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Children's
Hospital
Melbourne

Sustained home visiting for vulnerable families and children

A literature review of effective programs

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Background

Parenting young children has become a more complex and stressful business, especially for those families in our community with the least resources (Grose, 2006; Hayes et al, 2010; Poole, 2004; Richardson & Prior, 2005; Trask, 2010). A widening gap exists between families that function well and those that are vulnerable. The paradox of service delivery for children and families is that vulnerable families – that is, those families with the greatest needs – are also the least likely to be able to access those services (Ghate & Hazel, 2002; Fram, 2003). A range of barriers exist for vulnerable and at risk families in making use of services (Carbone et al, 2004).

One of the key barriers to vulnerable families accessing services is that many find it difficult to relate to the formal service system and are easily alienated by practices others find acceptable. Research regarding parents' experiences of support services suggests that parents want services where they are simultaneously cared for and enabled in their role as parents, and to receive services characterised by empathy, competence, functionality, respect, flexibility and honesty (Attide-Stirling et al, 2001; Winkworth et al, 2009). Vulnerable parents fear a loss of autonomy in their interactions with support services and want services that are non-judgemental and that provide continuity of care (Ghate & Hazel, 2002; von Bultzingslowen, 2006).

In addition to the barriers faced by vulnerable and marginalised families in accessing services, the system does not work in an integrated or coherent fashion to ensure that all children and families needing support receive it. Furthermore, the vast majority of services for children and families in Australia do not have an outreach function, that is, a means of engaging these vulnerable and at risk families who are in need of support but use services inconsistently or not at all. In short, the service system was not designed to meet the needs of vulnerable families within the context of a rapidly changing social and economic climate. Therefore, many families requiring support are not receiving it.

The changing circumstances in which families are raising children and the need to support families who are struggling the most with these circumstances (i.e. vulnerable and marginalised families) has led the Federal and state Governments in Australia to implement a number of programs and initiatives such as *Communities for Children*, *Communities for Children Plus* and *Best Start*. So far, these programs have not succeeded in making significant improvements in child and family outcomes.

When considering the provision of support to vulnerable families during the antenatal, postnatal and early childhood periods a number of tensions emerge. Firstly, there is a tension in regards to identifying vulnerable families. *Risk based approaches* employ a series of indicators of risk factors known to be associated with a high likelihood of problems in parenting. One of the challenges with this approach is how to 'sell' programs to parents if they believe they don't need it.

In contrast to a risk-based approach, a *needs based approach* supports families on the basis of expressed needs or concerns. The benefit of a needs based approach is that families will be more likely to use services employing this approach. However the

approach poses a challenge for the service system in terms of promptly identifying and responding to families problems.

Another tension is different service paradigms. Prescriptive, manualised programs follow a specific sequence and they require the professionals who deliver them to undertake training as well placing a high importance on program fidelity (i.e. the program is delivered exactly as it was intended). A prescriptive, manualised approach contrasts with an approach whereby services are tailored to meet the needs and circumstances of clients and seeks to work with them in a way that is responsive to the issues that are of most concern to them. When compared to a prescriptive, manualised program this approach is harder to deliver in a rigorous fashion and relies less on training and more on the skills and experience of the individual professional (e.g. their ability to be clear about which strategy in their 'repertoire' works and which situation the strategy will be most effective).

In addition to considering *programs* it is also important to consider actual *practices*. One practice issue that is especially important is the relationship between the parent and the professional. Practices that are known to be essential for effective work with parents include the use of family centred and capacity building practices and responsiveness to family needs and circumstances. It is important to note, however, that these practices are "threshold" factors, that is, they are necessary but not sufficient for conditions for helping families become more effective parents. The evidence regarding effective practices appears to be stronger than the evidence regarding effective programs.

A third tension pertains to different interpretations of evidence based practice. The dominant model for determining effective practice is the randomised controlled trial however there are a range of problems with relying exclusively on these forms of evidence. Broader understandings of evidence incorporate practice based evidence and client values and preferences. Practice based evidence is a body of knowledge that can include individual clinical expertise, collective practice wisdom, practice-based syntheses, and concurrent gathering of evidence during practice (Centre for Community Child Health, 2011).

Studies of various forms of support and intervention with families, especially vulnerable families, have consistently shown that they are more effective when they acknowledge and build on family values and priorities, hence the importance of considering client values and preferences as part of the 'evidence base' (Affleck et al, 1989). Support and intervention that do not adopt this approach can be counterproductive or even harmful. In addition to the acknowledgement and utilisation of a broader evidence base, we also need a better understanding of how interventions work and how they achieve their effects.

A fourth tension relates to what the service system responds to. Traditionally, the service system has responded to symptoms (e.g. parenting difficulties) rather than causes (e.g. mental illness, domestic violence). It may be that the reason why parenting programs are not more effective than they have been is that they typically address these presenting problems rather than underlying causes (i.e. the reasons why families are vulnerable). If only the presenting problems are addressed then the impact of the

intervention are weakened. When considering responses to underlying causes, it is important to note that there are a range of specialist services to address problems such as drug abuse, domestic violence and mental health problems. Therefore, in developing new approaches to support vulnerable families it would not be desirable to duplicate these services. Rather, it would be more efficient to improve the integration of services.

The Centre for Community Child Health (CCCH) (2011) argues that new ante and postnatal services for vulnerable parents needs to have a dual focus. The target group needs ongoing help and support with parenting but attention also needs to be paid to the conditions that led parents to experience difficulties in the first place. These difficulties are likely to be ongoing but unless they are addressed they will undermine efforts to help parent to care for their children.¹

Home visiting for vulnerable families and their children

Home visiting is a service delivery strategy that aims to provide a range of supports for families (Boller et al., 2010). Home visiting is not a single uniform intervention, but a strategy for delivering a multiplicity of services (Boller et al., 2010; Howard and Brooks-Gunn, 2009; Kahn and Moore, 2010; Landy and Menna, 2006; Sweet and Appelbaum, 2004). As a result, home visiting programs come in many shapes and sizes, differing in their goals, intensity of services, staffing, whom they serve and delivered in different policy contexts (Gomby, 2005; Sweet and Appelbaum, 2004; Bennett et al, 2007).

Home visiting is becoming a common component of interventions for expectant families and families with young children within developed nations. For example, in the US, new legislation provides \$US1.5 billion for the provision of home visiting services to new and expectant families (U.S. Congress, 2010). States are required to select evidence-based home visiting models that will improve children's outcome in a range of areas (Boller et al, 2010). In Australia, existing home visiting programs are provided as part of some state-based maternal and child health or community child health services. These include Family Home Visiting in South Australia (Children, Youth and Women's Health Service, 2005) and Sustained Health Home visiting in New South Wales (NSW Department of Health, 2009).²

The popularity of home visiting programs is supported by their potential benefits including:

- advantages for parents in that they do not have to arrange transportation, child care or time off from work;

¹ CCCH (2011) summarised the evidence regarding programs for vulnerable families who are expecting a child and/or who have young children. The evidence was organised according to a range of topics and are outlined in Appendix A.

² Family Home Visiting (South Australia) is based on a universal platform and thereby enables early identification of family and child development issues, leading to the possibility of earlier intervention and problem prevention. Sustained Health Home visiting (NSW) is offered as part of a comprehensive, integrated approach to the care of women, their infants and families in the perinatal period. Families that require support additional to universal services are offered support in their homes over a two-year period.

- providing an opportunity for 'whole family' involvement, personalised service, individual attention and rapport building; and
- allows home visitors an opportunity to observe the environment in which families live, identify and tailor services to meet the needs of families, and build relationships in ways that may not be possible with other types of intervention (CCCH, 2011).

Despite the potential benefits, the diversity of home visiting programs has made it difficult to identify conclusively the extent to which home visiting is effective at improving maternal and child health outcomes (Bennett et al, 2007). Bennett et al (2007) state that: "it is unlikely that the answer to the question 'does home visiting work' will be a simple yes or no" (p. 13).

The difficulties in determining whether home visiting is effective are compounded by the fact that few home visiting programs have been evaluated (Watson et al, 2005). Those that have been evaluated are university-based programs which are more likely to be successful than large scale public policy driven initiatives possibly as a result of the difficulties maintaining fidelity in a large scale program (Watson et al, 2005).³ Furthermore, some types of home visiting programs lend themselves more easily to 'gold standard' methods of evaluation (e.g. randomised control trials) which means that other programs that do not lend themselves to this type of evaluation may be overlooked.

Although home visiting programs are diverse, they can be grouped into two types according to their intensity, scope and degree of prescriptiveness:

- comprehensive programs with detailed program manuals and an extensive schedule of visits; and
- programs that focus more specifically on parent-child interactions and that are less prescriptive.

Examples of comprehensive programs with detailed program manuals and an extensive schedule of visits include:

- *Nurse Family Partnership* (Olds, 2006; Olds et al., 2004)
- *Hawaii's Healthy Start Program* (Duggan et al., 1999; Kotelchuck, 2010)
- *Healthy Families America* (Daro, 1999)
- *Parents as Teachers (PAT) Program* (Wagner and Clayton, 1999)
- *Home Instruction Program for Preschool Youngsters (HIPPI)* (Baker et al., 1999)
- *Community Mothers Program* (Johnson et al., 2000)
- *Early Head Start* (Love et al., 2002, 2005)
- *The Solihull Approach* (Douglas, 2004; Douglas and Rheeston, 2009).

³ As a result of the diversity of home visiting programs, and the problems thereby with comparing them, Watson et al (2005) consider a range of questions about home visiting such: as who is likely to benefit from home visiting, what are the aims of home visiting and how do the characteristics of families affect the effectiveness of home visiting programs. They note that the answers to these questions are not clear-cut.

These are the types of programs that, because of their more structured formats, lend themselves more readily to formal evaluations, such as randomised controlled trials.

The second group of home visiting programs tend to be less structured in format as well as being more limited in their scope, focusing specifically on parent-child relationships. They include:

- Maternal sensitivity training (Bakermans-Kranenburg et al., 2003; Warren, 2007)
- Interaction coaching (McDonough, 2000; Puckering, 2009)
- The Circle of Security approach (Cooper et al., 2005; Dolby, 2007; Hoffman et al., 2006; Marvin et al., 2002; Powell et al., 2007)
- It Takes Two to Talk: The Hanen Program for Parents (Girolametto, 2006)
- PALS (Landry 2003, 2006; Landry, Smith and Swank 2006)
- The Developmental, Individual-Differences, Relationship-Based (DIR) Model (Greenspan and Weider, 2006; Weider and Greenspan, 2006)
- Marte Meo Developmental Support Program (Aarts, 2008)
- Promoting First Relationships (Kelly, 2000, 2008).

Overall, these programs have not been as rigorously evaluated as the previous group, but do have a strong rationale.

The fundamental principle underlying all of these models is that services must reach out and become sensitively responsive, offering a degree of continuity of support and interventions. The more vulnerable or marginalised the parents are the more significant will be the need to offer intense, consistent and specialist services (Svanberg and Barlow, 2009).

Another way of categorising home visiting programs is to differentiate them according to their underlying theoretical models (Landy & Menna, 2006). These different intervention approaches have been outlined by Landy and Menna (2006) and are presented in Table **1**.

Table 1

Psychodynamic Approaches

- Emphasise the effect of parent's early history on their interactions with their child
- Consider the effect of unconscious thoughts and feelings on behaviour and examine the deeper meaning of parents' statements
- Emphasise consideration of parent's defensive functioning and how it influences their ability to deal with problems
- See the relationship between a service provider and parent(s) as a critical part of the intervention
- Perceive social support and empowerment approaches as ignoring the internal world

of the individual and how this internal world influences perception and behaviour

Clinical and Therapeutic Approaches

- Stress the importance of parents and children receiving interventions that can overcome the particular difficulties that they have
- Offer interventions that vary according to the particular problems faced by the child and family, and work with them individually or together to overcome the difficulties
- See assessment of the child and family as an important precursor to intervention

Psychoanalytic Approaches

- Believe that it is crucial to go deeply into memories so that early developmental conflicts can be resolved
- View the birth of a child as a significant trigger for memories – both conscious and unconscious – that affect a parent’s view of his or her child and his or her interaction with the child

Individual Risk Approaches

- Look for variables in individual and families that can place development at risk and try to shift them or overcome them
- Consider the number and nature of risks and design interventions to improve them or significantly reduce them
- Emphasise the individual’s characteristics, rather than consider community factors (e.g., the family is “living in poverty”)

Social Support and Empowerment Approaches

- Believe that when parents feel better about themselves and the emphasis is on the positive, parents will do better than when the focus of intervention is on the unconscious
- Largely ignore the unconscious and emphasise current beliefs and plans for the future.
- Emphasise strengths rather than risk.
- Focus in the present and not the past.
- Actively involve the parent in choosing the goals for intervention.
- Link parents to support services in the community.

Community Development Approaches

- See clinical approaches as pathologizing the child or parent; believe that only individual’s strengths should be identified and worked with
- Focus on enhancing the community around the family because the family will be better able to function if the community is more supportive
- Having the parent involved in choosing suitable interventions is crucial for successful outcomes

Cognitive-behavioural Approaches

- Believe that distorted cognitive processes contribute to symptoms such as depression and aggression
- Considers emotions to be influenced by cognitions, and so it is not necessary to target them directly in the intervention
- Believe that it is not important to delve into the past but that changing current cognitions can alleviate or prevent symptoms from developing
- Provide strategies to help parents who have been traumatized to calm down and prevent triggering (e.g., mindfulness- based approaches)

Cognitive-behavioural approaches

- Use directive approaches and give the individual behavioural strategies to change his or her cognitions to more positive and constructive ones.

Population Health and Health Promotion Approaches

- Identify risks on a population health basis and provide large groups of parents with information that can enhance the health and development of their children
- Consider various aspects of parenting and development and provide information
- Believe that population wide strategies that can be applied in order to improve functioning of a large number of families (e.g., improvement of housing; supporting breast feeding) are more cost-effective than individualised approaches targeted at multi-risk families and their children

Landy and Menna (2006) argue that each of these approaches has its merits and that an integrative approach that uses strengths from various theoretical and intervention approaches and involves determining the most appropriate approaches for a particular child and family is the most effective.

Aim

This literature overview was undertaken to specifically review the Australian and international research evidence from rigorously evaluated key home visiting programs, in order to determine 'what works' in home visiting programs for vulnerable families and their children. Evidence of other kinds (i.e. apart from randomised controlled trials) may also need to be considered in the development of a home visiting program.

The aim of this review is to utilise information from rigorously evaluated key home visiting programs to assist decision-making regarding the potential components of an Australia-wide home visiting program for vulnerable families and their children.

The following trials of home visiting programmes (and the publications reporting upon the outcomes of those trials) were reviewed for this report:

- *The Nurse Home Partnership (Elmira trial)* (Olds et al, 1986; Olds et al, 1994; Olds et al, 1997; Olds et al, 1998);
- *The Nurse Home Partnership (Denver)* (Olds et al, 2002; Olds et al, 2004a);
- *The Nurse Home Partnership (Tennessee)* (Olds et al, 2004b; Olds et al, 2007; Kitzman et al, 2010; Olds et al, 2010)
- *The Hawaii Healthy Start Program* (Duggan et al, 1999; McCurdy et al, 2001; Duggan et al, 2004a; Duggan et al, 2004b; King et al, 2005; Bair-Merrett et al, 2010);
- *Healthy Families America* (Landsverk et al, 2002; Anisfeld et al, 2004; DuMont et al, 2006; Caldera et al, 2007; DuMont et al, 2010; Rodriguez et al, 2010);
- *Early Head Start – Home visiting* (Love et al, 2005);
- *The Early Start (NZ) Program* (Fergusson, 2005; 2006);
- *Community Mothers Program (CMP)* (Johnson, Howell & Molloy, 1993)
- *The Queensland Home visiting trial* (Armstrong et al, 1999; Fraser et al, 2000);
- *The Miller Early Childhood Sustained home visiting (MECSH) programme* (Kemp et al, 2011);
- The *MOSAIC Home visiting program* (Taft et al, 2011); and
- The *Postnatal home-visiting for illicit drug-using mothers and their infants home visiting program* (Western Australia).

These programs were chosen because they were evaluated using a randomised control trial method and were considered key home visiting programmes or were Australian based home visiting programs.

In addition to reviewing the literature that reported upon specific trials of home visiting programs, this review also explored the findings of the following recent systematic reviews and meta-analyses of home visiting programs for children and/or families:

- American Academy of Pediatrics (2009). The role of preschool home-visiting programs in improving children's developmental and health outcomes. *Pediatrics*, 123 (2): 598-603.
- Ammerman, R.T., Putnam, F.W., Bosse, N.R., Teeters, A.R., Van Ginkel, J.B. (2010). Maternal depression in home visitation: A systematic review. *Aggression and Violent Behavior* 15 (3), pp. 191-200.
- Astuto, J., & Allen, L. (2009). Home Visitation and Young Children: An Approach Worth Investing In? In *Society for Research in Child Development (Ed.)*, Social Policy Report, 23 (4), 1-28.
- Aslam, H., & Kemp, L. (2005). Home visiting in South Western Sydney: An integrative literature review, description and development of a generic model. Sydney: Centre for Health Equity Training Research and Evaluation.

- Bennett, C., Macdonald, G., Dennis, J., Coren, E., Patterson, J., Astin, M., & Abbott, J. (2007). Home-based support for disadvantaged adult mothers. In T. C. Collaboration (Ed.), (Issue 4): The Cochrane collaboration.⁴
- DataPrev. (2011). Home visiting programmes (DataPrev Project). Available at: [http://www.dataprevproject.net/Parenting and Early Years/home visiting programmes](http://www.dataprevproject.net/Parenting_and_Early_Years/home_visiting_programmes)
- Doggett, C., Burrett, S. L., & Osborn, D. A. (2009). Home visits during pregnancy and after birth for women with an alcohol or drug problem (Review). In T. C. Collaboration (Ed.): The Cochrane Collaboration.
- Drummond, J. E., Weir, A. E., & Kysela, G. M. (2002). Home visitation programs for at-risk young families: a systematic literature review. *Canadian Journal of Public Health*, 93(2), 153-158.
- Gomby, D.S., Culross, P.L., and Behrman, R.E. (1999). Home visiting: Recent program evaluations – Analysis and recommendations. *The Future of Children*, 9 (1), 4-26.
- Gomby, D.S. (2005). Home Visitation in 2005: Outcomes for Children and Parents. Invest in Kids Working Paper No. 7. Committee for Economic Development Invest in Kids Working Group. http://www.ced.org/docs/report/report_ivk_gomby_2005.pdf.
- Holzer, P. J., Higgins, J.R., Bromfield, L.M., Richardson, N. and Higgins, D.J. (2006). The effectiveness of parent education and home visiting child maltreatment prevention programs. *Child Abuse Protection Issues* no.24 (Autumn): 1-23.
- Kendrick, D., Elkan, R., Hewitt, M., Dewey, M., Blair, M., Robinson, J., Williams, D. and Brummell, K. (2000). Does home visiting improve parenting and the quality of the home environment? A systematic review and meta analysis. *Archives of Disease in Childhood*, 82 :443-451.
- Leis, J. A., Mendelson, T., Tandon, D., & Perry, D. (2009). A systematic review of home-based interventions to prevent and treat postpartum depression. *Archives of Women's Mental Health*, 12, 3-13.
- Macdonald, G., Bennett, C., Dennis, J., Coren, E., Patterson, J., Astin, M., & Abbott, J. (2007). Home-based support for disadvantaged teenage mothers. In T. C. Collaboration (Ed.), (Issue 4): The Cochrane Collaboration.⁵
- McNaughton, D. B. (2004). Nurse home visits to maternal-child clients: a review of intervention research. *Public Health Nursing*, 21 (3): 207-219.

⁴ This review was withdrawn from The Cochrane Collaboration in 2007. The reasons for the withdrawal of the review were that the conclusions of the review were inaccurate. The inaccuracies related to three factors: (1) the attempt to synthesise evidence from trials of heterogenous programs conceals important difference among the programs and their effects; (2) basic methodological standards were not met; and (3) the approach taken with the literature further obfuscates the literature. The lead author on the feedback on the review was David Olds et al (The Cochrane Collaboration, 2007).

⁵ This review was also withdrawn. The feedback discussed in footnote 4 pertained to both the Bennett et al (2006) and Macdonald et al (2006) reviews.

- Miller, S., Maguire, L. K., & Macdonald, G. (2012). Home-based Child Development Interventions for Preschool Children from Socially Disadvantaged Families. In T. C. Collaboration (Ed.): The Campbell Collaboration.
- Nievar, M. A., Van Egeren, L., & Pollard, S. (2010). A meta-analysis of home visiting programs: moderators of improvements in maternal behaviour. *Infant Mental Health Journal*, 31(5), 499-520.
- Sweet, M. A. and Appelbaum, M.I. (2004). Is home visiting an effective strategy? A meta-analytic review of home visiting programs for families with young children. *Child Development*, 75 (5): 1435-1456.
- Watson, J., White, A., Taplin, S., & Huntsman, L. (2005). Prevention and Early Intervention Literature Review. In N. D. o. C. Services (Ed.). Sydney: NSW Department of Community Services.

Report Structure

The review is organised according to four key 'components' of home visiting programs. These have been derived from reviewing the literature and are designed to cover what might be considered important in developing an Australian home visiting program. They include process, program and practice elements. Although the literature alone is unlikely to provide definitive answers to the best approach for each component, it does highlight where there is a convergence of research outcome and where substantial gaps remain.

1. Process components of home visiting:

- Number of visits
- Age of commencing/finishing
- Antenatal versus postnatal recruitment
- Eligibility criteria
- Use of Quality Improvement
- Use of ICT
- Use of implementation principles and process evaluation
- Service coordination
- Maintaining engagement with itinerate families

2. Content components of home visiting

- Parenting
- Parent health
- Child health and development
- Addressing background factors
- Summary of content delivery mechanisms (face to face, internet, DVD etc)

- Approaches to delivering content (curriculum, modules, motivational interviewing, coaching)
3. Workforce (practice)
- Home visitor qualifications
 - Home visitor competencies
 - Caseload
 - Clinical supervision
 - Training and coaching
4. Impacts and outcomes
- Summary of measured outcomes
 - Statistical impact
 - Economic impact
 - Summary of process measures.

Each of these sub-components is discussed in light of the findings from the trials, systematic reviews and meta-analyses. Where limited information is available for a component, alternative bodies of literature that may be useful are suggested.

After the review of literature about each component, a comparison of findings from 'effective' and 'less effective' programs for infants/children and 'effective' and 'less effective' programs for parents is provided. An effective program was one that showed evidence of an association at $p < 0.05$ for a number of outcomes. However, the categorisation of the programs requires further consideration due to the difficulties of comparing home visiting programs, as a result of the diversity within the field (e.g. varying designs, implementation, administration, size, location and target group).

This comparison of findings information is included to help guide decision-making about the components of a home visiting program. Any commonalities between effective programs may provide insight into what makes a home visiting program effective. However, it is important to note that because of the aforementioned differences between home visiting programs (e.g. goals, intensity of services, staffing, whom they serve, policy contexts) this information should be used as a guide only.⁶

⁶ Bennett et al (2007) notes that when comparing the effects of different home visiting programs, the outcomes of a program always need to be considered. If different programs intend to produce different outcomes then it is problematic to compare them in terms of their effectiveness. This was partly the reason behind the withdrawal of the Bennett et al (2007) and Macdonald et al (2007) Campbell Collaboration systematic reviews (see footnote 4).

1. PROCESS COMPONENTS OF HOME VISITING

1.1 Number of visits

Systematic reviews and meta-analyses

Findings regarding the impact of the number of visits (also referred to as 'intensity' and 'dose') on the outcomes of home visiting programs are mixed. Some research clearly states that the frequency of visits is integral to the effectiveness of a program. For example, Nievar et al (2010), in a meta-analysis of home visiting programs for at-risk families, notes that the effectiveness of home visiting programs is principally dependent upon the intensity and frequency of services, stating that:

A critical predictor of the differences in effect sizes across studies was the frequency of home visiting... Across all studies, intensive programs or programs with more than three visits per month had a medium mean effect size, more than twice the size of mean effects in non-intensive programs. [These] findings suggest that programs with more frequent contact between home visitors and their clients are most successful (emphasis added).

This finding is supported by Gomby et al (1999) who note that families receiving more home visiting contacts appear to benefit more from the intervention and Thornton et al (in Watson et al, 2005) who suggest that home visiting programs with less frequent visits are less effective. Similarly, Holzer et al (2006) argues that for programs that seek to reduce child maltreatment, more intense and prolonged programs are generally more effective than short-term programs. Furthermore, Gomby (1999) notes that if home visits are too infrequent, it may be difficult to build close home visitor-parent relationships and these relationships are "the precursor to behaviour change" (p. 5).

Gutterman et al (2001) claims that the intensity *and duration* (i.e. the length of time over which the visits are undertaken) of home visiting services is the key to achieving intended outcomes. However, Nievar et al (2010) suggests that the duration may be less important than the intensity and frequency of services, noting that short-term *intensive* interventions can be highly effective. In support of this claim, Doggett et al's (2009) systematic review of home visits during pregnancy or after birth for women with an alcohol or drug problem found that short-term (at least 4 weeks) intensive interventions delivered by trained counsellors to postpartum women with a drug problem can increase the number of women attending drug and alcohol services; however, this outcome not maintained over the long term.

In contrast to Nievar et al's (2010) findings, Aslam & Kemp's (2005) systematic review of home visiting programs found no pattern of difference in the average intensity and duration of the program related to the outcomes measured. Similarly, Kendrick et al's (2000) systematic review of home visiting programs concluded that studies which failed to show a positive effect of home visiting do not appear to be distinctive in terms of "characteristics of intervenors, participants, nature, *duration, and intensity* of intervention" (p. 450; emphasis added).

Although Aslam and Kemp found not pattern of difference in the average intensity and duration of programs, they note, however, that:

Overall, the trend was for studies showing significant positive outcomes to include a greater number of visits over a longer duration, with the exception of studies reporting significantly positive outcomes in the environment and maternal depression/self-esteem. These specific positive outcome studies tended to include fewer visits over a shorter duration (p. 23).

In other words, Aslam and Kemp's (2005) study suggests that, for home visiting programs that seek to bring about a change in the family environment or maternal depression/self-esteem, the number of visits and the duration of the program appears to be less important when compared to programs that seek to bring about other types of outcomes.

Some research has suggested a required 'dosage' of home visiting services. For example, in a meta-analysis of 8 home visiting systematic reviews (DataPrev, 2011) found that program effects were stronger for interventions that lasted for 6 months or more and involved more than 12 home visits. Furthermore, Gomby et al (1999) cites research which suggests that at least 4 visits or 3-6 months of service are required in order for change to occur. Thornton et al (in Watson et al 2005), found that ideally home visits should occur weekly or, at the least, once per month.

Generally, however, the literature does not prescribe a specific number of visits, focusing instead upon the complexities inherent in the relationship between frequency of visits and program outcomes. For example, Sweet and Applebaum (2004), in their systematic review of home visiting programs for families with young children, found that the number and 'amount' (i.e. length of individual visits) of home visits predicted effect size only for child cognition outcomes. For these outcomes more visits and more hours of visits tended to increase effect sizes, however they also note that the magnitude of the effect was very small. Taking into account the very small magnitude of the effect and the fact that there was no significant effect for the other outcome types, they conclude that "the effect of home visit dosage is weak at best" (p. 1446).

Sweet and Applebaum (2004) findings highlight the importance of considering the intended outcomes of the program when determining how many home visits are required. In keeping with this finding, McNaughton's (2004) systematic review of nurse home visiting interventions notes that the 'dosage' of a home visiting intervention will depend upon the goal of the home visits. For example, if the goal is to link clients with an immunisation program the number of visits will be less than if the goal is to develop parents' problem solving skills. Indeed, Aslam and Kemp (2005) found that the intensity of home visiting programs varies depending upon the program content. Counselling programs had the least number of visits on average (13.5) and problem solving programs had the most (39.1).

Other researchers highlight the importance of the characteristics of the families when considering the frequency of home visits. For example, Ammerman et al (2010) found that relatively brief treatments (4-8 sessions) may be appropriate for mothers with minor depression or for mothers who have extensive social support, but that women who are 'at-risk' or have more severe manifestations of depression will require longer and

more intense interventions (15-20 sessions).⁷ Thornton et al (in Watson et al, 2005) make a similar point regarding duration, claiming that for families with multiple and complex problems services need to be delivered for three to five years to ensure changes over the long-term.

In regards to the frequency of home visits, Drummond et al's (2002) systematic review of home visiting programs for at-risk young families found that most home visiting programs fall short of the expected number of home visits. The best outcome, in terms of meeting the expected number of visits, was the Nurse Home Partnership program, which reached 50% of expected number of visits.

Text box 1

Comparison of findings from home visiting programs: Number of visits

Effective programs for infants and children

- The total average number of visits for the Elmira trial of the Nurse Home Family Partnership was 32 (9 visits during pregnancy and 23 visits up to the age of 2).
- The total average number of visits for the Denver trial of the Nurse Home Family Partnership was 27.5 (6.5 visits during pregnancy and 21 visits during the first two years after birth).
- The total average number of visits for the Tennessee trial of the Nurse Home Family Partnership was 33 (7 during pregnancy, 26 visits during the first 2 years after birth).
- The total average number of visits for the Healthy Families America trial varied from 21.0 – 35.4.
- The total average number of visits for this trial of the Early Head Start program was between 44-66 (2-3 visits per month during the average duration of involvement of participants of 22 months).⁸
- The total average number of visits for this trial of the Early Start program (NZ) is not specified (the average duration of involvement of participants of 24 months).
- Home visitors in the Community Mothers' Programme were scheduled to visit intervention group mothers once a month for the first year of the child's life. The majority (65%) of mothers in the intervention group received at least 10 visits, 27% received 5-9 visits and 9% received fewer than 5 visits.

Less effective programs for infants and children

- The total average number of visits for this trial of the Queensland Home Visiting trial was 22 visits (during the first year).

⁷ Ammerman et al (2010) state that: "although it is tempting to reduce the number of sessions to decrease costs and allocate limited resources more widely, in the case of maternal depression this is likely to come at the expense of positive and sustainable outcomes for mothers and children" (p. 198).

⁸ This was calculated by multiplying the number of visits per month by the average rate of involvement of participants.

- The total average number of visits for this trial of the MECSH program was 16.3.

Effective programs for parents

- See above for information about the Elmira trial of the Nurse Home Family Partnership.
- See above for information about the Denver trial of the Nurse Home Family Partnership.
- See above for information about the Memphis, Tennessee trial of the Nurse Home Family Partnership.
- The total average number of visits for the Hawaii Healthy Start program was 13-28 visits over at least 3 years.
- See above for information about the Healthy Families America trial.
- See above for information about the Early Head Start program.⁹
- See above for information about the Early Start program (NZ).
- See above for information about the Community Mothers' Programme.
- See above for information about the Queensland Home Visiting trial.

Less effective programs for parents

- See above for information about the MECSH program was 16.3
- The majority of participants in the MOSAIC trial received weekly visits from a mentor and the majority received 12 months of mentoring support.
- The total number of visits for the Postnatal home visiting program for illicit drug-using mothers and their infants was 8.

1.2 Age of commencing/finishing

Systematic reviews and meta-analyses

Most home visiting programs reviewed for this literature review commenced during or prior to the first week of the child's life (see Text box 2 below). The earliest point of commencement was prenatal and the latest point of commencement was 5 years (MOSAIC). Half of the programs finished when the child was between 2-3 years of age. Two programs finished when the child was younger, two ended when the child was older and information for one program was not available about the finishing age.

The literature does not explore in any great depth the impact of child's age of commencement and finishing upon the effectiveness of home visiting programs. Sweet and Applebaum's (2004) meta-analysis found that the outcomes of home visiting programs did not vary according to the age of child that the program targeted. The Centre for Community Child Health (2011) argues that there is no logical reason why a program such as the Nurse Family Partnership program should conclude when children

⁹ This was calculated by multiplying the number of visits per month by the average rate of involvement of participants.

reach 2 years of and that families who are vulnerable and in need of support before a child is born, are likely to require support through a child's early years.

Commenting upon Bryce et al's (1991) and Armstrong et al's (1999) findings that home visiting programs with the lowest drop-out rates are those that were delivered to participants at risk of poor pregnancy outcomes or poor health for their infants, McNaughton et al (2004) speculate that participants stayed in these studies because of their potential benefits and because neither of the interventions required a long term commitment.

Text box 2

Comparison of findings from home visiting programs: Age of commencing/finishing

Effective programs for infants and children

- The (child) age range for commencing and finishing the Elmira trial of the Nurse Home Family Partnership was antenatal – 2 years of age.
- The (child) age range for commencing and finishing the Denver trial of the Nurse Home Family Partnership was antenatal – 2 years of age.
- The (child) age range for commencing and finishing the Tennessee trial of the Nurse Home Family Partnership was antenatal – 2 years of age.
- The (child) age range for commencing and finishing the Healthy Families America trial was antenatal – at least 3 years.
- The (child) age range for commencing the Early Head Start program is 5 months (the average age of commencement). The (child) age range for finishing is not specified.¹⁰
- The (child) age range for commencing and finishing the Early Start program (NZ) was within the first 3 months of birth – 5 years (maximum).
- The (child) age range for commencing and finishing the Community Mothers Programme was birth – 1 year.

Less effective programs for infants and children

- The (child) age range for commencing and finishing the Queensland Home Visiting trial was 1 week of age – 12 months of age.
- The (child) age range for commencing and finishing the MECSH program was prenatal (average 26 weeks gestation) – 2 years of age.

Effective programs for parents

- See above for information about the Elmira trial of the Nurse Home Family Partnership.

¹⁰ Programs had latitude in terms of when they enrolled families. They could enrol families with children up to 12 months. The average age at random assignment was 5 months, with one quarter of the families enrolling while the mother was still pregnant with the focus child (Love et al, 2005).

- See above for information about the Denver trial of the Nurse Home Family Partnership.
- See above for information about the Memphis, Tennessee trial of the Nurse Home Family Partnership.
- The (child) age range for commencing and finishing Hawaii Healthy Start program was 1 week to at least 3 years of age.
- See above for information about the Healthy Families America trial.
- See above for information about the Early Head Start program.
- See above for information about the Early Start program (NZ).
- See above for information about the Community Mothers' Programme.
- See above for information about the Queensland Home Visiting trial.

Ineffective programs for parents

- See above for information about the MECSH program.
- The (child) age range for commencing the MOSAIC trial was 0-5 years of age and the program was 12 months in duration (Taft, 2011).
- The (child) age range for commencing and finishing Postnatal home visiting program for illicit drug-using mothers and their infants was 1 week – 6 months of age.

1.3 Antenatal versus postnatal recruitment

Systematic reviews and meta-analyses

Overall, the research supports antenatal, as opposed to postnatal recruitment (DataPrev, 2011). In their meta-analysis of home visiting systematic reviews, DataPrev (2011) notes that interventions that begin early (either antenatally or at birth) are more effective than those that begin in later parenthood. Similarly, Aslam and Kemp (2005) found that programs that commence antenatally report a greater number of significant positive outcomes when compared to studies that commenced postnatally. This is especially the case in terms of child behaviour outcomes. Daro et al (2006) also report that when women are recruited during pregnancy, birth outcomes are more positive and they have stronger parenting outcomes than women enrolled postnatally. However, studies of maternal depression and self esteem showed positive outcomes when commencing postnatally.

Text box 3

Comparison of findings from home visiting programs: Antenatal versus postnatal recruitment

Effective programs for infants and children

- The Elmira trial of the Nurse Home Family Partnership recruited during the antenatal period

- The Denver trial of the Nurse Home Family Partnership recruited during the antenatal period
- The Tennessee trial of the Nurse Home Family Partnership recruited during the antenatal period
- The Healthy Families America trial recruited during the antenatal and postnatal period¹¹
- The Early Head Start program recruited during the antenatal and postnatal period.
- The Early Start program (NZ) recruited during the postnatal period.
- The Community Mothers Programme recruited during the postnatal period.

Less effective programs for infants and children

- The Queensland Home Visiting trial recruited during the postnatal period.
- The MECSH program recruited during the antenatal period.

Effective programs for parents

- See above for information about the Elmira trial of the Nurse Home Family Partnership.
- See above for information about the Denver trial of the Nurse Home Family Partnership.
- See above for information about the Memphis, Tennessee trial of the Nurse Home Family Partnership.
- See above for information about the Healthy Families America trial.
- See above for information about the Early Head Start program.
- See above for information about the Early Start program (NZ).
- See above for information about the Community Mothers' Programme.
- See above for information about the Queensland Home Visiting trial.

Ineffective programs for parents

- See above for information about the MECSH program.
- The MOSAIC trial recruited during both the antenatal and postnatal.
- The Postnatal home visiting program for illicit drug-using mothers and their infants recruited during the antenatal period.

1.4 Eligibility criteria

Systematic reviews and meta-analyses

Overall, the literature appears to support the view that home visiting programs are more effective for families from low socio-economic backgrounds when compared to other

¹¹ The San Diego trial only recruited mothers after they had given birth. The New York trial recruited mothers before and after they gave birth (DuMont et al, 2006).

families (Watson et al, 2005; Karoly et al in Astuto & Allen, 2009). For example, the Elmira trial of the Nurse Family Partnership indicated that the program effects were more pronounced amongst mothers and children at greater socio-demographic risk (e.g. poor and/or unmarried and/or teenage mothers) (Olds, 2007b). The effects of the program on child maltreatment and child injury were further concentrated amongst women who had a limited sense of control over their lives (Olds, 2007b). Olds (2007b) states that,

there is now consistent evidence from trials of the NFP that program effects on caregiving and children are more pronounced among disadvantaged families where mothers have low psychological resources (p. 3).

Similarly to Olds (2007), Aslam and Kemp (2005) conclude that, in the Australian context, positive outcomes are most likely from home visiting interventions with mothers from low socioeconomic groups, including those that are based upon specific subgroups within the population (e.g. teenage or unmarried mothers, specific ethnic groups). They note that some benefit may also be gained from a focus on first-time mothers and that highly targeted programs for mothers with postnatal depression also achieve positive outcomes in maternal depression/self-esteem outcomes.

Furthermore, Holzer et al's (2006) systematic review found that for programs that aim to target child maltreatment, targeting an at risk population are likely to be more successful than other programs. Gomby (2005) suggests that home visiting programs are most effective where either the initial need is greatest and/or where parents feel their children need the service.

Neivar et al (2010) notes that programs that target at risk families are more cost-effective in the long term. For example, children of families in at risk families more likely to access criminal justice system therefore programs that target at risk families lead to greater cost benefits.

Landy and Menna (2006) argue that, in general, an inverted U-shaped association has been found between the level of risk and effectiveness of intervention, whereby those least at risk or at low risk and those at high risk benefit least from home visiting programs. Those at moderate risk usually show the best outcomes.

Targeting programs towards families from specific ethnic groups also emerges as a factor that may enhance the impact of home visiting programs. Aslam & Kemp (2005) found that mothers recruited on the basis of race or low socioeconomic status were likely to show significant positive outcomes, more-so than non-significant outcomes, particularly on measures of child behaviour, child health and the home environment.

Nievar et al (2010) notes that the benefits of home visiting for at-risk families could be attributed to the fact that at-risk families have more room for improvement when compared to low risk families. However, some researchers such as Bakermans-Kranenburg et al (2005) suggest that middle class families will benefit more from home visiting programs than at-risk families as a result of the 'Matthew effect' (whereby those who have existing resources utilise available opportunities to build upon those resources, and those who do not have existing resources remain disadvantaged). Nevertheless, the

evidence regarding who benefits from home visiting (as described previously) does not appear to support this claim.

Sweet and Applebaum's (2004) research suggest that the eligibility requirements of a home visiting program leads to differing effect sizes, with the desired outcomes of the program being an important contributing factor. They found that home visiting programs with a targeted recruitment strategy (i.e. not universal) that sought to impact upon child cognitive outcomes or child maltreatment outcomes had significantly higher effect sizes than programs that had universal enrolments. However, for parenting behaviour outcomes the effect was reversed; effect sizes were significantly higher when families were universally enrolled when compared to targeted enrolment. Sweet and Applebaum (2004) do not hypothesise why this might be the case, other than stating that the results from targeted population analyses are "often contradictory and hard to interpret" (p. 1447).

Watson et al (2005), in a consideration of key issues relating to home visiting, claim that home visiting is an especially useful intervention when mothers' need for support is exacerbated by social isolation, lack of psychological resources and disadvantage (e.g. limited transport options, few family supports). However, Watson et al (2005) also argues that programs aimed at disadvantaged parents can stigmatise involvement in a service. They argue that a home visiting service is more likely to be taken up if it is offered on a universal basis to a particular geographic area or to a certain group of people (e.g. first-time mothers).

Text box 4

Comparison of findings from home visiting programs: Eligibility criteria

Effective programs for infants and children

- The Elmira trial of the Nurse Home Family Partnership actively recruited pregnant women who had no previous live births, were less than 26 weeks gestation, and had any one of the following: (1) young age (<19 yrs) (2) single parent status (3) low socioeconomic status. However, any woman who asked to participate could enrol in the program if she had no previous live births.
- The eligibility criteria for the Denver trial of the Nurse Home Family Partnership was first time mothers who qualified either for Medicaid or did not have private health insurance.¹²
- The eligibility criteria for the Tennessee trial of the Nurse Home Family Partnership was first time mothers with no specific chronic illnesses (that might contribute to foetal growth retardation or pre-term delivery) and at least two of the following socio-demographic characteristics: unmarried, less than 12 years of education or unemployed.
- The eligibility criteria for the Healthy Families America trial was parents facing a range of challenges who also did not pass the Kempe Family Stress Checklist.

¹² First time mothers were defined as mothers who had had no previous live births.

- The eligibility criteria for the Early Head Start program was families who were at or below the federal (US) poverty level.
- The eligibility criteria for the Early Start (NZ) program was any family that had two or more of a number of risk factors including: extent of family support, whether the pregnancy was planned or unplanned, substance abuse and family violence or where there are serious concerns about the family's capacity to care for the child and after a one month probation period did not pass an assessment that is similar to the Kempe Family Stress Checklist.
- The eligibility criteria for the Community Mothers' Programme was first time mothers who lived in a defined deprived area of Dublin.

Less effective programs for infants and children

- The eligibility criteria for the Queensland Home Visiting trial was women who reported one or more of the following risk factors: physical forms of domestic violence, childhood abuse of either parent, sole parenthood, ambivalence to pregnancy (i.e. sought abortion or no antenatal care) and three or more of the following risk factors: maternal age less than 18 years; unstable housing, financial stress, less than 10 years of maternal education, low family income, social isolation, history of mental health disorder (either parent), alcohol or drug abuse and domestic violence other than physical abuse. Women with poor English literacy skills were excluded.
- The eligibility criteria for the MECSH program was mothers who did not require an interpreter and mothers with one or more of a number of risk factors for poor maternal or child outcomes including maternal age under 19 years, current probable distress (based upon the Edinburgh Depression Scale) and lack of emotional and practical support.

Effective programs for parents

- See above for information about the Elmira trial of the Nurse Home Family Partnership.
- See above for information about the Denver trial of the Nurse Home Family Partnership.
- See above for information about the Tennessee trial.
- See above for information about the Healthy Families America trial.
- See above for information about the Early Head Start program.
- See above for information about the Early Start (NZ) program.
- See above for information about the Community Mothers' Programme.
- See above for information about the Queensland Home Visiting trial.

Ineffective programs for parents

- See above for information about the MECSH program.

- The eligibility criteria for the MOSAIC trial was mothers who were pregnant or had at least one child five years or younger and disclosed intimate partner violence or were psychosocially distressed (Taft, 2011).¹³
- The eligibility criteria for the Postnatal home visiting program for illicit drug-using mothers and their infants was English speaking illicit drug-users attending an antenatal chemical dependency unit.

1.5 Use of Quality Improvement

Systematic reviews and meta-analyses

Ongoing quality improvement of a program ensures that its ongoing feasibility, efficiency, engagement, cultural relevance and effectiveness (Lau in Ammerman, 2010, p. 198; Astuto & Allen, 2009). Quality improvement involves the modification and adaptation of treatments to meet the needs of populations and the settings in which programs are delivered, whilst retaining the core features of the program (Lau in Ammerman, 2010, p. 198). Quality improvement is necessary because: “treatments developed and tested in highly controlled settings are less effective when implemented in real world settings” (Weisz, Weiss, Han, Granger, & Morton, 1995).

Implementation problems and family and community context can limit what home visiting programs can achieve, unless service quality is improved and home visiting models are adapted. Policymakers and practitioners cannot always expect the same results obtained at one program site to be duplicated at another (Gomby, 2007). Gomby (2007) notes that to increase the likelihood of successful duplication, programs should focus on improving quality.

Very little literature reviewed for this review discussed quality improvement and most evaluations of home visiting programs reviewed did not include information about the process of quality improvement (see Text box 5 below).

Text box 5

Comparison of findings from home visiting programs: Use of quality improvement

Effective programs for infants and children and parents

- Healthy Families America sites can propose enhancements to the model, such as including clinical staff for addressing substance abuse and depression. In an effort to promote ongoing quality improvement, the program standards are revised periodically to meet the changing needs of families and programs.
- The quality of the Early Head Start – Home Visiting program is maintained through adherence to a number of program performance standards.

¹³ Women were ineligible if they had a serious mental illness and were not taking their medication or if their English was inadequate for informed consent (unless they spoke Vietnamese as Vietnamese-speaking staff and home visiting mentors were included in the study).

Less effective programs for infants and children and parents

- The Queensland Home visiting program incorporated weekly interdisciplinary assessment, planning and evaluation of program strategies.

No information on the quality improvement processes of the following programs was identified:

- The Nurse home partnership Elmira trial;
- The Nurse home partnership Denver trial;
- The Nurse home partnership Tennessee trial;
- Early Start (NZ);
- Community Mothers' Programme;
- MECSH program;
- MOSAIC; and
- The Postnatal home visiting program for illicit drug-using mothers and their infants.

1.6 Use of ICT

Systematic reviews and meta-analyses

None of the literature reviewed discussed the use of ICT. None of the trials reviewed mentioned the use of ICT as part of a home visiting program.

Alternative literature: the application of technology within social and welfare services (e.g. Feil et al, 2008; Parrott & Madoc-Jones, 2008; Tregeagle & Darcy, 2008); the application of technology within the health sector (Grigsby & Sanders, 1998).

Text box 6

Comparison of findings from home visiting programs: Use of ICT

None of the information identified for this review described the use of ICT as part of a home visiting program.

1.7 Use of implementation principles and process evaluation

Systematic reviews and meta-analyses

The way in which evidence is translated into practice – and how that can be done effectively – is a key concern for policy-makers and service providers in the field of child and family services. Fixsen et al (2009) argues that the “missing link” between science (i.e. evidence) and service is implementation. In other words, implementation is the key for ensuring that the evidence regarding what works is translated into practice. Implementation principles ensure that a program is being delivered with fidelity (i.e. as intended) and process evaluation tracks whether implementation principles are being adhered to. As Sweet and Applebaum (2004) note:

just because a program reports certain goals, features, and services as delivered does not mean that this is actually the case when it comes to individual homes and families.

Gomby (2007) argues that what determines the effectiveness of a home visiting program is what happens when home visitors are in the home – what issues they discuss, their relationship with families and so on. What is important, in other words, is the content of the program – not as designed, but as delivered by the home visitors and as received by the families.

Astuto and Allen (2009) note that most reviews of home visiting programs do not report upon implementation fidelity. Drummond et al (2002) also notes that few programs describe quality control practice. Of those that do report quality control, systematic paper audits and frequent observations of home visits by supervisory staff were the most common methods curricula (Drummond et al, 2002).

Hebbeler and Gerlach-Downie (2002) suggest that ultimately improving the effectiveness of home visiting services depends upon understanding more about the nature of what is supposed to happen and what does actually happen over the course of a home visiting program. Understanding the inner workings and critical characteristics of home visiting programs may help explain why such an appealing strategy as home visiting has yet to live up to its promise and what has to happen for it to do so.

Hebbeler and Gerlach-Downie (2002) undertook a qualitative analysis of why a home visiting program failed to achieve its intended outcomes. The original experimental study involved a longitudinal investigation of a program that provided monthly home visits to mothers over the first 3 years of the child's life. The study used a randomized design with 500 families assigned to the home visiting treatment or control group. The study found small and inconsistent effects of participation in the home visiting program on parent knowledge, attitude and behavior but no overall gains in child development or health. Hebbeler and Gerlach-Downie used qualitative methods to provide an in depth look at the content of the home visits and the nature of the interaction between the home visitor and the mother in order to understand precisely how the program improved developmental outcomes for children or, alternatively, to explain why it did not.

In exploring why the program was not more effective, Hebbeler and Gerlach-Downie focused on the home visitor's theory of change, that is, how they understood the connection between what they did and the intended outcomes. They note that an inadequate theory of change is a fundamentally different explanation from those typically put forward in the literature when a home visiting program does not achieve its intended results. Typical explanations include that the program was not fully implemented, the program was not intensive enough, or the program was not comprehensive enough.

Jones Harden (2010) argues that home visiting during the early childhood years is an effective service delivery mechanism, *when implemented in a quality manner*. Arguably, it is even more important to attend to the quality implementation of home-based interventions when they are delivered to psychologically vulnerable families. These

services must have an explicit goal, a specific target population, and an associated theory of change.

Alternative literature: implementation science and diffusion of innovation literature (e.g. Fixsen et al, 2009; Rogers, 2003; Salveron, Arney & Scott, 2006); structural and process aspects of home visiting programs (Jones-Harden, 2010); process factors linked to effective early childhood interventions (Pianta et al, 2005); the importance of implementation (Durlack & DuPre, 2008).

Text box 7

Comparison of findings from home visiting programs: Use of implementation principles and process evaluation¹⁴

Effective programs for infants and children

- The Elmira trial of the Nurse Home Family Partnership utilised detailed record-keeping systems and regular case reviews to ensure that the home visit protocol was followed by each nurse.
- The implementation principles for the Denver trial of the Nurse Home Family Partnership were supported via a database that provided information to sites about how closely a site was following the program model and comparisons of NFP sites to help nurse home visitors refine their practice.
- The implementation principles for the Tennessee trial of the Nurse Home Family Partnership were supported via detailed visit-by-visit guidelines.
- The implementation principles for the Healthy Families America trial were supported via the Healthy Families America credentialing system that monitors program adherence, a data collection system to monitor implementation in addition to an implementation study. The Healthy Families America Alaska trial used a management information system to record process measures (referred to as the 'MIS').¹⁵ Implementation of Healthy Families America Alaska was assessed via home visitor surveys, review of training curricula, observation of selected training sessions, review of policy and procedure manuals, and discussion with program leaders.
- The implementation principles for the Early Head Start program were supported via a set of performance standards that define the scope of services that programs must offer to children and families. An implementation study was undertaken to analyse

¹⁴ Implementation principles were drawn from the publications listed on page 6. Other publications that do not report upon the outcomes of the trials (but do describe implementation principles) may provide further information regarding this component.

¹⁵ As part of the Healthy Families America Alaska process, home visitors completed a 'home visitor log' form for each visit to indicate which content areas had been covered in the visit. These data were subsequently entered into the MIS for the purposes of process evaluation (Caldera et al, 2007).

the relationship between patterns of implementation and the impact of those patterns on outcomes.¹⁶

- The implementation principles for the Early Start program (NZ) were supported via a series of procedures that include: the development of clearly stated and operationalised program goals, regular weekly supervision of staff to assess goals, directions and practice and the development of databases to monitor key outputs.

Less effective programs for infants and children

- The implementation principles of the Queensland Home visiting program were supported via weekly interdisciplinary assessment, planning and evaluation of program strategies.

Effective programs for parents

- See above for information about the Elmira trial of the Nurse Home Family Partnership.
- See above for information about the Denver trial of the Nurse Home Family Partnership.
- See above for information about the Tennessee trial.
- See above for information about the Healthy Families America trial.
- See above for information about the Early Head Start program.
- See above for information about the Early Start program (NZ).

Less effective programs for parents

- The implementation principles of the MOSIAC home visiting program were supported via interim and impact surveys of GPs and MCH nurses, fortnightly mentor contact sheets, four, eight and 12 month exit interviews with participants and impact questionnaires for intervention participants about the experience of being mentored.

The following programs did not identify or describe implementation principles or process evaluation:

- Community Mothers' Programme;
- MECSH; and
- The Postnatal home visiting program for illicit drug-using mothers and their infants.

Service coordination

Systematic reviews and meta-analyses

Many families accessing early childhood services have multiple and complex needs that cannot be addressed by a single service (Centre for Community Child Health, 2007). Services need to be able to address the holistic needs of families (CCCH, 2006) and as such service coordination plays a key role in ensuring children and families' needs are met.

¹⁶ See ACF, 2002b in Love et al (2005) for a description of the process undertaken to measure the relationship between implementation and impact.

In regards to service coordination within home visiting programs, Daro et al (2006) notes that home visiting outcomes are more robust when programs are partnered with other early intervention services or specialised support. Astuto and Allen (2009), found evidence to suggest that home visiting is more effective when it is combined with additional support programs. Gomby (1999) also argues that programs that combine home visits with centre-based group care for children tend to be lead to greater benefits for child development. Astuto and Allen (2009) challenge the idea that home visiting alone will resolve the issues that socioeconomically disadvantaged families face:

Movement away from the notion that home visitation alone is a panacea for addressing the ills of poverty towards a more integrated, system-level approach to intervention and prevention is an idea whose time has arrived (p. 14).

This claim is supported by the American Academy of Pediatrics (2009) which stated that: "Home visiting programs are not a panacea, sufficient unto themselves to reverse or prevent the damaging effects on children of poverty and inadequate or inexperienced parenting." Miller et al's (2012) systematic review, which found no evidence to support the effectiveness of home-visiting interventions specifically targeted at improving development outcomes for preschool children from disadvantaged backgrounds, also note home visiting alone is insufficient "in and of themselves to eradicate inequalities" during the early years (p. 30).

Access to services is an important issue to take into account when considering service coordination. LeCroy and Whitaker (2005) sought to identify the kinds of problematic situations that face home visitors when working with vulnerable families. In focus groups with home visitors, they looked at the situations that were ranked most difficult by home visitors, which included working with families where there are limited resources, where family mental illness is present (e.g., threatening suicide), where there is substance use in the home, and where families are unmotivated. They developed a Difficult Situations Inventory and asked the home visitors to rate the difficult situations.

The situation rated as most difficult was 'working with limited resources to help parents.' Home visitors were clearly frustrated in their attempts to provide (or connect families to) the kinds of services that families needed. Home visitors described clear needs many families had and their inability to meet those needs through identification of specific resources, in particular, mental health services.

Alternative literature that may be useful to expand upon this section: service coordination – what works (Choi, 2003); service coordination in the health sector (KPMG, 2005); for a summary of evidence, see Moore & Skinner (2010).

Text box 8

Comparison of findings from home visiting programs: service coordination

Effective programs for infants and children

- Service coordination for the Elmira trial of the Nurse Home Family Partnership involved the linkage of family members with other health and human services.¹⁷
- Service coordination for the Healthy Families America trial involved referrals to other services (Healthy Families New York).
- Service coordination for the Early Start program (NZ) involved referrals to further support where required.

Less effective programs for infants and children

- Service coordination for the Queensland home visiting trial involved the coordination of community services to which families could be referred.

Effective programs for parents

- Service coordination for the Hawaii Healthy Start involved referrals to community services.

Less effective programs for parents

- Service coordination for the MOSAIC trial involved assisted referral to community services (especially domestic violence services).

Information about service coordination was not identified for the following programs:

- The Denver trial of the Nurse Home Family Partnership.
- The Tennessee trial of the Nurse Home Family Partnership.
- The Early Head Start program;
- Community Mothers' Programme;
- The MECSH program.
- The Postnatal home visiting program for illicit drug-using mothers and their infants program.

Maintaining engagement with itinerant families

Systematic reviews and meta-analyses

None of the literature reviewed discussed maintaining engagement with itinerant families. A small number of trials noted that families drop out of home visiting programs because they relocate, however none identified described whether or how engagement was maintained with itinerant families.

Alternative literature that may be useful to expand upon this section: working with itinerant families (Healey et al, 2009; Jolleyman & Spencer, 2008); engaging with 'hard to reach' families/families and engaging with 'hard to reach' services (Barrett et al, 2008; Baruch et al, 2007; Cortis, Katz & Patulny, 2009; Centre for Community Child Health, 2010; what works with vulnerable families (Moran et al, 2004; Carbone et al,

¹⁷ This is identified as one of the major activities of the Elmira home visiting trial.

2004; Ghate and Hazel, 2002; Soriano et al (2006); educational itinerancy (Henderson, 2004; Fields, 1997).

Text box 9

Comparison of findings from home visiting programs

A number of studies note that families drop out of home visiting programs because they relocate; however, none of the studies identified for this review described whether or how engagement was maintained with itinerate families.

2. CONTENT COMPONENTS OF HOME VISITING

Not surprisingly, benefits are most likely to occur in home visiting program areas that have been emphasised by home visitors in their interactions with families (Gomby, 2005). The more child-focused home visits are in content, the higher the level of children's cognitive and language development, the greater support for language and literacy by parents and the greater the overall quality of the home environment (Gomby, 2005). Gomby (2005) notes, however, that parents at risk tend to receive visits that focus on parent needs, rather than child needs and, in an earlier publication (Gomby, 1999), concluded that children's development was better promoted through more child-focused interventions and that most home visiting programs cannot provide that level of 'child focus'.

Drummond et al's (2002) systematic review found that some home visiting programs target child development directly (child focused) whereas others ('indirect') focus upon environments. Drummond et al (2002) found that higher performing children benefit more from direct interventions, while lower performing children benefit from indirect interventions.

Roggman, Boyce, Cook and Jump (in Astuto and Allen, 2009) note that individualization (i.e. 'matching' interventions to parents' styles and needs) is inherent to many home visitation programs. They note that this individualisation "increase[es] the families' engagement as well as the likelihood of program retention and fidelity."

Holzer et al (2006) argues that for parent education programs that seek to reduce child maltreatment, the most effective programs will be those that are comprised of a number of parent education strategies will generally be more effective than those with a more narrow focus. Holzer et al (2006) also concluded that home visiting programs are more likely to be successful when the focus is on improving both maternal and child wellbeing. Home visiting programs that attempted to improve the mothers' life chances as well as reduce the risk of child maltreatment showed improvements for both mothers and children (Holzer et al, 2006).

Gomby (2007) highlights the importance of matching the goals of the program to the family's goals. If program and family goals do not align, chances for success are limited. Particular programs may be better suited to some families than others: different families need different types of program content or approaches (Gomby, 2007).

2.1 Parenting

Systematic reviews and meta-analyses

A number of the systematic reviews that were reviewed discussed parenting content specifically. Astuto and Allen's (2009) review found that parenting skills and behaviours was one of the distinct areas of change for parental outcomes in home visiting programs.

In terms of the effectiveness of home visiting programs for bringing about changes in parenting, Bennett et al's (2007) systematic review found no statistically significant difference for disadvantaged mothers receiving home visiting in relation to parenting skills or parenting behaviour. Similarly, MacDonald et al's (2007) systematic review found very limited support for the effectiveness of home visiting in improving aspects of disadvantaged teenage mothers' parenting. As noted previously, Sweet and Applebaum (2004) found that universal home visiting programs bring about greater effect sizes in terms of parent behaviour outcomes than targeted home visiting programs.

Gomby (2005) claims that the effects of home visiting programs are most consistent for outcomes relating to parenting, when compared to outcomes relating to child development and improving the course of mothers' lives (e.g. through helping mothers complete their education or gain employment).

Astuto and Allen (2009) notes that the characteristics that make home visiting services effective for male parents is virtually non-existent. Father participation in home visiting services has been shown to increase attrition rates and has not impacted upon father engagement in parenting activities or sharing parenting responsibility (Watson et al, 2005).¹⁸

Jones-Harden (2010) argues that parent-child interaction intervention should be a key component of home-based services that are designed to promote child and parent development. She claims that home-based interventions that focus on enhancing skills and behaviors among parents show particular promise (Jones-Harden, 2010).

Alternative literature: 'what works' to improve parenting skills and parenting behaviours (e.g. Moran, Ghate, van der Merwe, 2004).

Text box 10

Comparison of findings from home visiting programs: parenting content

All of the programs that identified the content of the program included a parenting component. Three programs did not identify any specific content. They were:

- Healthy Families America¹⁹;

¹⁸ This was in a program (Healthy Families America) that calls for services to be directed towards both the mother and the father.

¹⁹ One of the aims of HFA is to promote positive parenting, however as the programs are individualised it is difficult to determine whether or how that is transferred into the actual content delivered to parents.

- Early Head Start²⁰; and
- The Postnatal home visiting program for illicit drug-using mothers and their infants program.

All the other programs that did identify parenting content are listed below, with the specific focus of the parenting component identified (where that information was available).

Effective programs for infants and children

- The Elmira trial of the Nurse Home Family Partnership included parent education regarding fetal and infant development.
- The Denver trial of the Nurse Home Family Partnership and the Tennessee trial of the Nurse Home Family Partnership included content relating to competent care-giving.
- All families in the Early Start program (NZ) program received Partnership in Parenting education and the Triple P program.
- Mothers in the Community Mothers' Programme received support and encouragement in rearing their children (no further information provided).

Less effective programs for parents and children

- The Queensland home visiting program included content relating to the enhancement of adjustment to the family role.
- All participants in the intervention arm of the MECOSH program received the Learning to Communicate program (postnatal child development parent education program).

Effective programs for parents

- The Hawaii Healthy Start program included content relating to parenting education; modelling effective parent-child interaction and problem-solving strategies.

Less effective programs for parents

- The MOSAIC program included content relating to the provision of information and support with parenting.

2.2 Parent health

Literature, systematic reviews and meta-analyses

Astuto and Allen (2009) note that focusing on maternal health and behaviour is an effective way of impacting upon the developmental trajectories of young children. They also note that parental health is one of two distinct areas of change for parental outcomes for home visiting programs (along with parenting skills and behaviours).

In terms of the effectiveness of home visiting programs in bringing about changes in parent health, Bennett et al's (2007) systematic review found no statistically significant difference for disadvantaged mothers receiving home visiting in relation to maternal

²⁰ The principles of the program include reference to parenting however it is difficult to determine whether or how that is transferred into the actual content delivered to parents.

depression, anxiety or stress associated with parenting. In keeping with Bennett et al's (2007) findings, Gomby (1999) found that most home visiting programs she reviewed had not yet shown benefits in increasing mothers' mental health. With a few exceptions, most home visiting programs do not lead to large benefits for mothers in the domain of mental health.

Alternative literature: what works to improve parent health (e.g. Moran, Gbate, van der Merwe, 2004).

Text box 11

Comparison of findings from home visiting programs: parent health content

The following programs did not include or identify a parent health component:

- Hawaii Healthy Start program
- Healthy Families America²¹;
- Early Head Start;
- Community Mothers' Programme;
- The Queensland Home visiting program;
- The MECOSH program²²; and
- The MOSAIC program.

All the other programs that did identify parent health content are listed below, with the specific focus of the parenting component identified (where that information was available).

Effective programs for infants, children and parents

- The Elmira trial of the Nurse Home Family Partnership included content relating to women's health-related behaviours.
- The Denver trial of the Nurse Home Family Partnership included content relating to maternal and foetal health.
- The Tennessee trial of the Nurse Home Family Partnership included content relating to the promotion of women's health.
- The Early Start (NZ) program included content relating to ensuring the physical social and emotional health of the child's mother is supported, protected and sustained.

²¹ The HFA New York trial included a focus on providing assistance to access with health care, however it is not clear whether this was for parents, children or both parents and children.

²² The content of the MECOSH program is individualised tailored to the mothers' needs, skills and strengths. Access to health services may have been a focus of individual visits however it is not clear whether this was for parents, children or both parents and children.

Less effective programs for parents

- The Postnatal home visiting program for illicit drug-using mothers and their infants program included content relating to infant feeding.

2.3 Child health and development

Systematic reviews and meta-analyses

Astuto and Allen (2009) note that there is little evidence to suggest that young children benefit from home visiting services in terms of the language/cognitive effects (Astuto and Allen, 2009). However there is some evidence that amongst specific children and families there are positive outcomes. In a US based study Wagner (Wagner in Astuto and Allen, 2009) found that young Latino children had greater language and cognitive benefits than non-Latinos in both the intervention and control groups of a home visiting trial. For this reason, Astuto and Allen (2009) argue that there may be a “good fit” between home visiting services and immigrant families.

Bennett et al’s (2007) systematic review found no evidence that home visiting significantly impacts upon the health and development of children of disadvantaged mothers in terms of: preventive health care; psychosocial health; language development, behaviour problems and accidental injuries. Bennett et al (2007) notes that some studies prior to 1993 suggest that home visiting may have a positive impact upon take-up of immunisations, but they note that these findings had not been replicated in two subsequent studies (Bennett et al’s (2007)).

Miller et al’s (2012) systematic review did not find any evidence to support the effectiveness of home-visiting interventions specifically targeted at improving development outcomes for preschool children from disadvantaged families.

MacDonald et al’s (2007) systematic review found very limited support for the effectiveness of home visiting in improving developmental and social outcomes for children of disadvantaged teenage mothers.

Text box 12

Comparison of findings from home visiting programs: child health and development content

The following programs did not include or identify a child health and development component:

- Healthy Families America²³;
- Early Head Start²⁴; and

²³ Reference is made to the promotion and focus upon child development however it is not clear how this translates across to the actual content delivered. The content of the program is intended to be individualised.

²⁴ The principles of the program include reference to activities that promote healthy development and identify atypical development at the earliest stage possible however it is not clear how this translates across to the actual content delivered.

- The MECOSH program.²⁵

All the other programs that did identify child health and development content are listed below, with the specific focus of the parenting component identified (where that information was available).

Effective programs for infants and children

- The Elmira trial of the Nurse Home Family Partnership included content relating to child health and development.
- The Denver trial of the Nurse Home Family Partnership and the Tennessee trial of the Nurse Home Family Partnership included content relating to infant health and development.
- The Early Start (NZ) program included content relating to child health (e.g. access to services, immunisations, preventive health care and childhood morbidity).
- The Community Mothers' Programme is based upon a program that uses a child development program in which health visitors give parents of young children support and guidance on child health and development matters.

Less effective programs for infants and children

- The Queensland Home visiting program was designed to enhance child health.

Effective programs for parents

- The Hawaii Healthy Start program was designed to ensure that each child has a "medical home" (i.e. a continuing source of pediatric primary care).

Less effective programs for parents

- The Postnatal home visiting program for illicit drug-using mothers and their infants program included content relating to immunisation.

2.4 Addressing background factors

Bennett et al (2007) argue that a home visiting program for disadvantaged families that focuses only upon parenting is not likely to bring about significant differences, especially over the short period during which home visiting programs are typically delivered. Disadvantage is a socioeconomic construct that can overarching negative impacts upon parenting and family functioning that override any efforts on the parts of individual parents and families to improve child outcomes (Bennett et al, 2007).

Bennett et al (2007) note that socioeconomic disadvantage can also undermine the relevance and timeliness of home visiting interventions (Bennett et al, 2007). For example, if families are struggling with "day to day crisis situations" such as the threat of eviction and lack of food an educational program is unlikely to be relevant, useful or effective.

²⁵ The content of the MECOSH program is individualised tailored to the mothers' needs, skills and strengths. Access to health services may have been a focus of individual visits however it is not clear whether this was for parents, children or both parents and children.

In regards to disadvantaged families, Bennett et al (2007) argue that home visiting interventions need to be tailored to the problems that disadvantaged families face. If parents lack knowledge or skills then parent education programs will be appropriate and sufficient. However, if families' problems relate to social isolation or maternal depression then programs need to be tailored accordingly. They argue that: "the best interventions may be those that are broader based, providing a flexible menu of assistance" (p. 14).

Comparison of findings from home visiting programs: Addressing background factors*

Effective programs for infants and children

- The Elmira trial of the Nurse Home Family Partnership encouraged women to use "problem-solving skills to gain control over the difficulties they encountered" (Olds et al, 1994).
- The Denver trial of the Nurse Home Family Partnership "enhance[d] parent's personal development by helping them plan future pregnancies, continue their education and work."
- The Tennessee trial of the Nurse Home Family Partnership also "encourage[d] parents to plan subsequent pregnancies, complete their education and work" (p. no).
- Amongst other goals, the Early Start program (NZ) sought to "improv[e] [the] economic functioning" of families.

Less effective programs for infants and children

- One of the goals of the Sustained Home visiting program was to "develop and promote parents' aspirations for themselves and their children." The program content was tailored to meet the individual needs of the parent, and may have included assistance with issues such as financing and budget.

Effective programs for parents

- See above for information about the Elmira trial of the Nurse Home Family Partnership.
- See above for information about the Denver trial of the Nurse Home Family Partnership.
- See above for information about the Tennessee trial of the Nurse Home Family Partnership.
- See above for information about the Early Start (NZ) program.

Less effective programs for parents

- One of the goals of the MECSH program was to "develop and promote parents' aspirations for themselves and their children." The program content was tailored to meet the individual needs of the parent, and may have included assistance with issues such as financing and budget.

The following programs did not include or identify any addressing of background factors as part of the home visiting program:

- Healthy Families America;

- Hawaii Healthy Start;
- Early Head Start;
- Community Mothers program;
- The Queensland Home Visiting trial
- the MOSAIC trial; and
- the Postnatal home visiting program for illicit drug-using mothers and their infants.

* Background factors were defined as issues such as education, work, finances or any other 'external' factors relating to disadvantage/poverty.

2.5 Summary of content delivery mechanisms (face to face, internet, DVD)

Apart from face-to-face visits and support groups, no other method of content delivery mechanism was noted in either the systematic reviews/meta analyses or the trials.

Alternative literature: 'virtual' home visiting (Kelso et al, 2009).

Text box 13

Comparison of findings from home visiting programs: content delivery mechanisms

The only method of content delivery noted in any of the trials was face-to-face visits and support groups.

2.6 Approaches to delivering content (curriculum, modules, motivational interviewing, coaching)

Watson et al (2005) identify two broad theoretical approaches to home visiting: the 'professional expert' model whereby mothers are advised and informed by professionals; and the partnership model whereby mothers are encouraged to develop problem solving skills through the supportive 'friendship' of a home visitor. The DataPrev (2011) systematic review argues that non-judgemental, strengths based approaches are essential to effective home visiting practice, but these are not skills in which health professionals are routinely trained or skilled.

Leis et al (2009) notes that non directive counselling (also known as 'listening visits') may be an effective treatment for postpartum depression but may not be as effective when used as a selective preventive intervention.²⁶ Leis et al (2009) also note that home based cognitive behavioural interventions are effective at reducing postpartum depression and that a relatively short six session course of treatment may be sufficient (however it is not clear if these results are sustained over time).

²⁶ Non directive counselling is defined as counselling that is: "based on the principle... that talking to a supportive professional 'will help people take a more positive view of themselves and their lives'" (Leis, p. 5).

Text box 14

Comparison of findings from home visiting programs: Approaches to delivering content

Effective programs for infants and children

- The approach to delivering content in the Elmira trial of the Nurse Home Family Partnership was focused upon goal-setting, problem-solving and the development of women's sense of competence. The nurses delivered a home-based education program. The nurses sought to establish long-lasting, therapeutic relationships with mothers and families, emphasizing individual and family strengths.
- The approach to delivering content in the Denver trial of the Nurse Home Family Partnership was for nurse home visitors to use input from parents, nursing experience, nursing practice, and a variety of model-specific resources in addition to the principles of motivational interviewing. Nurse home visitors sought to build on parents' own interests to attain the model's goals.
- The approach to delivering content total in the Tennessee trial of the Nurse Home Family Partnership was the same as the Denver trial (see above).
- The approach to delivering content for the Healthy Families America trial was for interactions between direct service providers and families to be relationship-based; designed to promote positive parent-child relationships and healthy attachment; strengths-based; family-centered; culturally sensitive and reflective.

Less effective programs for infants and children

- The approach to delivering content for the Queensland Home Visiting trial was a family therapy approach.
- The approach to delivering content for the MECOSH program included a parent development program ('Learning to Communicate'); the intervention was guided by a strengths-based approach and the 'Parent Adviser model.'

Effective programs for parents

- See above for details of the Denver trial of the Nurse Home Family Partnership.
- See above for details of the Tennessee trial of the Nurse Home Family Partnership.
- The approach to delivering content for the Hawaii Healthy Start program was to deliver concrete advice and assistance (no further information provided).
- See above for details of the Healthy Families America trial.
- See above for details of the Queensland Home Visiting trial.

Less effective programs for parents

- See above for details of the MECOSH program.
- The approach to delivering content for the Postnatal home visiting program for illicit drug-using is not identified, however it is noted that "The needs of the mother and baby took precedence over formal, structured sessions mothers and their infants" (Bartu et al, 2006).

The following programs did not include or identify the approach to delivering content:

- The Early Start program (NZ) which provides a flexible service, making it difficult to provide a concise account of work of the home visitors (Fergusson et al, 2006).
- The Early Head Start program.
- The Community Mothers' Programme
- The MOSAIC trial.

3. WORKFORCE

3.1 Home visitor qualifications

Literature, systematic review and meta-analyses

One of the main issues debated by researchers is whether the results of some home visiting programs can be attributed to the qualifications of the home visitors (i.e. either professionally trained home visitors or paraprofessionals) (Holzer et al, 2006).

Multiple studies have suggested that programs that utilise qualified professionals as home visitors are more effective than programs that utilise paraprofessionals in this role. One of the most well known examples of this is Olds et al's (2002) study which compared the outcomes of the Nurse Home Visiting Program when it was delivered by paraprofessionals and trained nurses. Olds et al's (2002) found that families had better outcomes when the Nurse Home Visiting Program was delivered by trained nurses. Their research demonstrated that after two years, paraprofessional home visitors produced effects that were rarely clinically or statistically significant and were approximately half the size of those produced by nurses.

Other studies demonstrate similar findings to Olds et al (2002). For example, Gomby et al's (2005) systematic review of home visiting primary prevention programs that seek to encourage changes in parental attitudes, behaviours and/or knowledge found that most programs that employ paraprofessionals had either no or only very modest results. When comparing the Nurse Family Partnership to other home visiting programs that utilise paraprofessionals, Holzer et al's (2006) systematic review, which focused upon programs designed to prevent child maltreatment, found that programs employing paraprofessionals, such as high school graduates, tended to be less effective than programs than the Nurse Family Partnership programme.²⁷

In addition to the literature that supports the use of professionals to deliver home visiting programs, research demonstrates that nurse based home visiting programs have better staff retention (The American Academy of Pediatrics, 2009) which may have benefits in terms of continuity of care. This may be especially significant for disadvantaged families who, research demonstrates, may be reluctant to trust service providers.

²⁷ Of the studies Holzer et al (2006) reviewed, only the Nurse Home Visiting Program used trained nurses as home visitors.

The literature relating to this issue highlights the importance of skills and experience when providing home visiting programs to families (DataPrev, 2011), especially those with multiple and complex problems (Holzer et al, 2006; Gomby et al, 2005). For example, Holzer et al (2006) notes that for programs that aim to reduce child maltreatment, home visitors who have experience dealing with the complex needs of 'at risk' clients are likely to be more successful than those who do not have that experience. Holzer et al (2006) claims that in order to address the multiple and complex issues that many socioeconomically disadvantaged and 'at risk' families face (e.g. mental health issues, substance abuse and domestic violence) home visitors need to have the necessary skills, experience and training to deal with these issues. Gomby et al (2005) also notes that extremely well trained visitors are needed to work with families with multiple and complex problems and that non-professional volunteers may not have the skills that required to lead to change for children and their families (Gomby et al, 2005).

In regards to Olds et al's (2002) study, Watson et al (2005) suggests that the paraprofessional group in this study were set up to fail because inclusion in this group was limited to people with a high school diploma only – anyone who had undertaken college preparation in the caring professions and anyone who had a Bachelor's degree in any field was excluded.²⁸ Paraprofessionals were also paid poorly. Watson et al (2005) suggest, not surprisingly, that a poorly paid, poorly educated workforce is likely to be less effective at improving outcomes for children and families than an educated, well-paid workforce.

Watson et al (2005) also note that, in the four year follow-up, paraprofessional-visited mothers had made significant gains in terms of baby birth weight and modest gains for some other outcomes when compared with the control group. Paraprofessional-visited children were less than one point below nurse visited children on some cognitive measures but the children failed to reach statistical significance. Watson et al (2005) suggests that even with the aforementioned limitations of the paraprofessional group, they were still able to have a positive impact at the four year follow up and that the actual difference between cognitive outcomes for paraprofessional visited and nurse visited children was relatively small.

In comparison to the aforementioned studies, Neivar et al's (2010) systematic review found no significant differences between studies that used professional HVs and those that used trained paraprofessionals. Neivar et al's (2010) note that there are some methodological limitations with the studies included in their systematic review and that, as a result, their findings regarding the difference between professional and paraprofessional home visitors are not 'definitive.' Similarly, Kendrick et al's (2000) study found that the results of home visiting programs delivered by qualified professionals were similar to those delivered by paraprofessionals (p. 450).

²⁸ Olds et al (2004a) state that the reason why paraprofessional eligibility was limited in this way was so that paraprofessionals visitors shared the same characteristics as the families they were visiting, a characteristic which has been said to increase home visitors level of sensitivity and empathy to participants and, in turn, increase the participants' ability to trust the home visitors.

As with aforementioned findings, it appears that the importance of home visitor qualifications depends upon the intended goal and outcome of the home visiting program. For example, Ammerman et al (2010) suggests that a home visiting program that is intended to provide therapeutic treatment to mothers with depression needs to be delivered by professionals who have had intensive training in that area:

Because therapeutic skills are difficult to acquire and implement effectively and consistently, considerable investments in time and training may be needed to bring home visitors to an acceptable level of competence. Indeed, most training programs in psychotherapy are lengthy, require thorough grounding in a sizable empirical literature, include intensive clinical experiences with close and frequent supervision, and require demonstration of competency. In particular, recent views of psychotherapy emphasize strong skills in critical thinking and case conceptualization, both of which are challenging to master in the absence of intensive training (p. 199).

Other research highlights the way in which certain conditions will make home visiting programs more appropriate for paraprofessional home visitors than others. Gomby et al (2005) argues that paraprofessionals are more successful in programs that have "circumscribed goals and a relatively proscriptive curriculum), where lesson plans are detailed and clear." The American Academy of Pediatrics (2009) argues that programs delivered by paraprofessionals appear to be more effective if they are at least one year or more in duration, compared to shorter programs.

Another important issue emerging in the literature, when considering the significance of home visitor qualifications, is the 'social distance' between the home visitor and the service recipient. Paraprofessional home visitors are often from the same cultural background and/or community as participants (The American Academy of Pediatrics, 2009). This is important because, as McCurdy et al (2001) notes, one of the benefits of using paraprofessional home visitors is that there is often less "social distance" between the home visitor and the parent,

thus, the home visitor shares many of the same cultural and demographic characteristics as the family, features that are presumed to increase both the family's openness to the home visitor and willingness to engage actively in the service (p. 98).

Jones-Harden (2010) also notes that matching home visitors and families who share a similar background, particularly in regard to language, is another implementation strategy that may improve program quality and family engagement.

Indeed, some researchers argue that the relationship between the home visitor and the parent is more important than the home visitor qualifications (Gomby et al in Holzer et al, 2006). However, this assertion does not appear to have been empirically tested (Holzer et al, 2006). Jones-Harden (2010) argues that the home visitors' development of sustained relationships with families is paramount, with a particular emphasis on providing the affective and concrete supports that may increase the engagement of vulnerable populations.

Social distance between the home visitor and the service recipient is not only important for developing rapport, but may also impact upon the effectiveness of a program. For

example, Nievar et al (2010) describe a program that utilised college-educated home visitors in a housing project in Chicago. These home visitors had a negative effect on the success of program because residents were unable to relate to college educated home visitors. When residents from the housing project were recruited, the outcomes of the program improved (Curtis in Niever, 2010).

Although Curtis' (in Niever, 2010) research suggests that non-professional home visitors in certain circumstances will be better at engaging with participants than professional home visitors, Drummond et al (2002) reports that home visiting programs implemented by nurses have a higher proportion of visits delivered, when compared to programs implemented by paraprofessionals.

In terms of which type of professional should deliver an intervention, Gomby (2005) notes that most researchers believes that at this point in time it is not possible to conclude that individuals from a particular professional or educational discipline are better home visitors than others.

Suggested alternative literature: working with families with multiple and complex problems (Bromfield et al, 2010); core skills and knowledge for child and family service workers; effective early intervention practices in the early childhood field (relationships between parents and professionals, family-centred practice etc) (Centre for Community Child Health, 2007; Dunst & Trivette, 2009; Davis, Day et al, 2002; Moore, 1996; Trivette & Dunst, 2007).

Text box 15

Comparison of findings from home visiting programs: home visitor qualifications

Effective programs for infants and children

- The home visitors for the Elmira trial of the Nurse Home Family Partnership were registered nurses.
- The home visitors for the Denver trial of the Nurse Home Family Partnership were qualified nurses (with a BSN degree and experience in community or maternal and child health nursing and paraprofessionals (with a high school education; those who had college preparation in any of the helping services were excluded, as was anyone with a Bachelor's degree in any discipline).
- The home visitors for the Tennessee trial of the Nurse Home Family Partnership were qualified nurses.
- The home visitors for the Healthy Families America trial were known as 'Family Support Workers.' There were no educational requirements for Family Support Workers, however they were required to undertake training as part of their employment (see section 0).
- The home visitors for the Early Head Start did not need a specific qualification, however they did require a number of other competencies (see section 0).

- The home visitors for the Early Start program (NZ) required “sound training” in a relevant discipline such as nursing or social work.
- The home visitors for the Community Mothers’ Programme were non-professional volunteers.

Less effective programs for infants and children

- The home visitors for the Queensland Home Visiting trial were child health nurses and community child health nurses.
- The home visitors for the MECSH program were child and family health nurses embedded within the universal child and family health nursing services.

Effective programs for parents

- See above for information about the Denver trial of the Nurse Home Family Partnership.
- See above for information about the Tennessee trial of the Nurse Home Family Partnership.
- The home visitors for the Hawaii Healthy Start program were trained paraprofessionals (recruited from the community, with qualities essential for working with vulnerable families, i.e. warmth, self-assurance, cultural sensitivity and good parenting skills).
- See above for information about the Healthy Families America trial.
- See above for information about the Early Head Start program.
- See above for information about Early Start program (NZ).
- See above for information about the Community Mothers Programme.
- See above for information about the Queensland Home Visiting trial.

Less effective programs for parents

- See above for information about the MECSH program.
- The home visitors for the MOSAIC trial did not require any specific qualifications, however a number of competencies were required (see Text box 16). The home visitors for the Postnatal home visiting program were identified as ‘research midwives.’ No further information was provided.

Home visitor competencies

A number of researchers have identified necessary or useful competencies for home visitors. These include: the ability to establish rapport, organisational skills, the ability to respond to family crises, problem solving skills, the skills to complete paperwork (Gomby in Watson et al, 2005), motivation, self-confidence, a sense of humour, empathy and open-mindedness (Thornton et al in Watson et al, 2005). Korfmacher’s (in Astuto and Allen, 2009) research found that higher levels of home visitor empathy relate to an increased number of HVs completed.

Jones-Harden (2010) note that the role of staff in the delivery of high-quality home visiting programs is critical, however the staff characteristics that are linked to quality is not transparent. Jones-Harden refers to LeCroy and Whitaker's (2005) identification of five home visitor characteristics that are linked to competence in working with high-risk families: having clinical skill, addressing family difficulties, addressing parenting difficulties, resolving personal difficulties, and having experience.

Alternative literature: qualities of service providers required for work with vulnerable families (Briggs, 2006; Carbone et al, 2004; Ghate & Hazel, 2002; Barnes & Freude-Lavervardi, 2003); effective early intervention practices in the early childhood field (relationships between parents and professionals, family-centred practice etc) (Centre for Community Child Health, 2007; Dunst & Trivette, 2009; Davis, Day et al, 2002; Moore, 1996; Trivette & Dunst, 2007); 'threshold factors' for enhanced early intervention outcomes (Barnes, 2003; Barnes & Freude-Lagevardi, 2003).

Text box 16

Comparison of findings from home visiting programs: Home visitor competencies

Effective programs for infants and children

- The home visitors for the Denver trial of the Nurse Home Family Partnership required 'strong people skills.
- The home visitors for the Healthy Families America trial were selected on the basis of personal qualities and willingness to work in culturally diverse communities and the ability to build a trusting relationship.
- The home visitors for the Early Head Start program needed knowledge and experience in child development and early childhood education; the principles of child health, safety and nutrition; adult learning principles and family dynamics. And also knowledge of community services and resources and the ability to link families with appropriate agencies and services. They were also required to be able to communicate with the families they served either directly or through a translator. They also needed to be familiar with the ethnic backgrounds of families.
- The skills sought for the home visitors in the Early Start program (NZ) were: awareness of cultural issues and obligations under the Treaty of Waitangi; experience in dealing with high risk families and; evidence of good interpersonal skills and sound judgement.
- Home visitors for the Community Mothers' Programme were "successful, experienced mothers."

Effective programs for parents

- See above for the details of the Denver trial.
- See below for the details of the Tennessee trial.
- The home visitors for the Hawaii Healthy Start were required to have the qualities deemed essential for working with vulnerable families: warmth, self-assurance, cultural sensitivity and good listening skills.

- See above for the details of the Healthy Families America trial.
- See above for the details of the Early Head Start program.
- See above for the details of the Early Start program (NZ).
- See above for the details of the Community Mothers' Programme.
- See above for the details of the Queensland Home Visiting trial.

Less effective programs for parents

- The home visitors for the MOSAIC trial were mothers with good listening skills, open, compassionate, and non-judgemental.

The following programs did not require or identify specific competencies of home visitors:

- The Elmira trial of the Nurse Home Family Partnership;
- Tennessee trial of the Nurse Home Family Partnership;
- The Queensland Home Visiting trial;
- The MECSH program; and
- The Postnatal home visiting program.

3.3 Caseload

Most of the trials indicated the caseload of home visitors (see Text box 17). None of the systematic reviews of meta-analyses discussed the relationship between caseload and program effectiveness. Jones-Harden (2010) notes that home visitor competence is affected by the health of the home visiting program. Elevated job stress has been linked to excessive work demands.

Text box 17

Comparison of findings from home visiting programs: Caseload

Effective programs for infants and children

- The caseload of home visitors in the Elmira trial of the Nurse Home Family Partnership was 20-25 families per home visitor
- The caseload of home visitors in the Denver trial of the Nurse Home Family Partnership was 25 families per home visitor.
- The caseload of home visitors in the Tennessee trial of the Nurse Home Family Partnership was 25 families per home visitor.
- The caseload of home visitors in the Healthy Families America trial was 15 families (for those families receiving weekly visits) to 25 families (for those families receiving less frequent visits).
- The caseload of home visitors in the Early Head Start program was an average of 10-12 families, with a maximum of 12 families for any one home visitor.

- The caseload of home visitors in the Early Start program (NZ) was 25 families per home visitor.
- The caseload of home visitors in the Community Mothers' Programme was 5-15 families.

Less effective programs for infants and children

- The caseload of home visitors in the Queensland Home Visiting trial was 45 families for every two nurses.
- The caseload of home visitors in the MECSH program was 25 families per home visitor.

Effective programs for parents

- See above for information about the Denver trial.
- See above for information about the Tennessee trial.
- See above for information about the Healthy Families America trial.
- See above for information about the Early Head Start program.
- See above for information about the Early Start program (NZ).
- See above for information about the Community Mothers' Programme.
- See above for information about the Queensland Home Visiting trial.

Less effective programs for parents

- See above for information about the MECSH program
- The caseload of home visitors in the MOSAIC trial was one mentee per mentor.

The following programs did not specify the caseload of home visitors:

- The caseload of home visitors in the Hawaii Healthy Start program was not specified.
- The caseload of home visitors in the Postnatal home visiting program was not specified.

3.4 Clinical supervision

Gomby et al (1999) note that, regardless of a home visitor's skill level, supervision is needed to help them manage the emotional stresses of home visiting. Both Gomby et al (1999) and Drummond et al (2002) argue that supervision is required to ensure home visitors maintain objectivity, and to provide them with an opportunity for reflection and professional growth.

Jones-Harden (2010) note that the psychological characteristics of home visitors can affect their performance. To address home visitors' limitations in intervening with high-risk families and their own vulnerability, Jones-Harden suggests that a higher level of supervision and support is necessary. Unless the home visitor supervisor is an expert in intervening with psychologically at-risk families, consultation from a mental health professional is critical.

According to Landy and Menna (2006), there are four main components of effective supervision:

- Supervisions is available regularly, relatively frequently, and without interruption
- It is a collaborative and supportive and occurs in a respectful interpersonal climate that encourages open discussion of difficult feelings and frustrations
- It has a sound theoretical base that is accepted and understood within the agency
- It is reflective and allows staff members' supportive opportunities to think about their cases and the ways they are working and to consider other possible approaches.

Text box 18

Comparison of findings from home visiting programs: clinical supervision

Effective programs for infants and children

- Paraprofessionals in the Denver trial of the Nurse Home Family Partnership received twice the level of supervision (2 supervisors to 10 visitors) than nurses.
- The national office of Healthy Families America requires each direct service staff member to receive a minimum of 1.5-2 hours of individualised supervision per week. In addition, supervisors shadow direct service staff to monitor and assess their performance and provide constructive feedback and development.
- There is no information about the supervision of Early Head Start program staff other than those receiving Early Head Start funding are required to provide adequate supervision of staff.
- Each Family Support Worker in Early Start program (NZ) receives 2 hours of clinical support per week from trained clinical supervisors.
- Home visitors in the Community Mothers' Programme worked under the guidance of a family development nurse who served as a resource person, confidante and mentor.

Less effective programs for infants and children

- Nurse home visitors in the MECOSH program were supported by the provision of individual clinical supervision and team supervision by external providers on a monthly basis.

Effective programs for parents

- See above for information about the Denver trial.
- See above for information about the Tennessee trial.
- The Hawaii Healthy Start program home visitors worked under professional supervision (no further information provided).
- See above for information about the Healthy Families America trial.
- See above for information about the Early Head Start program.
- See above for information about the Early Start program (NZ).

- See above for information about the Community Mothers' Programme.

Less effective programs for parents

- See above for information about the MECSH program
- MOSAIC trial coordinators met with mentors on a six to eight weekly basis.

The following programs did not specify the clinical supervision arrangement for home visitors:

- The Elmira trial of the Nurse Home Family Partnership²⁹;
- The Tennessee trial of the Nurse Home Family Partnership.
- The Queensland Home Visiting trial; and
- The Postnatal home visiting program.

3.5 Training and coaching

As noted previously, Gomby et al (2005) argues that paraprofessionals are more successful in programs that have "circumscribed goals and a relatively proscriptive curriculum), where lesson plans are detailed and clear." Gomby (2005) suggests that higher levels of training are probably needed to service families who are facing multiple, complex issues or to work in programs with multiple, broad goals or with a curriculum that allows a great deal of flexibility.

Text box 19

Comparison of findings from home visiting programs: Training and coaching

Effective programs for infants and children

- Home visitors for the Denver trial of the Nurse Home Family Partnership received 1 month of intensive training before working with families (both nurses and paraprofessionals received training).
- Home visitors for the Tennessee trial of the Nurse Home Family Partnership received 1 month of intensive training before working with families.
- Home visitors for the Healthy Families America trial received basic training in areas such as cultural competency, substance abuse, reporting child abuse, domestic violence, drug-exposed infants and services in the community (amount of training not specified).
- The amount of training that home visitors for the Early Head Start program received is not specified. Agencies that receive funding to deliver the program are required to provide pre-service and in-service training opportunities.
- Home visitors for the Early Start program (NZ) undertook a four week training program.

²⁹ Olds et al (1994) state that: "members of the team were able to serve as ongoing supports for one another on a day-to-day basis" however clinical supervision arrangements are not specified.

- Home visitors for the Community Mothers' Programme received four weeks training.

Less effective programs for infants and children

- Home visitors for the Queensland Home Visiting trial received training. The amount of training has not been specified.
- Home visitors for the MECSH program received training in the program model throughout the 2.5 year program. The amount of training has not been specified.

Effective programs for parents

- See above for information about the Denver trial.
- See above for information about the Tennessee trial of the Nurse Home Family Partnership.
- Home visitors for the Hawaii Healthy Start program received 5 weeks of core training prior to enrolling families in their caseload.
- See above for information about the Healthy Families America trial.
- See above for information about the Early Head Start program.
- See above for information about the Early Start program (NZ).
- See above for information about the Community Mothers' Programme.
- See above for information about the Queensland Home Visiting trial.

Less effective programs for parents

- See above for information about the MECSH program.
- Home visitors for the MOSAIC trial received 5 days training.³⁰

The following programs had no information about training or coaching:

- The Elmira trial of the Nurse Home Family Partnership;
- The Postnatal home visiting program for illicit drug-using mothers.

4. IMPACTS AND OUTCOMES

4.1 Summary of measured outcomes

A separate document outlines measured outcomes.

4.2 Statistical impact

A separate document outlines statistical impact.

Economic impact

Evaluating the economic impact of home visiting interventions is important for two reasons: firstly, to determine the costs for the service system of delivering the

³⁰ Further information about MOSAIC training is available online at: <http://www.latrobe.edu.au/mchr/pdf/MosaicManualv2FINAL.pdf>

intervention and, secondly, to guide decision making regarding the distribution of resources (McCauley et al, 2004).

Stevens et al (2010) reviewed evidence about the cost-effectiveness of six interventions within the child services field, including, for example, parenting programs, cognitive-behavioural therapy and home visiting. Stevens et al (2010) note that there is scant economic evidence relevant to all six intervention types they reviewed. The scant evidence is a result of the novelty of outcome evaluations in the child services field as well as the complex nature of childhood services which "will continue to present huge challenges for those who would seek to evaluate cost-effectiveness" (p. 151). The following discussion outlines the findings of some economic impact evaluations of home visiting programs for vulnerable children and families (none of the costs presented have been adjusted for the 2012 context).

A London School of Economics (2007) cost-benefit analysis of home visiting programs found that of a range of home visiting programs, the Nurse Family Partnership had the most significant benefits. The NFP program appeared to most cost-effective when targeted towards high-risk individuals (the Elmira trial) however the authors note that the program would have been cost-effective even if it had been targeted towards low-risk individuals.

Barlow et al's (2007) cost-benefit analysis of a home visiting program for families at risk of child abuse and neglect in the UK found that the mean 'societal costs' in the control and intervention arms were £3874 and £7120, respectively (a difference of £3246). The mean 'health service only' costs were £3324 and £5685 respectively (a difference of £2361).³¹

Barlow et al (2007) notes that as well as significant improvements in maternal sensitivity and infant cooperativeness there was also a non-significant increase in the likelihood of the intervention group infants being removed from the home due to abuse and neglect. These incremental benefits were delivered at an incremental societal cost of £3246 per woman.

A small randomised controlled trial of a home visiting program for low-income mothers in an inner-city neighbourhood in the US found that a lower rate of major illness and accidents requiring hospital admission amongst the treatment group led to a net difference of US\$27.31 per month for the medical care costs for children in the treatment group (US\$55.60 per month) versus those in the comparison group (\$US82.91 per month) (Hardy & Streett, 1989). When adjusted to a 24 month follow up period, the authors calculated a cost saving of \$85,862 (for 131 children in the treatment group). This saving was offset by the expense of the home visiting program during the 24 month period (estimated at US\$60,000).³²

³¹ The control group received standard treatment. The intervention group received 18 months of weekly visits from a health visitor.

An evaluation of the Home Start program in the UK found that a home visiting program delivered by volunteers was not cost-effective (McCauley et al, 2004).³³ The study found no significant differences between outcomes (e.g. parenting stress, depression, self-esteem) for the treatment group and the control group and as the cost of delivering the home visiting program was higher than the costs associated with the control group the authors thereby concluded that the intervention was not cost-effective.

In conclusion, Stevens et al (2010) states that:

not all social care interventions will be cost saving. It is... likely that decision makers in children’s services will have to make decisions about what is a reasonable cost to incur in return for a given likelihood of effect. These are social value, as much as social-scientific judgements” (p. 152).

Indeed, in regards to child maltreatment there is some evidence to suggest that society values the reduction of child maltreatment greater than the associated costs. The London School of Economics (2007) suggests that: “this provides support for the continuation of home visitation (and other) programmes aiming to achieve [a reduction in child maltreatment].” (p. 39).

Table 2 lists the costs of individual home visiting programs reviewed in this report (where that information was available).

Table 2: Costs of home visiting programs*

Program	Cost-benefit or cost
Nurse Home Family Partnership (Denver trial)	A cost-benefit analysis of NFP for low income women found benefits-cost for NFP was \$US17,180, for higher risk women = \$US34,148, for lower risk women = US\$1,880 (London School of Economics, 2007); the cost of the program when delivered by nurses was estimated at \$US9140, whereas when delivered by paraprofessionals it was estimated at \$US6162 (Olds et al, 2002)
Healthy Families America	Cost-benefit analysis showed that benefits – cost of Healthy Families America was – \$US1263 (London School of Economics, 2007)
MOSAIC	Health sector costs were A\$5,738 (US\$5,083) per woman higher per woman in the intervention group (Taft et al, 2011). At a predicted mentor capacity of 4 women per year with biannual training, predicted

³³ The Home Start program involved weekly home visits to a group of 80 families over a period of 11 months. The program was designed for families under stress.

	costs would be \$A2313 (Taft et al, 2011).
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* None of these costs have been adjusted to the 2012 context. They are the costs reported in the publications.

4.4 Summary of process measures

Table 3 lists those process measures identified in the publications that report upon the outcomes of the trials that have been explored for this review (listed on page 7). It is likely that most of these programs had a greater number of process measures than those listed here. Further analysis of associated publications that describe implementation in greater detail is required to compile a comprehensive list of all process measures.

Table 3: Process measures

Program	Process measures
Nurse Family Partnership	
<i>Elmira trial</i>	- Number of visits - Nurses used detailed assessment, record-keeping forms and protocols to guide their work with families
<i>Denver trial</i>	-Staff retention -Number of home visits (during pregnancy and during infancy) -Completed home visits (i.e. was the parent at home, did they answer the door etc). -Number of participants who discontinued the program
<i>Memphis, Tennessee trial</i>	-Number of home visits (during pregnancy and during infancy)
Hawaii Healthy Start	-Family engagement and retention (e.g. refused service, moved, unable to contact) -Service delivery (mean number of visits, more than 12 visits, frequency of visits) -Quality of care (maternal satisfaction with the home visitor and home visitor success in identifying and responding to problems that require intervention) ³⁴
Healthy Families America	
<i>San Diego</i>	Not available
<i>New York</i>	-Number of visits per year -Content of home visits

³⁴ These are the process measures identified by Duggan et al (1999). However McCurdy also reports upon the number of visits mothers received by a child development specialist and the number of mothers engaged in parenting groups (the HHS program included home visits and parenting support groups).

	-Nature and outcome of service referrals
<i>Alaska</i>	-Enrolment (length of enrolment) -Reasons for dropout -Visit frequency -Home visit content -Dose of service (enrolment of equal to or more than 24 months and receipt of equal to or more of 75% of expected visits) -Action taken on developmental screening by home visitors
Early Head Start	Duration of enrolment ³⁵
Early Start (NZ)	Number of families actively participating (or 'currently active') in Early Start (NZ) ³⁶
Community Mothers program	Number completing the study Reasons for non-completion of the study
Queensland study	Patient satisfaction
MOSAIC ³⁷	A comprehensive process evaluation was undertaken which included: -Interim and impact surveys of participating GPs and nurses -Fortnightly mentor contact sheets -Four, eight and twelve month (exit) coordinator interviews with participants -Participants' experience of being mentored
MECSH	None identified in Kemp et al (2011)
Postnatal home visiting program for illicit drug-using mothers	None identified in Bartu et al (2006)

CONCLUSION

This literature review sought to answer the question 'what works in home visiting programs?' Based upon the findings of this review, the simple answer to this question is we don't really know. This is because either: (a) the evidence regarding the 'components' of home visiting programs is contradictory or contested or; (b) the evidence is not available.

³⁵ Love et al (2005) notes that a well-developed criteria for assessing implementation of Early Head Start was undertaken. ACF (2002) is referenced by Love et al (2005) as a publication that outlines the process for assessing implementation. This publication may include further information about process measures.

³⁶ Participants who were actively participating were those who were currently receiving services. These were contrasted with 'currently inactive' participants, those who were currently enrolled but not receiving services as a result of client availability or temporary unavailability of participants and 'lost from the service', those who were no longer enrolled in the service (Ferugsson et al, 2005).

³⁷ Further information about the process evaluation is available in Taft et al (2009).

The only component for which there appears to be a consensus in terms of what works in home visiting programs is antenatal (as opposed to postnatal) recruitment. The research is generally supportive of the following components in terms of making a home visiting program effective:

- a greater number of visits over a longer period of time (although for some specific outcomes less intensive approaches may be effective);
- targeting families who are at risk and/or have multiple or complex problems (although there is some evidence that high risk families may not benefit as greatly as moderately at risk families); and
- if targeting families with multiple and complex problems, employing a workforce that has the appropriate skills and experience to work with those families.

A summary of the key components of a number of home visiting programs in the review failed to identify any characteristics that appeared to 'make the difference' in terms of effectiveness. This is partly because of the difficulty of separating more effective from less effective programs. While it is obvious that some programs are clearly ineffective, with no statistically significant outcomes, most were effective for at least one outcome. The effectiveness of a program, in part, therefore, depends upon what outcome is being sought.

In many cases it is not possible to say, based upon the information gathered for this review, what makes a home visiting program effective. This is because there was either insufficient information about the delivery of the home visiting program (e.g. Did they maintain engagement with itinerant families and how? Did they use ICT? What was the approach to delivering content?) or because these components have not been 'tested' for their impact upon the overall effectiveness of the program (e.g. What role does caseload play in the effectiveness of a program? Does the level of training or coaching have an impact upon the effectiveness of a program? Do supervision arrangements play a role in the effectiveness of a program?)

A more useful question to ask may be 'what makes a home visiting program effective when trying to achieve a specific outcome'. In other words, because home visiting is a service delivery mechanism, rather than a single uniform intervention, its effectiveness will depend upon the outcomes the program is trying to achieve. There is evidence to suggest, for example, that the importance of duration, intensity, eligibility criteria (i.e. universal or targeted) and qualifications (i.e. qualified or non-professional) in achieving outcomes differs depending upon the outcome sought. At present, however, there does not appear to be a significant body of evidence to show what works for what outcomes, especially in regards to outcomes for children.

When attempting to design a home visiting program, it may be less useful to investigate home visiting programs per se and more useful to investigate the broader body of literature that looks at:

- What works with the group the program will be targeting? (e.g. What brings about an improvement in outcomes for at risk families? What brings about an improvement in outcomes for families with multiple and complex problems? What brings about an

improvement in outcomes for Indigenous families in remote communities? What brings about an improvement in outcomes for families from culturally and linguistically diverse backgrounds?); and

- What works to achieve the specific outcomes the program is seeking to impact upon? (e.g. What is the most effective way of improving children's cognitive outcomes? What is the most effective way of improving parenting skills and behaviours?)

Home visiting programs appear to have great potential, especially in reaching families who are not in contact with mainstream services. They are currently 'in favour' with many governments in Western, developed nations. However, the interest in home visiting programs appears to have overtaken a careful analysis of the evidence. Certainly, there is some evidence to suggest that home visiting programs can make a difference in the lives of children and families, however further research is needed to determine what makes some home visiting programs more effective than others. Designing an effective home visiting program based solely upon the current evidence about home visiting programs (and not taking into account alternative bodies of literature) would be only slightly more 'scientific' than a stab in the dark.

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APPENDIX A

Evidence regarding programs for vulnerable children and families (CCCH, 2011)

Evidence from successful parenting programs: there a range of different types of parenting programs including centre-based parenting groups and home visiting programs. None are effective with all families or consistently have a major impact on children and families, however all are at least moderately effective for some families.

Evidence regarding particular client groups: the evidence regarding which families benefit from which types of service is contradictory and difficult to interpret. Those services that appear to be most beneficial are those that target families most in need and/or where parents perceive that their children need the services.

Evidence regarding longer term models: there is no direct evidence to suggest that programs should continue beyond the age of two, however there is evidence to suggest that families that need support before a child is born are likely to need it also during the early childhood period.

Evidence regarding effective service components: it is not clear exactly how long or how frequent services should be in order to be effective however there is some evidence to suggest that prescriptive programs are more effective when they start prenatally and are of longer duration and intensity.

Evidence regarding service cost: there is limited evidence regarding the cost-benefits of expected from the implementation of effective programs for parents (for more information see section [no.]). The costs of more intensive forms of treatment and care escalate dramatically if the cheaper early intervention programs are not provided or are ineffective.

Evidence regarding vocational and employment services: there is limited evidence to suggest that parenting and family support programs can successful promote the economic self-sufficiency of mothers. It may be that these two goals are not compatible and need to be addressed through different channels.

Learnings regarding best practice: some of the learnings regarding best practice concern systemic issues while others relate to direct service delivery. Issues identified include ways of engaging the most vulnerable and marginalised families, the need for systemic and multi-component approaches to addressing family needs, the importance of individualised responses to family issues, and the importance of the way in which professionals work with families.

Evidence regarding professional training and skills: a range of specific skills and knowledge required to work effectively with vulnerable families and children have been identified. Technical skills are required in order to provide parents with actual skills and strategies that have a direct effect on children's functioning and participation. However there is also a strong case for considering the personal qualities of workers to be the most important characteristic. It is important that staff embody the characteristics that families say they want of services such as empathy, honesty and non-judgemental support.