

# Literature on family interventions and family outcomes in health

---

## **Purpose of this document**

To outline and discuss the findings from a literature search on family interventions and family outcomes in health.

## **BACKGROUND**

### Aims

In order to inform current and upcoming work within Counties Manukau Health on complex families and family interventions, a literature review was proposed in November 2015 with the aim of exploring the following issues:

- What impact family centred care, or approaches that work with families, have on healthcare utilisation and/or other factors of wellbeing or health improvement for the whole family as well as the primary patient
- Insights on design features, tools and/or techniques of initiatives that are likely to be effective
- Data and/or frameworks for gathering information to inform our practice and effectiveness and build an evidence base for local initiatives seeking to involve and impact whole families

### Early considerations

An early decision was made not to include studies on the impact of psychotherapy on families. The international literature has reported some reduced utilisation of health care services following this type of therapy<sup>iii</sup>. However, much of this literature relates to interventions within the education and justice sectors, is resource-intensive, relies on services provided at federal or state level, and all within a specific cultural context. New Zealand has limited psychotherapy services and workforce making this literature less relevant to this literature review.

It was also recognised that there is literature from other sectors (such as education and justice) relating to family interventions or approaches specific to those sectors. For this review it was decided to focus on literature from the health sector, relating to interventions with a primary or major focus on health, as being most relevant to Counties Manukau Health. Included interventions could contain elements of other services (such as education) but would not be primarily delivered from other sectors. In New Zealand, the Whaanau Ora approach explicitly considers multiple aspects of family well-being, with health being of key importance; whaanau ora interventions were therefore considered to be in scope for this review. Outcomes of interest include those relating to health, well-being or determinants thereof.

## Defining “family” and “well-being”

Measuring health or well-being for family entities (as contrasted with measuring these quantities for individual members of families) is acknowledged as challenging. Even defining these concepts is not straightforward. A range of documents obtained from key informants, or via references from other articles, dealt with broader issues around conceptualising and/or measuring health and wellbeing in families. The 2013 Families Commission report “Families and whanau status report: towards measuring the wellbeing of families and whanau” is one such publication. This states that “it has proved difficult, if not impossible, to arrive at a universally agreed definition of the family”, and that “the recent theorising about measuring family wellbeing has yet to result in an agreed approach, or in a comprehensive set of indicators”<sup>iii</sup>.

For this review it was decided not to attempt to address the complexities of definition and evolution of families, but rather seek to identify instances of family health or well-being outcomes (however defined) being measured. Operationally, papers reporting on outcomes relating to more than one family member and/or to any outcome for the family as a whole have been included. Papers reporting on outcomes relating to only one family member (be it the index patient or another member of the family) have been excluded.

## Initial findings and iterative decisions

It became apparent from the initial search that very few studies could be identified that reported on health or well-being outcomes relating to the family as a whole, or even to more than one member of a family, from interventions targeted at families. Given the limited range of literature identified in the initial search, it was decided not to further restrict it to “complex” families, but rather include any family outcomes from interventions carried out with any type of family.

A narrative summary was chosen as an appropriate way to construct meaning across the range of methodological approaches retrieved by the literature searches.

Following a database search conducted in March 2016 of the University of Auckland doctoral and masters theses and dissertations, as well as a repeat search of the CINAHL database using similar search terms, but not restricted to health interventions, it was decided to retain the original inclusion criteria.

# METHODS

- Search of published literature 2000-2015 carried out by / in consultation with CM Health librarian Fakavamoeatu Lutui (November 2015)
  - Databases: CINAHL, Medline, Campbell Collaboration, Google scholar
  - Search terms grouped as (Family / household / whanau / whanau / fanau / aiga / kaiga), (intervention), (outcome / impact / effect), (measurement / evaluation), (Maori / Maaori / Pacific / Pasifika / First Nations / Native / Aboriginal / indigenous / minority / Samoan / Tongan / Cook Island / Hawaiian / Niuean / Polynesian / Melanesian), and variations of these words as appropriate
- Preliminary search of grey literature conducted by CM Health librarian Peter Murgatroyd (November 2015)
  - Databases: Nursing Research Index, Grey Literature Report, New Zealand Council of Educational Research, Research Information Service, The Hub, Kiwi Research Information Service
  - Search terms: health, family
- More in-depth search of grey literature focusing on databases identified as being useful through the above preliminary search (Dr Siniva Sinclair, December 2016)
  - Databases: Kiwi Research Information Service, The Hub
  - Search terms: health\* AND famil\* AND interven\* AND outcome\* AND measure\*
- Repeat search of both published and grey literature using the above search terms (Fakavamoeatu Lutui, February 2016)
- Search of University of Auckland database of doctoral and masters theses and dissertations, as well as repeat search of CINAHL, using search terms from the list above but not restricted to health interventions (Dr Nicolette Sheridan and Lorraine Nielsen, Philson librarian, March 2016)
- Discussion and review of documents from key informants
  - Kahukore Baker, Principal Maori Policy and Knowledge Analyst, Social Policy Evaluation and Research Unit (SuPERU) a.k.a. Families Commission
  - Clinical Director Dr Doone Winnard and fellow public health physician Dr Sarah Sharpe from CM Health's Population Health Team
  - Claire Naumann, Transformation Manager in CM Health's Integrated Care Team
  - Dr Seini Jensen, Director of Performance and Evaluation, Pasifika Futures
- Academic advice on the subject, literature search and review processes, and assistance with retrieving publications from Dr Nicolette Sheridan, Associate Professor and Associate Dean Equity, Faculty of Medical and Health Science, University of Auckland

## **RESULTS**

The search of published literature yielded 22 papers, including 2 systematic reviews. On further investigation four of these papers, and one paper identified through references, met the inclusion criteria of reporting on health or well-being outcomes relating to more than one member of a family which had participated in an intervention.

The preliminary search of grey literature databases yielded eight articles; one appeared relevant, however on further investigation it did not include a health intervention<sup>iv</sup>. The more comprehensive search of the grey literature identified three unpublished doctoral theses from New Zealand which appeared possibly relevant, however in two cases<sup>v,vi</sup> it became clear that the outcomes related only to one family member, despite more than one member being involved in the measurements; one of these also related specifically to a tool rather than an intervention<sup>vii</sup>. The third thesis also did not relate to an intervention<sup>viii</sup>.

Three further New Zealand reports (one with an additional background paper) were identified via key informant discussions. These relate to a high-quality evaluation of a research-based New Zealand home visiting programme, Early Start<sup>ix</sup>, as well as the first phase of work by Whaanau Ora collectives<sup>x</sup> and one of the new Whaanau Ora Commissioning Agencies<sup>xi</sup>, respectively.

The updated searches carried out in February 2016 yielded four additional potentially relevant papers, however none of these met the inclusion criteria (the most relevant of these because it related to an intervention based in the education sector, albeit with some connections to health services<sup>xii</sup>).

The wider searches in March 2016 at the Philson library yielded 33 University of Auckland doctoral or masters theses or dissertations, and a further 40 papers from the CINAHL database, with components potentially transferrable to health. Of these, four met the original inclusion criteria.

The below summary table outlines salient features of the identified papers, including the interventions assessed, design of the studies, population included, outcomes reported, measurement, and comments on the quality and relevance of the selected papers.

Author(s), title, journal/institution and year	Intervention(s)	Design	Population	Outcome groups	Measurement	Comments
Fergusson D, Boden J, Horwood J, <i>Early Start evaluation report: nine year follow-up</i> . Ministry of Social Development (New Zealand), 2012	Intensive home visiting service set up in Christchurch in mid-1990s.	Randomised controlled trial	Families with infants facing severe social, economic or emotional challenges	Child: health, service utilisation, maternal parenting attitudes, child abuse and neglect, child behavioural adjustment Family and parental: maternal health, family functioning, family economic functioning, exposure to stressful life events	Parental interviews, hospital records, teacher questionnaires.	Research-based New Zealand programme with rigorous evaluation to 9 years post enrolment. Modest benefits for children (fewer hospital visits for accidents, lower rates of parent-reported child abuse, more competent and less punitive parenting). No impact on family and parental functioning
Tanninen H-M, Haggman-Laitila A, Kangasniemi M, <i>The content and effectiveness of home-based nursing interventions to promote health and well-being in families with small children: a systematic review</i> . Scandinavian Journal of Caring Sciences 2015	Home-based nursing interventions comprising discussions and practical exercises to help parents cope with parenthood and relationships and interactions in the family, together with health, well-being, social relations and socio-economic situations	Systematic review including different types of studies	Families with children under seven years of age	Coping with parenthood; family relationships and interactions; family health, well-being and social relations; and socio-economic situation	19 quantitative instruments identified, including: Parent Stress Index, Adult-Adolescent Parenting Inventory, Infant-Toddler HOME Inventory. Tools relating to family functioning: Parental Bonding Instrument, Mother-infant interaction (AMBIANCE)	Recent systematic review of home-based nursing interventions targeting families with children under seven years. Eleven studies included (none from New Zealand).

Author(s), title, journal / institution and year	Intervention(s)	Design	Population	Outcome groups	Measurement	Comments
Sweet M, Appelbaum MI, <i>Is home visiting an effective strategy? A meta-analytic review of home visiting programs for families with young children.</i> Child development 2004	Home visiting programmes (n = 60) in the United States of America after 1965. These provided a range of goods and services to parents using home visits as their primary service delivery strategy, and were delivered by professionals, paraprofessionals or non-professionals	Meta-analysis: data combined to analyse five child and five parent outcome groups	Families with children of various ages targeted: range antenatal to elementary school	Child outcomes: cognitive, socio-emotional, child abuse (actual, potential or parenting stress); Parent outcomes: parenting behaviour, parenting attitudes, enhancement of life course (education, employment, public assistance)	Weighted mean standardised effect sizes [found to be significantly greater than zero for cognitive and socioemotional child development, potential child abuse, parenting behaviours and attitudes, and maternal income]	Meta-analytic review combining data from 60 services. Home visiting programmes as a whole did provide a (small) statistically significant benefit to parents and children on 3/5 child and 3/5 parent outcomes
Barlow A et al, <i>Paraprofessional-delivered home-visiting intervention for American Indian teen mothers and children: 3-year outcomes from a randomised controlled trial.</i> American Journal of Psychiatry 2015	Family Spirit Intervention: 43 structured lessons delivered during pregnancy and up to 36 months post-partum, by bilingual Native American community members (paraprofessionals) with intensive training and supervision. Programme developed through community-based participatory research over more than a decade.	Randomised controlled trial with strong emphasis on intervention fidelity	Expectant American Indian teens (n=322; ages 12-19 years at conception) from <=32 weeks gestation, and their children up to 36 months of age, in four southwestern reservation communities	Parental competence (parenting knowledge, locus of control and stress as well as home environment); maternal emotional and behavioural functioning (depressive symptoms, externalising and internalising problems, alcohol and drug use); children's emotional and behavioural outcomes (externalising and internalising behaviours, dysregulation, and competence)	Parenting Stress Index-Short Form, Parental Locus of Control Scale, Home Observational Measure of the Environment (HOME), Center for Epidemiological Studies – Depression scale (CES-D), Achenbach System of Empirically Based Assessments, Infant-Toddler Social and Emotional Assessment	Rigorous trial comparing Family Spirit Intervention plus optimised standard care with optimised standard care alone. Found significantly greater parenting knowledge and parental locus of control, fewer depressive symptoms and externalising problems, and lower drug use among mothers, with fewer externalising, internalising and dysregulation problems among children, both in intervention group

Author(s), title, journal/ institution and year	Intervention(s)	Design	Population	Outcomes reported	Measurement	Comments
Norr K et al, <i>Maternal and infant outcomes at one year for a nurse-health advocate home visiting program serving African Americans and Mexican Americans.</i> Public Health Nursing 2003	Resources, Education and Care in the Home – Futures (REACH-Futures) programme to reduce infant mortality through home visits by a team of community residents led by a nurse. (Average of around 5 home visits and 7 contacts in first 12 months)	Randomised controlled trial	African American and Mexican American expectant mothers in third trimester (n=588), and their children (followed up here to 12 months), in Chicago	Maternal and parenting (repeat pregnancy within 12 months, community life skills, parenting attitudes, cognitive growth stimulation, home safety hazards); infant health (illness and injury episodes in first year, immunisations at 12 months, reported abuse or neglect, mental and motor developmental status at 12 months)	Community Life Skills Scale, Difficult Life Circumstances Scale, Bavolek Adult-Adolescent Parenting Inventory, Home Observation for the Measurement of the Environment, Bayley Scales of Infant Development (Mental, Motor)	Small statistically significant effects (one parenting attitude subscale, infant mental development, and documentation of immunisation among African Americans; community life skills and one HOME subscale among Mexican Americans). Concludes that primary health care model of nurse – community worker team is an appropriate approach to reduce health disparities in industrialised countries
Kuhne F, Krattenmacher T, Beierlein V, Grimm JC, Bergelt C, Romer G, Miller B, <i>Minor children of palliative patients: a systematic review of psychosocial family interventions.</i> J Palliative Med 2012	Five structured interventions: "Children Of Somatically Ill Parents", "Family Focused Grief Therapy", "Family Talks in Cancer Care", "Parental Guidance Program", "Teens and Adults Learning to Communicate"	Systematic review including different types of studies (mainly quantitative and cross-sectional)	Parents with palliative-stage disease; minor children (<18 years)	Psychosocial including symptomatology, quality of life	Multiple including Brief Symptom Inventory (BSI), Beck Depression Inventory (BDI), Social Adjustment Scale (SAS), Child Depression Inventory (CDI). Tools relating to family functioning: Family Assessment Device (FAD), Family Relationships Index (FRI), Family Environment Scale (FES)	Systematic review of psychosocial interventions for a high risk group (children of palliative patients). Tools for measuring family functioning may have broader application.

Author(s), title, journal/ institution and year	Intervention(s)	Design	Population	Outcomes reported	Measurement	Comments
Davey MP, Kissil K, Lynch L, Harmon L, Hodgson N, <i>A culturally adapted family intervention for African American families coping with parental cancer: outcomes of a pilot study.</i> Psycho-Oncology 2013	Culturally-adapted family intervention, compared with psycho-education treatment	Non-randomised quasi-experimental two-arm prospective pre- and post-intervention	12 African American families with school-age children coping with parental cancer	Symptoms of psychosocial distress (depression and anxiety) considered as secondary objective (family communication as primary objective)	Multiple including Children's Depression Inventory (CDI), Revised Children's Manifest Anxiety Scale (RCMAS), Center for Epidemiologic Studies Depression Scale (CES-D). Tools relating to family functioning: Interaction Behaviour Questionnaire (IBQ)	Relates to above systematic review; example of cultural adaptation.
Rotheram-Borus MJ, Lee MB, Gwadz M, Draimin B, <i>An intervention for parents with AIDS and their adolescent children.</i> American Journal of Public Health 2001	24-session coping skills intervention delivered in small groups by social workers and graduate students in clinical psychology over 12 weeks	Randomised controlled trial with 2-year follow-up	Financially needy parents with AIDS (n=307) and their adolescent children (n=412) in New York City between 1993-1995	Emotional distress, problem behaviours (for both parents and adolescents); stressful family events reported by adolescents; parental coping with illness; custody plans	Brief Symptom Inventory, Rosenberg Self-Esteem Scale, Coping With Illness Questionnaire	Significantly greater reduction in emotional distress and problem behaviours among both adolescents and parents, and in conduct problems among adolescents, in intervention group; no difference observed in disclosure or custody plans. Outcomes for control group families also improved over time (potentially due to introduction of anti-retroviral therapy during study period and/or interview participation).

<b>Author(s), title, journal/ institution and year</b>	<b>Intervention(s)</b>	<b>Design</b>	<b>Population</b>	<b>Outcomes reported</b>	<b>Measurement</b>	<b>Comments</b>
Kreutzer JS, Marwits JH, Sima AP, Godwin EE, <i>Efficacy of the Brain Injury Family Intervention: impact on family members.</i> J Head Trauma Rehabil 2015	Structured treatment programme designed to enhance family functioning after acquired brain injury using family education, skill building, and psychological support	Randomised controlled trial with pre- and post-assessments	Parents, spouses, partners, significant others or close friends of individuals with acquired brain injury	Needs for emotional / instrumental / professional / community support, health information and care involvement	Family Needs Questionnaire (FNQ), Service Obstacles Scale (SOS), Zarit Burden Inventory (ZBI)	Family intervention included survivor as well as caregiver/ other family members. Questionnaires reflect needs of whole family, burden on caregiver
<i>Annual Report 2015: The First Year.</i> Pasifika Futures, November 2015	Engagement with navigators through core providers of Pacific whaanau ora services; development of family plans and support to implement them	Standardised assessment with service users at entry, exit and regular intervals	Service users: families enrolled with core providers commissioned by Pasifika Futures	Four outcome domains (health, education, economic, community participation) reported for whole families. Health domain includes families having a health plan and becoming smokefree	Measurement Assessment and Scoring Tool (MAST)	More information available in <i>Pasifika Futures Evaluation and Performance Framework.</i> Pasifika Futures 2015 (obtained from Dr Seini Jensen)
<i>Tracking Whaanau Ora Outcomes: Information Collection Trial, First Phase Results.</i> Te Puni Kokiri, June 2012	Engagement with Whaanau Ora collectives funded by Te Puni Kokiri	Survey of service users	50 whaanau completed survey	Self-reported whaanau engagement in exercise and smoking, parenting and tikanga confidence, housing and income situation	Whaanau satisfaction survey	Survey completed by individual on own or whaanau behalf

# NARRATIVE SUMMARY OF IDENTIFIED PAPERS

This review has identified twelve papers (plus one supplementary paper providing background information on one of the identified papers) which provide outcome information on either more than one family member, or the family as a unit, from interventions undertaken to improve the health or well-being of families. Eleven of these are summarised in the above table, and discussed below. (There were two papers identified which related to one intervention; in this case, only the paper reporting the final results has been included).

This section presents a narrative summary of the eleven papers. It follows the order of the summary table, which groups papers broadly by the type of intervention they examine.

## Home visiting services

The first five papers in the summary table all relate to home visiting services. Early Start is a research-based intensive home visiting service for families with infants facing severe social, economic or emotional challenges which was set up in Christchurch in the mid-1990s and has been rigorously evaluated throughout via a randomised controlled trial, with results available up to nine years of follow-up<sup>xiii</sup>. The evaluation showed modest benefits for children, including fewer hospital visits for accidents, lower rates of parent-reported child abuse, and more competent, less punitive parenting. No impact was found on family or parental functioning.

A recent (2015) systematic review of home-based nursing interventions to promote health and well-being in families with small children<sup>xiv</sup> did not include a New Zealand publication. It identified 19 quantitative instruments for measuring different outcomes in families; most of these related to individual family members, however some (Parental Bonding Instrument, AMBIANCE) related to interactions between members.

A meta-analytic review<sup>xv</sup> carried out in 2004 of home visiting programmes in the United States since 1965 combined data from 60 services run by professionals, paraprofessionals or non-professionals. Overall home visiting programmes provided a (small) statistically significant benefit on three of five child and three of five parent outcomes.

The Family Spirit Intervention consisted of a series of 43 structured lessons delivered the homes of Native American teen mothers during pregnancy and up to 36 months post-partum, by bilingual members of their communities (paraprofessionals) who underwent intensive training and supervision. The programme was developed through community-based participatory research over a period of more than ten years, and was evaluated via a rigorous randomised controlled trial with strong emphasis on intervention fidelity. Initial positive findings after 12 months of follow-up<sup>xvi</sup> were confirmed and extended in the follow-up to 36 months<sup>xvii</sup>. Mothers in the intervention group were shown to have significantly greater parenting knowledge and parental locus of control, fewer depressive symptoms and externalising problems, and lower drug use than those in the control group. Intervention group children had fewer externalising, internalising and dysregulation problems than those in the control group.

The REACH-Futures programme used teams, each with two community workers supported by a nurse, to visit African American and Mexican American mothers and their children, from the third trimester of pregnancy to 12 months post-partum, with the aim of decreasing infant mortality in these populations<sup>xviii</sup>. A randomised controlled trial demonstrated some small statistically significant effects among some groups. These included an increase in positive attitudes for developmentally appropriate expectations, one of the four parenting attitude subscales, as well as in infant mental development and documentation of immunisation (as distinct from immunisation itself) among African Americans, and improvements in community life skills and in the provision of appropriate play materials (one of the subscales of the HOME observation) among Mexican Americans.

## Psychosocial and/or coping skills interventions for high risk families

The next three papers relate to psychosocial and/or coping skills interventions for specific high risk populations: children of parents with cancer and/or undergoing palliative care, and parents with AIDS together with their adolescent children.

A systematic review of psychosocial family interventions for minor children of palliative patients<sup>xix</sup> identified five structured interventions for this high risk group which met the inclusion criteria. This concluded that successful interventions begin during palliative care and continue throughout bereavement, and that supporting the most distressed sub-groups is an appropriate approach, but noted a lack of well-designed and elaborated interventions in this population.

Another paper reports on a pilot study of a culturally-adapted family intervention among twelve African American families coping with parental cancer<sup>xx</sup>, in which the intervention group reported significantly better communication with each other, and satisfaction, than the control group, although no differences were noted in anxiety or depression.

The third paper in this group relates to a 24-session coping skills intervention for low-income parents with AIDS and their adolescent children<sup>xxi</sup> which demonstrated significantly greater reduction in emotional distress and problem behaviours among both adolescents and parents, and in conduct problems among adolescents, in the intervention group; however no difference was observed between the groups on disclosure of HIV status or custody planning.

## Brain Injury Family Intervention

One identified paper considers the efficacy of an intervention for families of individuals with acquired brain injury, including the survivor as well as caregiver(s) and other family members as appropriate<sup>xxii</sup>. This demonstrated that the intervention group had a greater improvement in the degree to which their needs for Professional Support, Health Information, and Community Support (three of the six subscales on the Family Needs Questionnaire) were met from baseline to post-treatment. There was also a significant and promising decrease in caregiver burden from baseline to post-treatment, however burden scores increased significantly from post-treatment to follow-up, ending up non-significantly lower than those observed pre-treatment.

## Whaanau Ora programmes

Two papers (plus a background paper relevant to one of them) relate to the work of Whaanau Ora programmes in New Zealand. The first is the brief initial report of results from the first year of operation of the Pacific Whaanau Ora Commissioning Agency, Pasifika Futures<sup>xxiii</sup>. This reports results at the level of the family as a unit, across four domains (health, education, economic and participation) using a standardised tool, the Measurement Assessment and Scoring Tool designed specifically for this purpose. Health related indicators include having a family health plan (77% of enrolled families, indicating that they have prioritised health) and moving from having one or more smokers to being smokefree (27% of families who initially had one or more smokers).

More details of the family-level measurements are available in the (unpublished) evaluation and performance framework<sup>xxiv</sup> which indicates that the following quantities are being measured in the health domain:

- Families with a health plan, as a proportion of those who prioritise health in their initial assessment
- Families who have achieved a health goal (e.g. exercise, stopping smoking, taking medication etc), as proportion of those with health plan
- Families in which every member is enrolled with a primary care provider, as a proportion of all families
- Smokefree families, as a proportion of the families initially identified as having one or more smokers
- Families who have plan(s) for their long-term condition(s) in partnership with a health professional, as a proportion of families with one or more members who has a long term condition(s)
- Families with plans to achieve their aspirations, as proportion of families with member(s) with disabilities

The other paper reports the initial results of the first phase of the Whaanau Ora programme established by Te Puni Kokiri<sup>xxv</sup>, prior to the establishment of the three Commissioning Agencies. This used a whaanau survey completed by individuals on their own, or their family's, behalf.

## DISCUSSION

The 11 papers summarised above all relate to family interventions intended to effect some kind of improvement in health or well-being for the family as a whole, or at any rate for more than one member of the family (e.g. child and parent, index patient and caregiver, etc). According to the inclusion criteria, papers which did not include an intervention were excluded. However, it should be noted that in some cases the mere act of engaging with families, for example to collect data, may have a therapeutic effect. Thus the demarcation between “intervention” and “measurement” may not be completely clear. One example in particular is the New Zealand tool “Hua Oranga”, which triangulates the views of tangata whaiora (Maaori health consumers), clinicians and whaanau (family members) in order to measure the efficacy of treatment, or health interventions based on Maaori perspectives of health, philosophies, aspirations and world views. While not included in this review (on the basis of not being an intervention), there is an emerging recognition of the importance of measuring outcomes in this way<sup>xxvi</sup>.

The five papers on home visiting services together provide a useful evidence base for related programmes of various sorts, despite wide variations in how they are set up and measured. The Early Start programme in Christchurch and the Family Spirit intervention in Native American communities are likely to be among the most useful models for Counties Manukau Health, representing effective professional-led and community worker-led models respectively (both grounded in research and with an emphasis on programme fidelity).

The Early Start programme seems to have effectively reached a highly vulnerable population and made a positive difference for children through the delivery of practical assistance to parents by professionally-trained staff, while being less effective at changing the overall circumstances for the family. Although the numbers of Maaori families involved in the programme were small, they appear to have benefited equally or slightly more than non-Maaori families. It should be noted that the Early Start programme was adapted for New Zealand from an overseas (Hawaiian) programme and has maintained a strong focus on research and fidelity of programme delivery throughout. In this way it differs from the (related) Family Start programme which developed from the New Zealand government’s Strengthening Families Strategy and is widely offered across the country, including in Counties Manukau. Results from the Early Start evaluation therefore cannot necessarily be extrapolated to Family Start programmes, which have been implemented with more variability by local providers.

The Family Spirit intervention is an example of an effective programme rigorously developed and evaluated in partnership with the communities it was designed to serve, and delivered by trained paraprofessional community members, rather than by health professionals. It demonstrated positive impacts on a number of parameters known to be important for long-term child well-being. This is an important model for many underserved communities, including in New Zealand, which often have a scarcity of professionally trained staff with the cultural understanding and language skills to engage most effectively with their members.

The REACH-Futures study purports to be the first evaluation with acceptable retention rates to find that a home visiting programme using paraprofessionals had positive effects on mental development of healthy low-income infants, although these effects were small and applied only to

African American infants, and asserts that its infant outcomes were comparable with previous studies of home visiting programmes (often carried out by professionals), at least for African Americans. The differential findings between the different ethnic groups bear out previous observations of greater impact in groups starting from a lower baseline (e.g. Mexican American mothers initially had lower scores on the Community Life Skills scale than African American mothers, and were the only group in which a difference was detected between intervention and control groups).

The papers on psychosocial family and coping skills interventions are included, despite relating to psychosocial therapy, because of the nature of the population covered (being tightly targeted and therefore more feasible to consider providing such a service to), and particularly because of the tools that relate to the functioning of the whole family in a particular high-stress situation. (This is despite the fact that most of the tools used in these studies still relate to individual family members.) It may be useful to consider whether and how these tools could be used in the Cancer Psychological and Social Support (CPSS) initiative.<sup>xxvii</sup>

The Brain Injury Family Intervention is of particular interest for its use of instruments that explore family needs, service obstacles and caregiver burden (Family Needs Questionnaire, Service Obstacles Scale, Zarit Burden Inventory).

The MAST tool developed by Pasifika Futures seems to be very promising for true family-level measurement. No comparable reports are available at this stage from either of the other two Whaanau Ora Commissioning Agencies, Te Pou Matakana or Te Putahitanga, however it is expected that they may develop their own ways of measuring family outcomes. (The whaanau satisfaction survey used by Te Puni Kokiri in 2012 is included here for the sake of completeness, but represents a much earlier stage of development in attempts to measure family outcomes and responses).

## LIMITATIONS

Different individuals carried out the initial selection of potentially relevant abstracts, and the further review of these abstracts to determine whether they met the inclusion criteria. Thus, if any relevant papers were inadvertently excluded in the first round of a search, they could not be picked up in the detailed review of abstracts. The possibility of this occurring was mitigated by thorough and iterative discussion of the purpose of the review with those running initial searches, and by these individuals maintaining a low threshold for inclusion of abstracts in the initial selection.

The criteria for inclusion were driven by practical usefulness to Counties Manukau Health, as clarified during the process of exploring the literature, rather than by completeness. The papers selected may thus be less useful to other organisations.

## **CONCLUSIONS AND RECOMMENDATIONS**

This review has identified that the measurement of outcomes at family level from interventions undertaken with families is an emerging field of enquiry, with only a small number of publications meeting the inclusion criteria identified through the search strategies undertaken.

The identified papers include some models and some tools which may be useful for consideration by services aiming to effect change at the level of the family in Counties Manukau. In particular, the models of the Early Start and Family Spirit programmes could help inform home visiting services for families with children who may require additional support in their early years; and concepts reflected in the MAST tool developed by Pasifika Futures may be useful to inform thinking in the Whaanau Ora / Fanau Ola space in which family interventions are being undertaken without (yet) systems being in place to record and/or easily retrieve and analyse outcomes at family level.

- <sup>i</sup> Law DD, Crane DR, Berge JM, The influence of individual, marital and family therapy on high utilizers of health care. *Journal of Marital and Family Therapy* 2003; 29 (3): 353-363
- <sup>ii</sup> Crane DR, Does family therapy reduce health care costs for more than the identified patient? *Clinical Child Psychology and Psychiatry* 2011; 16 (1): 3-4
- <sup>iii</sup> Families Commission (New Zealand) 2013. Families and whanau status report: towards measuring the wellbeing of families and whanau
- <sup>iv</sup> Hanna D et al, The health of prisoners' families: a qualitative research project examining the effects that a family member being in prison has on the health of prisoners' families in New Zealand. Report to the National Health Committee from Wesley Community Action, December 2009
- <sup>v</sup> Ligett L, Evaluation of a healthy lifestyle intervention among disadvantaged pre-schoolers: a thesis submitted for the degree of Doctor of Philosophy. University of Otago (unpublished), 2012
- <sup>vi</sup> Kingi TKR, "Hua Oranga" Best health outcomes for Maori: a thesis presented for the degree of Doctor of Philosophy in Maori Studies. Massey University (unpublished), 2002
- <sup>vii</sup> Kingi TKR, "Hua Oranga" Best health outcomes for Maori: a thesis presented for the degree of Doctor of Philosophy in Maori Studies. Massey University (unpublished), 2002
- <sup>viii</sup> Gallrach F, Quality of life of people with dementia and their informal caregivers – a clinical and economic analysis in New Zealand. University of Canterbury (unpublished doctoral thesis), 2010
- <sup>ix</sup> Fergusson D, Boden J, Horwood J, Early Start evaluation report: nine year follow-up. Ministry of Social Development (New Zealand), 2012
- <sup>x</sup> Tracking Whaanau Ora Outcomes: Information Collection Trial, First Phase Results. Te Puni Kokiri, June 2012
- <sup>xi</sup> Annual Report 2015: The First Year. Pasifika Futures, November 2015
- <sup>xii</sup> Hart K, Schumacher R, Moving forward: Head Start children, families and programs in 2003. Center for Law and Social Policy, June 2004 (Brief no. 5)
- <sup>xiii</sup> Fergusson D, Boden J, Horwood J, Early Start evaluation report: nine year follow-up. Ministry of Social Development (New Zealand), 2012
- <sup>xiv</sup> Tanninen H-M, Haggman-Laitila A, Kangasniemi M, The content and effectiveness of home-based nursing interventions to promote health and well-being in families with small children: a systematic review. *Scandinavian Journal of Caring Sciences* 2015
- <sup>xv</sup> Sweet M, Appelbaum MI, Is home visiting an effective strategy? A meta-analytic review of home visiting programs for families with young children. *Child development* 2004
- <sup>xvi</sup> Barlow A et al, Effect of a paraprofessional home-visiting intervention on American Indian teen mothers' and infants' behavioural risks: a randomised controlled trial. *American Journal of Psychiatry* 2013; 170: 83-93
- <sup>xvii</sup> Barlow A et al, Paraprofessional-delivered home-visiting intervention for American Indian teen mothers and children:3-year outcomes from a randomised controlled trial. *American Journal of Psychiatry* 2015; 172: 154-162
- <sup>xviii</sup> Norr K et al, Maternal and infant outcomes at one year for a nurse-health advocate home visiting program serving African Americans and Mexican Americans. *Public Health Nursing* 2003; 20 (3): 190-203
- <sup>xix</sup> Kuhne F, Krattenmacher T, Beierlein V, Grimm JC, Bergelt C, Romer G, Miller B, Minor children of palliative patients: a systematic review of psychosocial family interventions. *J Palliative Med* 2012
- <sup>xx</sup> Davey MP, Kissil K, Lynch L, Harmon L, Hodgson N, A culturally adapted family intervention for African American families coping with parental cancer: outcomes of a pilot study. *Psycho-Oncology* 2013; 22: 1572-1580
- <sup>xxi</sup> Rotheram-Borus MJ, Lee MB, Gwadz M, Draimin B, An intervention for parents with AIDS and their adolescent children. *American Journal of Public Health* 2001; 91 (8): 1294-1302
- <sup>xxii</sup> Kreutzer JS, Marwits JH, Sima AP, Godwin EE, Efficacy of the Brain Injury Family Intervention: impact on family members. *J Head Trauma Rehabil* 2015
- <sup>xxiii</sup> Annual Report 2015: The First Year. Pasifika Futures, November 2015
- <sup>xxiv</sup> Pasifika Futures Evaluation and Performance Framework. Pasifika Futures 2015
- <sup>xxv</sup> Tracking Whaanau Ora Outcomes: Information Collection Trial, First Phase Results. Te Puni Kokiri, June 2012
- <sup>xxvi</sup> Dr Nicolette Sheridan, personal communication, March 2016
- <sup>xxvii</sup> <http://www.health.govt.nz/our-work/diseases-and-conditions/cancer-programme/national-cancer-programme-update>