a critical, yet sensitive, area for intervention. Trust must first be established between worker and family. Once families are receptive to feedback, research suggests that behavioral interventions focused on promotion of caregiver sensitivity show the most promise in improving the attachment relationship. To implement such an approach, the ARS paraprofessional staff would need training on how to offer feedback to parents and how to model appropriate parenting behaviors. Perhaps such training would overcome their hesitancy in discussing parenting issues. It is also possible that a more highly educated staff would achieve greater success in addressing the parenting domain. Administrators might reconsider the choice to employ paraprofessionals, and whether these staff are equipped to help families improving their parental sensitivity and skills.

Being available and encouraging, staff may bolster clients' perceived support, which in turn can buffer the effects of stress. Clients clearly appreciated the support they received from the worker; indeed, many appeared to rely upon it. This raises a concern about the sustainability of social support. A program component focused on building families' social networks and social skills might be considered, to make last changes in the availability of social support for families. A natural place to start would be to encourage the development of relationships between families enrolled in ARS. Indeed, staff suggest this has often occurred as a by-product of the Lawrence Hall of Science Program. At least one of the ARS sites was also considering the development of a mothers' support group. In addition, ARS workers could help families work on their existing relationships, by encouraging them to reach out to extended family, friends, and neighbors. The field of child welfare has embraced the notion that extended family and

friends should be involved in making decisions for children involved in the system. If this is feasible for families whose issues require court-mandated involvement with child protection, surely the same can be done for families who are participating in a voluntary program.

Teaching families about available resources in the communities and how to access them can be a way to implant knowledge and skills that allow families to meet future needs independently. Yet as family conditions change and children grow, new issues may arise in families, necessitating different types of services and support. Gains that families make while in the program may require an occasional booster in order to be maintained, as new crises surface. The ARS program might consider designating a staff person to maintain contact with families and continue to assist them beyond the program's duration.

Future research

From this research, certain broader questions have emerged about the differential response approach. First and foremost, what types of program models may be most effective in reaching the goal of preventing low to moderate risk families from entering the child welfare system? Different jurisdictions have taken a number of approaches, and it is time to identify and study successful models. Second, what are successful strategies for engaging clients in DR services? Client engagement is a challenge because the point of entry for DR is a child abuse report, and many families do not accept services out of suspicion of child protective services. This is another case where promising practices can be identified and shared with the field. Third, how should the outcomes of DR services be assessed? As was discussed in the limitations section, re-report of child maltreatment

may be a flawed measure if families served by DR continue to make greater use of community services after their completion of DR services, putting them under increased surveillance. The field of child welfare needs to clarify the goals of DR and find appropriate means to measure them. Beyond simply reducing maltreatment, DR seeks to build protective factors, and these would be important to measure. Because administrative child welfare data are limited, new methodological designs and methods of data collection must be devised.

An evidentiary base on the intensity, duration, targeting, staffing, and content of differential responses services is needed to inform policy and practice. Much of the current literature in this area is descriptive, not empirical. The Administration for Children, Youth, and Families (Children's Bureau) has recently announced funding for the development of the "National Quality Improvement Center on Differential Response in Child Protective Services." The purpose of this center will be to generate knowledge on differential response practice models and to support infrastructure development at state and local levels for implementation of services. This move toward building the knowledge base around DR is exactly what is needed, as the field of child welfare begins to separate the hopes from the realities in terms of what can be achieved through offering preventative, voluntary, strengths-based community services to families screened out of traditional child welfare services.

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Figure 1: ARS Program Diagram

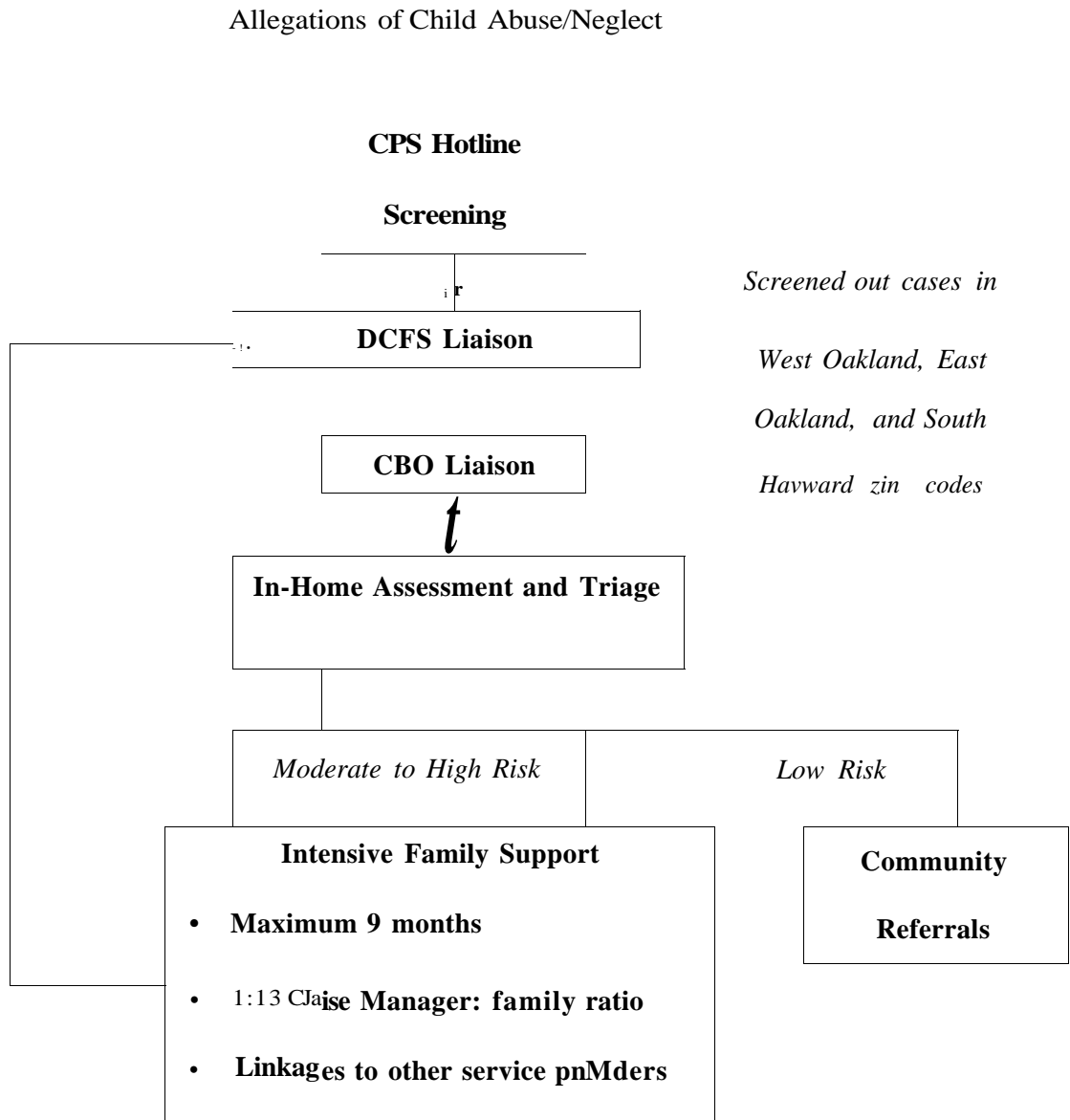


Figure 2: Another Road to Safety Logic Model

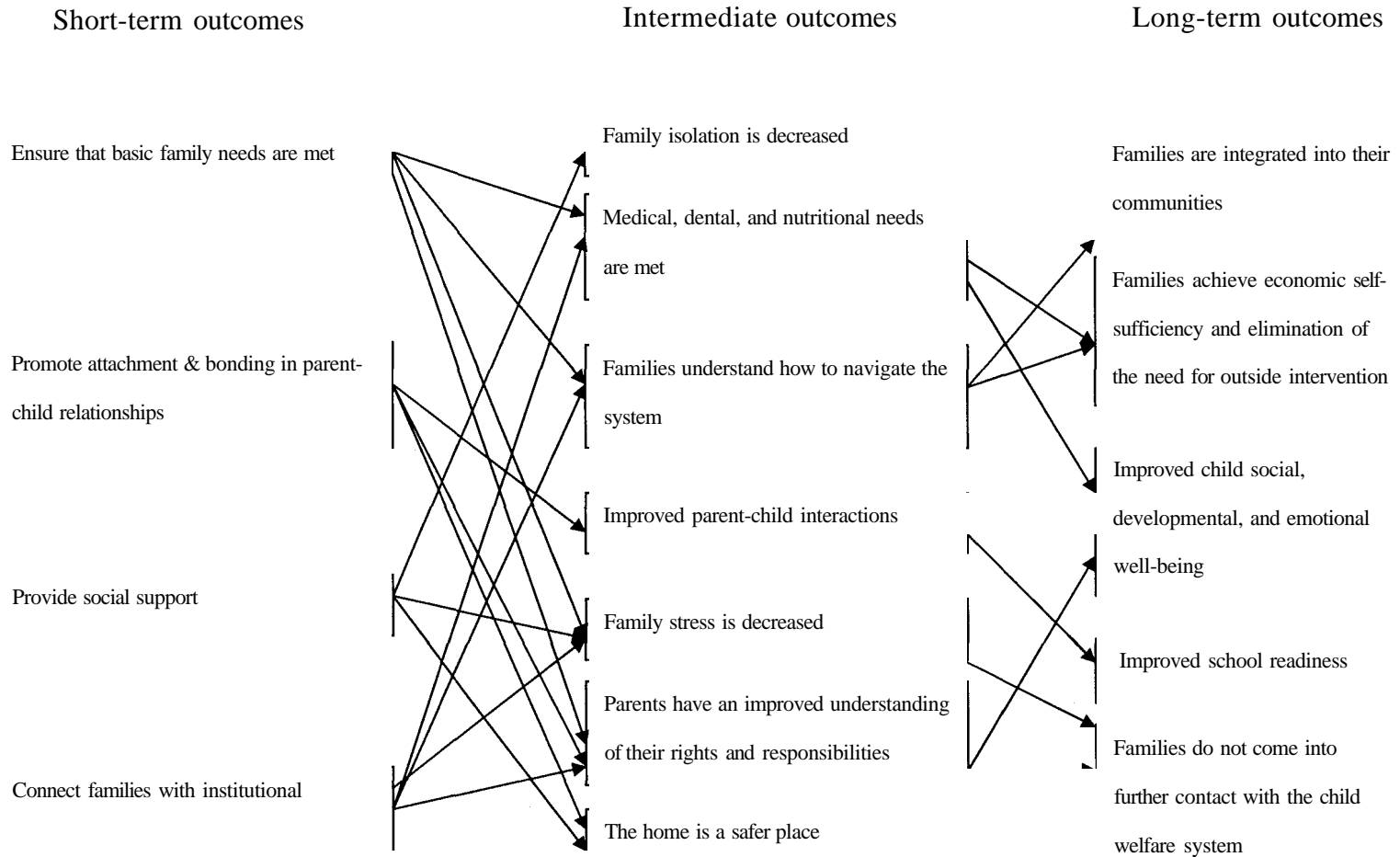


Figure 3: Model of stress, coping, and outcomes

Stress:

Illegal status

Poverty/difficulties meeting basic
needs

Depression

Domestic violence

Loss of job

Family resources

"Individual and collective
strengths at the time the
stressor event occurs.

Examples are economic
security, health,
intelligence, job
skills..social supports"

(Boss, 1987, p. 702)

Moderators

Social support

Emotional,
instrumental, and
informational social
support

Outcomes:

Family adaptation
or crisis

Figure 4: Sampling, data collection & analysis for qualitative study

Qualitative study

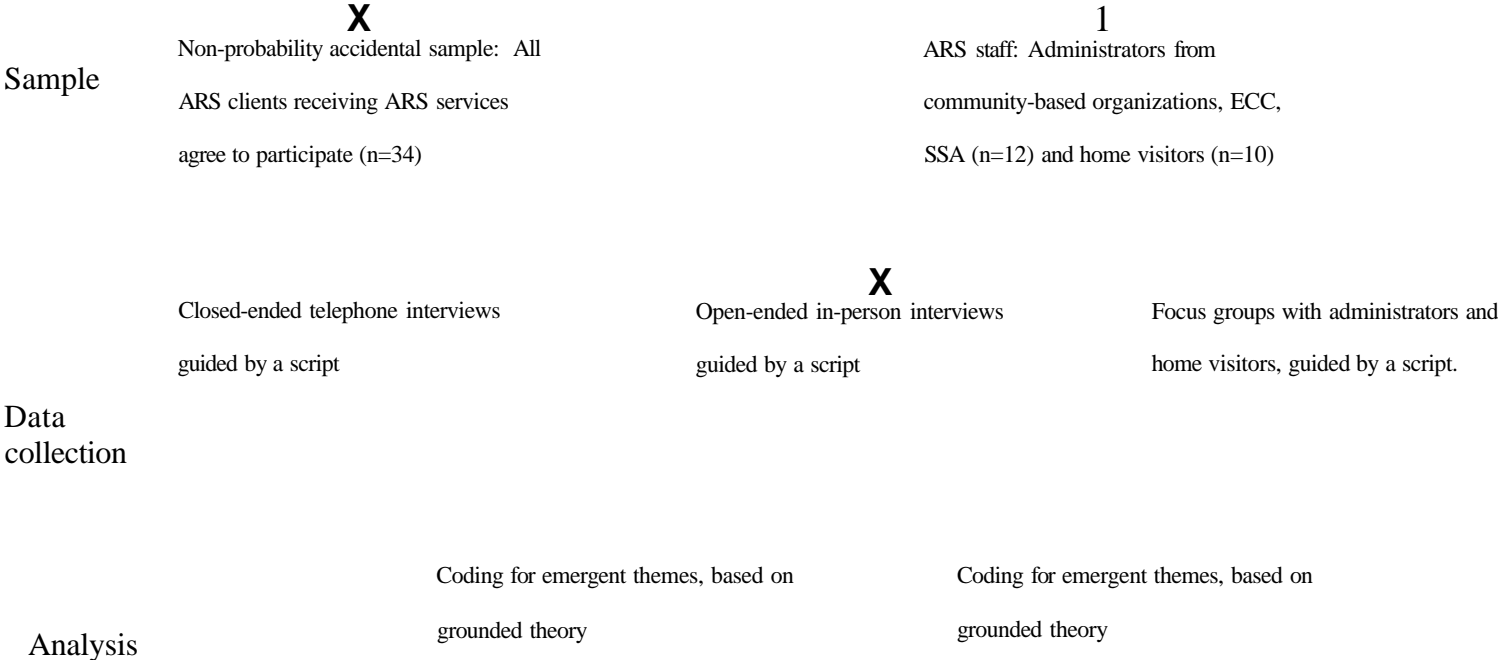


Figure 5: Sampling, data collection & analysis for outcomes study

Outcomes study

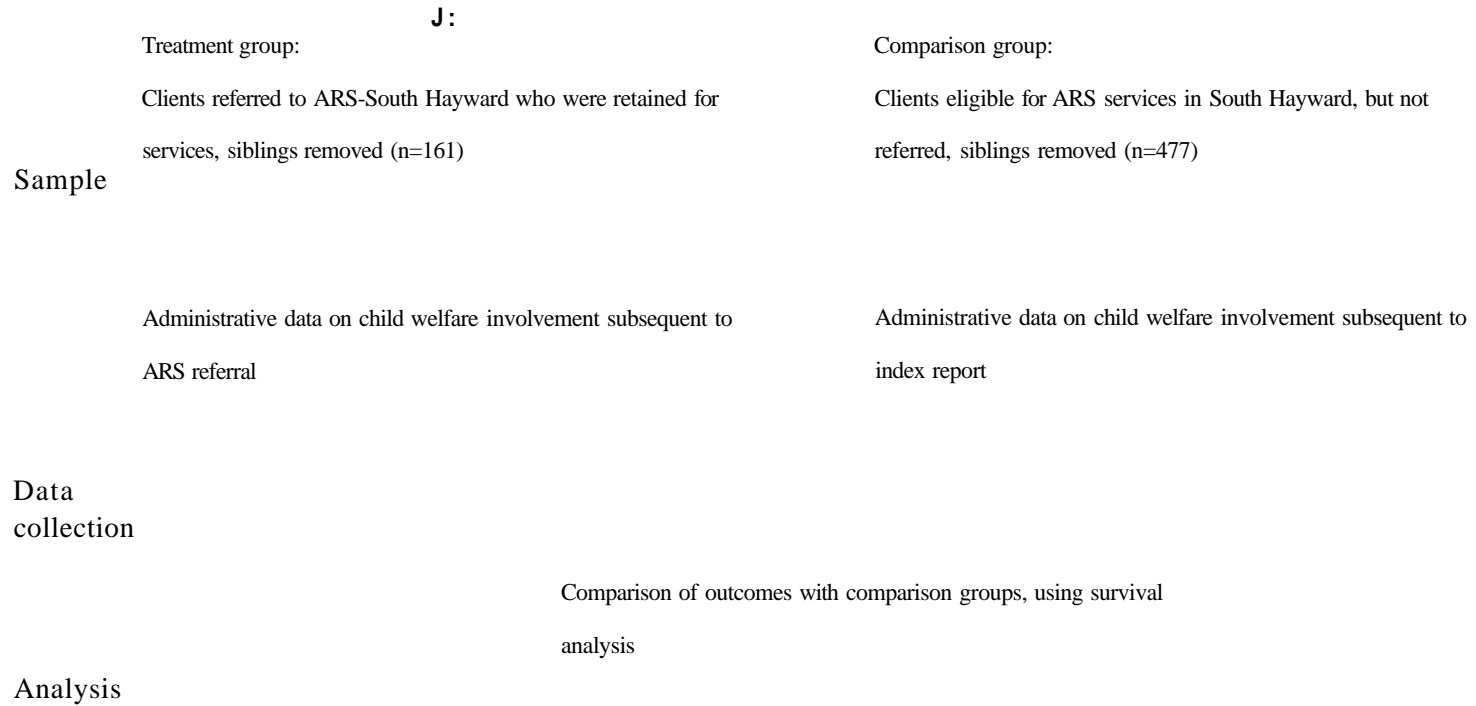


Figure 6: Map of Alameda County, with ARS zip codes marked

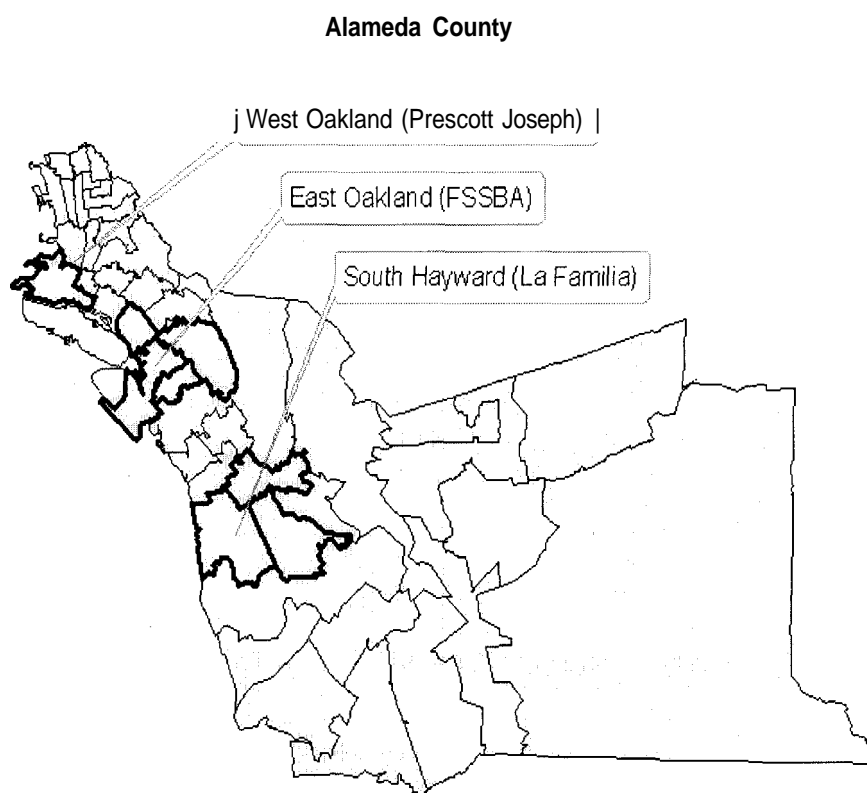
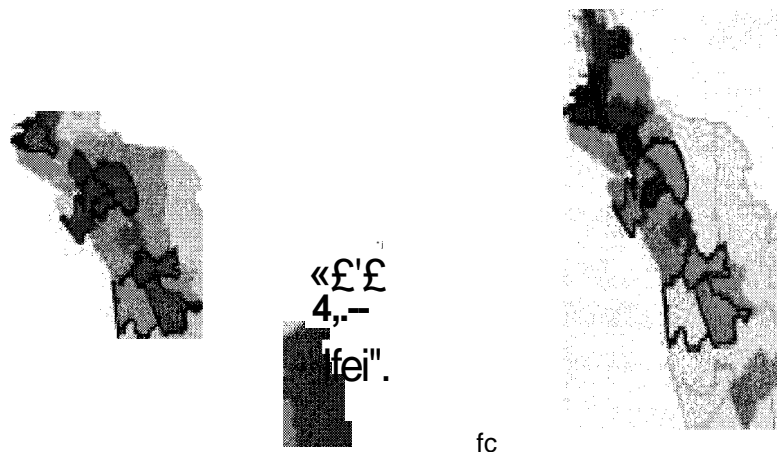


Figure 7: 1 mile buffers, census tracts and zip codes

Buffers, census tracts

Buffers, zip codes

Figure 8: Zip codes—Need for & availability of services



Legend

- | Low ifici'dencE
- rfecijym incicterif.
- li.jn in-irlonrr

Legend

- Low Availability
- Medium Availability
- High Availability

Figure 9: Census tracts—Need for & availability of services

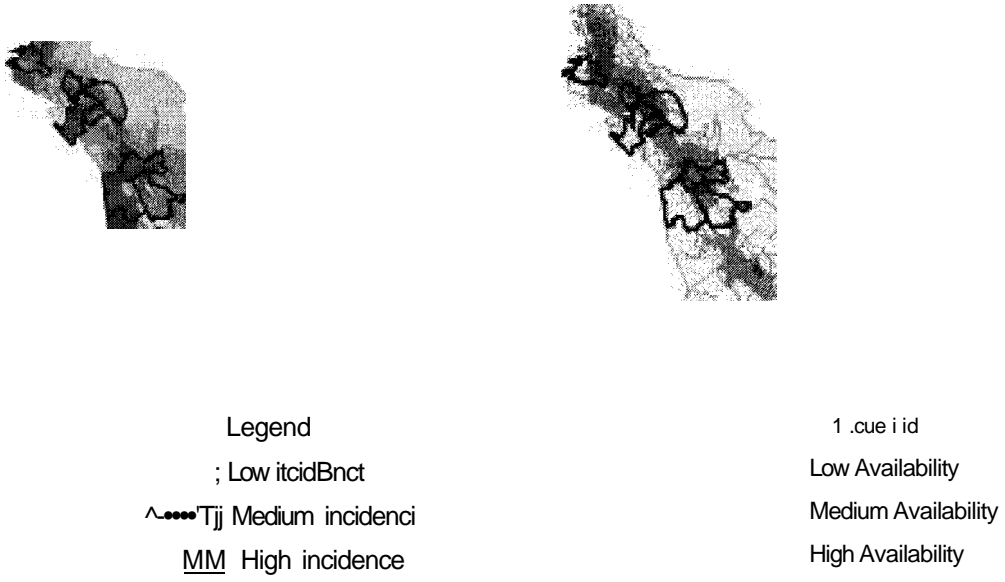


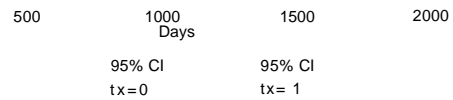
Figure 10: Re-report as failure

Log-rank test for equality of survivor functions

Treatment	Events observed	Events expected
0	163	164.3
1	48	46.7
TOTAL	211	211

P-value=0.83

Kaplan-Meier Survival Estimates by treatment
Re-report as failure



Estimated hazard functions by treatment
Re-report as failure

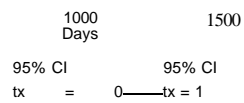
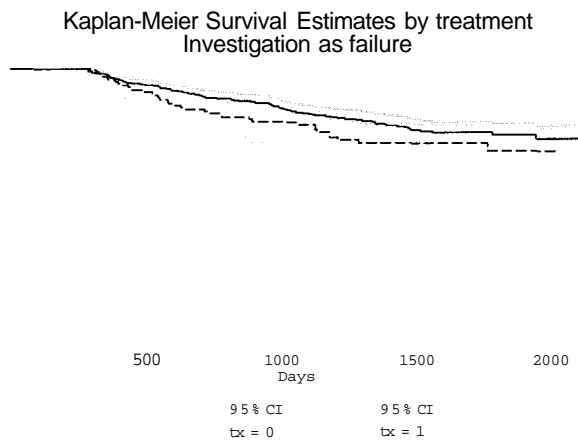


Figure 11: Investigation as failure

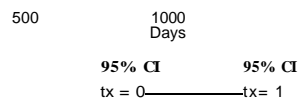
Log-rank test for equality of survivor functions

Treatment	Events observed	Events expected
0	100	107.6
1	38	30.4
TOTAL	138	138

P-value=0.12



Estimated hazard functions by treatment
Investigation as failure



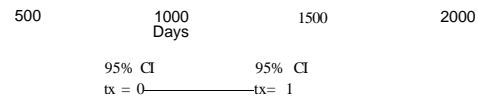
Outcome as failure: families with a re-report only

Log-rank test for equality of survivor functions

Treatment	Events observed	Events expected
0	100	113.8
1	38	24.2
TOTAL	138	138

P-value=0.002

Kaplan-Meier Survival Estimates by tx, families with re-report
Investigation as failure



Estimated hazard functions by tx, families with re-report
Investigation as failure

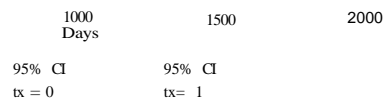
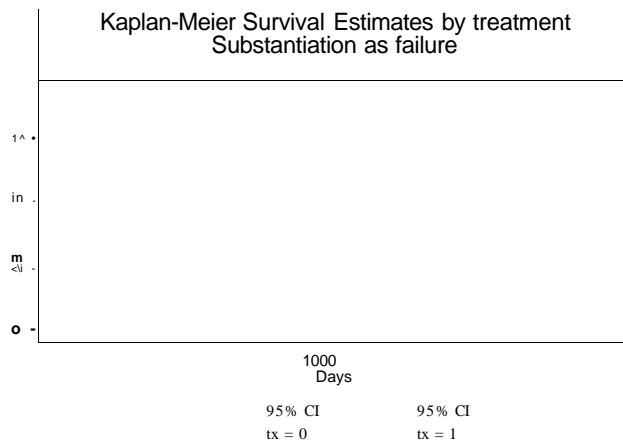


Figure 12: Substantiation as failure

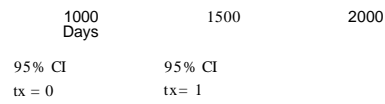
Log-rank test for equality of survivor functions

Treatment	Events observed	Events expected
0	18	21
1	9	6
TOTAL	27	27

P-value= 0.1657



Estimated hazard functions by treatment
Substantiation as failure

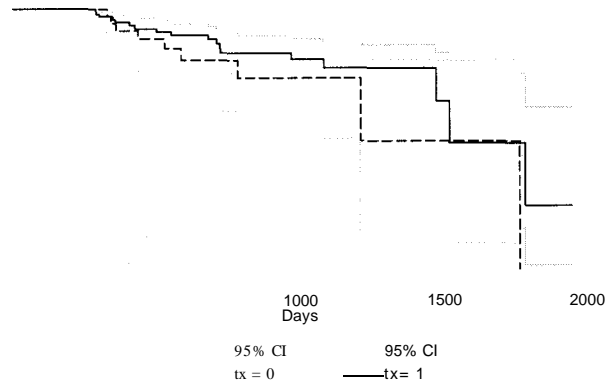


Substantiation as failure: families with an investigation only

Treatment	Events observed	Events expected
0	18	20.6
1	9	6.4
TOTAL	27	27

P-value=0.23

Kaplan-Meier Survival Estimates by tx, families with investigation
Substantiation as failure



Estimated hazard functions by tx, families with investigation
Substantiation as failure

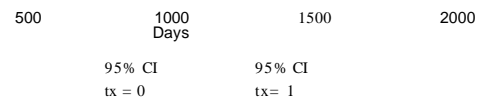


Table 1: State implementation of Differential Response, structural elements

State	Paraprofessionals	Duration of services	Use of home visitation
North Carolina	No, cases are managed by CPS social workers	Not specified	Yes, case management with weekly home visits
Missouri	No, cases are managed by CPS social workers	Not specified	No, case management specified but not home visitation
Minnesota	In most cases, no. In the majority of counties, CPS social worker acts as case manager.	In most counties, up to 90 days from the conclusion of the assessment	No, case management specified but not home visitation.
Virginia	No, cases are managed by CPS social workers	45-60 days	No, case management specified but not home visitation.
Washington	No, community-based organization staffed by Masters level social work professionals and public health nurses.	Not specified	Yes (frequency not given)

Table 2: Institutional resources dimensions examined, by study

Study	Resource type	Availability	Accessibility	Affordability	Quality
Peterson, Krivo & Harris, 2000	Recreation centers	/	X	X	X
Katz, Kling, Liebman, 2001	Playgrounds	X	X	X	•*
Klebanov, et al., 1998	Learning, social, and recreational opportunities	/	X	X	X
Brooks-Gunn, et al., 1998	Medical facilities	X	X	X	/*
Ludwig & Ladd, 1997	Educational facilities	X	X	X	V
Chase-Lansdale et al., 1997	Learning activities	<i>r</i>	X	X	X
Ensminger, Lamkin & Jacobson, 1996	Educational facilities	<i>S*</i>	X	X	X
Fuller et al, 1997	Child care	</	X	X	X
Small & Stark, 2005	Child care	<i>S</i>	X	X	X
Fuller et al., 2004	Child care	X	X	X	V
Levanthal & Brooks-Gunn, 2000 (Gautraux study)	Employment opportunities for youth	•/	X	X	<i>S</i>

Study addressed this dimension

Study did not address this dimension

Authors speculated on, but did not assess, this dimension

Table 3: Data on service types (total services=7,952)

Alcohol and drug treatment	Hospitals
Alcoholics Anonymous & Narcotics Anonymous meeting sites	Immigrant social services
Basic needs social services	Legal social services
Child care	Libraries
Churches	Medical facilities
Dental programs (publicly funded)	Mental health (agencies and school-based programs)
Employment social services	Youth development social services
Health (agencies and school-based programs)	

Table 4: Availability of services in Alameda County, by zip code

Geographic area	Minimum	Maximum	Mean	Standard Deviation
Within zip codes	46	3305	1027	622
Within zip codes and 1 mile buffers	55	3445	1172	681
Within ARS zips	841.00	2374.00	1415	492
Within ARS zip codes and 1 mile buffers	1017	2756	1681	551

Table 5: Comparison of demographic data, treatment and comparison groups

GENDER

	Male	Female
Tx	50% N=80	50% N=80
Notx	55% N=282	45% N=229

PRIMARY ETHNICITY

	Black	White	Hispanic	Ethnicity-Other	Ethnicity-Unknown
Tx	11% N=19	18% N=29	28% N=44	16% N=25	27% N=43
Notx	21% N=109	24% N=121	39% N=199	10% N=49	6% N=33

AGE AT TIME OF ARS REFERRAL OR INDEX REPORT

	During pregnancy or at birth	Infancy (birth to age 2)	Toddler (2-3)	Preschool (3-5)	Elementary age (6 to 12)**
Tx	1% N=2	38% N=61	15% N=24	45% N=72	1% N=1
No tx	0% N=1	28% N=142	16% N=84	55% N=281	1% N=3

NUMBER OF CHILD MALTREATMENT REPORTS PRIOR TO ARS REFERRAL OR INDEX REPORT

	Prior reports (none)	Prior reports (1 or more)
Tx	10% N=16	90% N=144
No tx	34% N=175	66% N=336

RISK LEVEL FOR TREATMENT GROUP

Risk level	Treatment group
Missing	18% N=29
Low	2% N=3
Moderate	40% N=64
High	33% N=52
Very High	8% N=12

Note: Percentages are rounded and may not sum to 100

**Of the children in the elementary age category, all three in the non-treatment group were six years old and the one in the treatment group was 12.

Table 6: Comparison of clients with re-report, investigated re-report, and substantiated re-report, treatment and comparison groups

RE-REPORTS

	Total number of re-reports	Maximum time to re-report	Minimum time to re-report	Mean time to re-report	Standard deviation
Tx	30% N=48	1765 days	295 days	641.8 days	334.5
No tx	32% N=163	1946 days	274 days	755.1	395.8

RE-REPORTS: ALLEGATION TYPES

	Emotional abuse	Neglect/ caretaker absence or <u>incapacity*</u>	Physical abuse	Sexual abuse	Substantial risk	Not determined
Tx	6% N=3	37% N=18	31% N=15	21% N=10	4% N=2	0% N=0
No tx	11% N=18	43% N=70	31% N=50	15% N=24	0% N=0	1% N=1

*Includes severe neglect

INVESTIGATION: RESPONSE TYPES

	Immediate	Ten day
Tx	58% N=22	42% N=16
Notx	66% N=66	44% N=44

INVESTIGATION: CONCLUSION TYPES

	Inconclusive	Substantiated	Unfounded	Not listed
Tx	21% N=8	24% N=9	50% N=19	5% N=2
Notx	19% N=19	18% N=18	58% N=58	5% N=5

SUBS' ANTIATION: ALLEGATION TYPES

	Emotional abuse	Neglect/ caretaker absence or <u>incapacity*</u>	Physical abuse	Sexual abuse	Substantial risk	Not determined
Tx	n/a	33% N=3	11% N=1	33% N=3	22% N=2	n/a
No tx	n/a	61% N=3	22% N=4	17% N=3	n/a	n/a

*Includes severe neglect

Note: Percentages are rounded and may not sum to 100