



Population-level Interventions to Optimize Early Child Development: A Realist Review of the Evidence

The Nurturing the Next Generation Research Team

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Key Messages

- Peel requires effective interventions that impact early child development at the population level. These interventions must be evidence-informed and evaluated for the efficacy of outcomes. Analysis should include cost-benefit assessment.
- Intervention strategies in the domains of parent education, social marketing and social connectivity must be flexible and adaptable to meet the needs and interests of a diverse population.
- Evidence indicates the importance of a 'just-in-time' approach to information delivery and access.
- Current programming must be redesigned to reach parents where they already meet. Location of program delivery is an important factor in determining parent engagement and retention. Further research needs to investigate the role of program location within the context of Peel communities.
- To augment community connections, and facilitate informational support to parents, emphasis should be placed on supporting both formal and semi-formal interactions that contribute to community development (e.g., community participation, relationship building and empowerment).
- Social marketing is a strategy used in public health to support voluntary behaviour change. The diversity of Peel's parent population must be recognized and incorporated into social marketing approaches that use both media and face-to-face strategies.
- Parent education requires effective and versatile facilitation, with emphasis on participatory, culturally appropriate approaches that can be used in group settings.

Executive Summary

Issue

This report presents the findings of a Canadian Institutes of Health Research (CIHR)-funded realist synthesis of the current literature on population-level interventions that optimize early child development.

The research, undertaken through a multiyear research partnership, is one component of Peel Public Health's Nurturing the Next Generation (NTNG) Strategic Priority. Peel Public Health staff partnered with researchers at Trent University, York University, McMaster University and the University of Calgary to undertake this literature review. The review identified existing research evidence to support planning for early child development interventions in the following domains: parent education, social connectivity and social marketing.

Context

The synthesis sought to answer the following question: *What are the population health interventions that public health can realistically implement to support early child social, emotional and cognitive development from the prenatal period to the end of the first year of life?* This question is important because previous research confirms that the environments and relationships experienced during the earliest phases of life determine lifelong health and wellbeing.

Findings

The review found the domains of parent education, social connectivity and social marketing to be potentially health enhancing. The review found no evidence of an existing

intervention to singularly and universally improve early child social, emotional and cognitive development.

Conclusion

There are evidence-informed approaches in the domains of parent education, social connectivity and social marketing that can be used to develop innovative population-level interventions to support the transition to parenthood and optimize early child development, while meeting the needs of Peel’s diverse communities.

1.0 Issue

In 2009, Peel Public Health (PPH) identified *Nurturing the Next Generation* (NTNG) as a key program priority in their 10 year strategic plan. The realist review, undertaken through a multiyear research partnership, is one component of Peel Public Health’s NTNG Strategic Priority. Peel Public Health staff partnered with researchers at Trent University, York University, McMaster University and the University of Calgary to conduct the review.

Early child development is a social determinant of health and a critically important developmental phase. Children’s early life experiences set a foundation for their entire lifecourse. The Ontario Early Years Study Part 3: *Making Decisions, Taking Action* indicates that who we become as adults is directly impacted by our health at birth and our life experiences. “Even during gestation, the environment of the fetus—nutrition, pollutants, drugs, infections and the mother’s health, well-being and stress level—influences how genes are expressed and the architecture and function of our brains (1).” Creating and sustaining healthy, supportive environments is essential to optimizing early child development (ECD) (2).

The challenge for Peel Public Health is to identify population-level interventions that support early social, emotional and cognitive development by improving the environments in which children grow up. Peel requires interventions that have the capacity to improve birth outcomes; increase access to appropriate nutrition and support the development and maintenance of stable, responsive relationships and safe environments during the prenatal period through to the end of the first year of life. The complex nature of these issues suggests that meeting these objectives requires a commitment to exploring innovative approaches, while at the same time recognizing that changes to existing systems and practices may be equally effective.

2.0 Context

2.1 The ‘Public Health Way’

The ‘Public Health Way’ is Peel Public Health’s guiding philosophy (3). It emphasizes a population health approach, and therefore interventions are generally directed at population-level outcomes. Population health approaches also try to reduce disparities in health status. Various types of interventions are often required including interventions outside the health sector.

2.2 Family and Child Health Status in Peel Region

Peel Region includes the Town of Caledon, City of Brampton and the City of Mississauga. The challenge of delivering sustainable, health-enhancing services for Peel Region’s growing population of families and children is significant. Peel Region has the second largest birth cohort in Canada, and anticipates an additional 16,190 births by the end of the year 2013.

Assessing the health status of Peel children is difficult. Peel-specific data in the areas of child health and wellbeing are not readily available. In fact, there is a paucity of data specific to the zero to six age population in Peel (4). Some of the indicators used to measure the health status of children and families in Peel include assessments of birth outcomes and poverty rates. Another measure often cited is the percentage of new mothers assessed to be at high risk. The Healthy Babies, Healthy Children Screening (HBHC) Tool is used to screen all new mothers for risk factors and eligibility for the HBHC program at the time of their baby’s birth. Those screened as high risk are offered the opportunity to participate in the HBHC Program. These indicators, supplemented by province-wide data and assessments like the Early Development Instrument (EDI) show:

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- Peel has an elevated low-birth-weight rate compared to the provincial rates due to infants born as small for gestational age (SGA). Research demonstrates that South Asian mothers have babies with lower birth weights than infants born of non-South Asian mothers. Although previously thought to be of concern, many of these infants are appropriately sized for their ethnic background (5).
 - The rate of lone-parent families in Peel is high. An estimated 60,000 children live in lone-parent families, the majority of which are led by single women (6).
 - The percentage of children aged zero to five years living in low income households increased from 14% to 19.8% between 2001 and 2006 (7).
 - The 2010 findings of the EDI survey found that 30% of Peel’s children are not ready for school in one or more domains of school readiness.

2.3 Diversity in Peel

Accounting for and understanding the state of child health in Peel requires approaches that reflect and respond to Peel’s diversity. Peel is a large geographical region. It is home to 1.3 million people. Flexible programming that is capable of meeting different needs associated with residents living in a mixed urban/rural community is required.

Similarly, Peel’s high level of ethnic, cultural and linguistic diversity is another factor that requires sensitivity and flexibility. Current census data illustrates that approximately 49% of the population was born outside of Canada, of which 10% can be classified as having immigrated within the last five years. Two-thirds of births in Peel are to mothers born outside of Canada, and 67% of Peel parents are immigrants (8). Providing parent support interventions that effectively meet the needs of an ethno-culturally diverse population is essential.

3.0 Literature Review

3.1 Research Partnership

Research partnerships present novel means of connecting knowledge users with knowledge producers. They provide an important means for organizations such as public health

to engage in high quality research and evaluation that lead to effective, evidence-based interventions.

Recognizing the value of this, Peel Public Health sought to partner with academic researchers to undertake the Nurturing the Next Generation Project. In 2010, Peel Public Health, in conjunction with a team of university researchers submitted a research proposal to the Canadian Institutes of Health Research (CIHR). Its approval led to the formation of the *Nurturing the Next Generation Research Team*. This team included expertise in the areas of infant and child development, population health, realist and systematic literature reviews, and knowledge translation. The team, made up of a core working group and an advisory panel, conducted research between 2010 and 2012.

3.2 Method

This literature review was completed using realist synthesis methodology, a multistep process that relies on expertise and critical evaluation to examine complex programs and policy issues. It is useful in synthesizing a large and diverse selection of literature for informing policy and in identifying and designing effective interventions. Unlike systematic reviews, realist reviews can incorporate less rigorous research studies on the grounds that even imperfect studies may contain useful information. This distinction between research designs is crucial where the summarization and evaluation of complex domains affecting human behaviour is required in order to answer the question of ‘what works for whom, under what conditions?’ (9)

3.3 Search Strategy

A preliminary literature search was conducted in MEDLINE using the key words “intervention” and “parents” based on the following research question: *What are the*

population health interventions that public health can realistically implement to support early child social, emotional and cognitive development from the prenatal period to the end of the first year of life?

This search initially yielded over 300,000 articles necessitating a further refinement of key words. To refine the search strategy, a group of public health and research experts brainstormed a list of potential areas for review and identified the following five public health, population-level domains: parent education, social connectivity, social marketing, policy initiatives and service integration. Upon reflection, a decision was made to eliminate policy initiatives and service integration as subjects for the review for several reasons. First, the rationale for this decision was that these areas were out of the direct scope and role of public health. Despite their importance, most policy initiatives affecting families are outside of Peel Public Health's jurisdiction. Similarly, service integration would be unfeasible given the level of inter-agency collaboration required and the current climate of active service integration already being undertaken. Second, incorporating policy initiatives and service integration into this review would render it unwieldy, and not manageable within the timelines set by CIHR.

Following this process, implementation chains were developed for the remaining domains: Parent education, social connectivity and social marketing in order to consider the mechanisms by which they work (Appendix A). Based on the implementation chains, a table of assumptions was developed summarizing the logic of these interventions within each domain (Appendix B).

Assisted by a university reference librarian, domain-specific literature was retrieved and consolidated in individual databases. Reviews of titles, abstracts, full text articles and reference lists were conducted. Snowball techniques were applied to identify promising studies that may

have been missed by the formal searches. After reviewing all peer-reviewed sources and publically available grey literature from government and institutional sources, the literature was assessed for possible benefit. Search processes concluded when saturation occurred as determined by the absence of new findings.

3.4 Appraisal

The appraisal process for this project involved a series of meetings and consultations between the NTNG core working group and the smaller advisory group of experts. Regular meetings of the core working group were combined with periodic consultations with advisory group members to identify and correct existing knowledge gaps leading to progressive stages of review and refinement.

4.0 Results

4.1 Parent Education

Parent education describes the range of programs and activities used to educate and support parents in the transition to parenthood. Parent and prenatal education strategies typically include the following delivery models: individual home visits; group education provided within a community, health clinic, or hospital setting; and the distribution of pamphlets, videos/DVDs, or the delivery of web-based programs.

For the purposes of this review, parent education was defined as: “...a process that involves the expansion of insights, understanding, and attitudes and the acquisition of knowledge and skills about the development of both parents and their children and the relationships between them” (10).

4.1.1 Search Results

A total of 1,477 articles were identified through initial searching in this category, 78 of which were selected for in-depth review, after screening. To meet criteria for inclusion, articles had to be written in English, targeted at parents of children aged zero to one year of age, be applicable or adaptable to Peel's context and needs, and be reflective of programs designed and implemented at a "universal level" (e.g., offered to all parents despite income, challenges, risks).

4.1.2 Findings

There was no evidence of effectiveness for any single universal parent education intervention within this review. Issues hindering the quality of evidence in the studies reviewed included the wide range of heterogeneous interventions, poor quality evaluations and a lack of program descriptions in the literature. Other major limitations included problems with study design, the consistent lack of outcome measures, and the overabundant use of parent satisfaction and parent self-report as measures to evaluate program outcomes.

This synthesis documented the following key findings in the domain of parent education:

- *Assessment of parent learning needs:* Most interventions were based on expert driven curricula, with few programs designed based on adult learning principles.
- *Program design and delivery:* Flexibility in mode of delivery is of demonstrated importance, however there is little evidence supporting the substitution of alternate delivery models in place of face-to-face delivery.
- *Parent engagement and retention:* Low attendance and poor participant retention was a dominant issue, suggesting that current programming fails to meet parental needs and interests.

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- *Efficacy*: Evaluation of outcomes was lacking in virtually all studies, and none were reviewed that assessed the long-term efficacy of parent education programs in sustaining behaviour change and child development outcomes.
 - *Positive effects on child development*: Of the studies reviewed, none provide evidence that parent education interventions result in direct improvements to child development. Reports of improved child development are inferred based on an increase in parent knowledge.

The findings of this review indicate that an inferred link between parent education and parent behaviour improvements are a predominant assumption in parent education interventions; however the evaluation literature cannot support that this assumption is true. Assumptions must be challenged and evidence must be incorporated into the design and delivery of programs. To this end, the limited available evidence offers support for the following conclusions, derived from the parent education literature.

- Parent satisfaction and program impact are affected and improved by the ability of the facilitator to foster social connections between participants.
- Outcome measures between differing delivery models and mediums — whether they are group, individual, Internet-based, or delivered via DVD/video format, are generally comparable.
- Convenience of location and flexibility of programming are major factors influencing program attendance.
- Providing a ‘suite of services’ delivered by well-trained professional facilitators allows parents to access services based on their specific needs and when they require them most (i.e., a ‘just-in-time’ approach).

Refer to Appendix C-1 Evidence for Practice Summary - Nurturing the Next Generation: Parent Education.

4.2 Social Connectivity

Social connections are an important resource for families, especially when they experience the transition to parenthood. Informal sources of support create opportunities for information exchange as well as instrumental and emotional support. Fostering social

connections in the community is one way to promote the health of families and optimize the development of young children.

For the purposes of this review, social connectivity was defined as: Family and community connections in the early parenting environment that provide actual and/or perceived support (in its many forms) or linkages to actual and/or perceived support (in its many forms). The opposite of social connectivity is isolation.

4.1.2 Search Results

Over 1,500 articles were reviewed by title and abstract, 27 of which were selected for in-depth analysis for their relevance in the formation of findings for this review. Relevance criteria included studies that reflected the demographic of interest, as well as those which demonstrated increased social support through a social connectivity intervention. Studies highly targeted to a specific population were excluded.

4.1.3 Findings

Social connections among parents are infrequently measured. A connection is inferred between increased parental wellbeing that arises from social connections and positive developmental indicators. This assumption was consistent with the measures used to evaluate social connections, which generally relied on perceptions of support, program satisfaction and perception of the change of social connections among parents as a result of their participation in a program, attending a centre, or utilizing a service. A further limitation in this literature is the large number of descriptive studies and inconsistency between measures of social connectivity and social support.

A review of the literature in the social connectivity domain revealed the following evidence:

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- *Community connections:* Family Resource Programs and Centres foster connections between new and expecting parents through community development and interventions that encourage participation.
 - *Internet connections:* The widespread use of the Internet and social networking sites by parents was recognized as a potential strategy due to its accessibility and flexibility. It is also a low cost means of fostering connections in a manner that is consistent with a 'just-in-time' approach to information access and exchange. Research findings revealed this medium to be effective at providing informational support but not emotional support. The requirement of committed staff tasked with managing and monitoring the sites is also acknowledged.
 - *Prenatal connections:* Based on findings synthesized from seven studies of group prenatal care, it was consistently reported that group care contributed to valued and sustained social connections.
 - *Father connections:* Existing programs tailored to meet the unique needs of fathers were not universally available. Evidence suggests that during the prenatal period, men value social environments that foster 'fathers-only' opportunities for connections led by a male facilitator. Additionally, programs and activities that are inclusive of the whole family are desirable in the postpartum period. These findings support the use of tailored strategies to ensure fathers are considered, engaged and retained within programming.

Specific observations arising from the literature in this domain suggest that focussed studies on social connectivity are limited. It has been demonstrated however that social connections do positively influence parental wellbeing, which may enhance child development outcomes. Approaches that engage parents in a friendly way, in welcoming settings will have the most success in fostering social connectivity. Successful strategies include:

- Creating opportunities for social interaction that do not rely on structured programming.
- Building on opportunities to encourage social connections where parents are already going (e.g., prenatal care and education, preschools, day care centres).
- Using the Internet for 'just in time' informational support, not necessarily social connections. Connections may be fostered in situations where parents have things in common (e.g., due date specific online chats for pregnant parents).
- Father-inclusive practices.

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- Family-systems intervention practices – approaches that treat families with dignity and respect, provide them with the information needed to make informed choices, actively involve them in obtaining resources and supports, and demonstrate practitioner responsiveness and flexibility.
 - Community development principles – participatory approaches based on relationship building, empowerment, strengths, respect for diversity, active family involvement, and neighbourhood and community engagement.

Refer to Appendix C-2 Evidence for Practice Summary – Nurturing the Next Generation: Social Connectivity.

4.3 Social Marketing

Social marketing in public health refers to the use of marketing principles to influence behaviour on a large scale. For the purposes of this review, social marketing was defined as follows: The systematic application of marketing concepts and techniques to the planning, implementation and evaluation of interventions designed to influence parenting practices and societal support for the benefit of children and their families.

4.3.1 Search Results

Peer-reviewed and grey literature published between 2000 and 2011 were included in this review, resulting in over 600 citations from the initial search. Articles were selected for a second phase of review based on their title and abstract. Seventy-four papers constitute the findings included in this review, of which 16 provide an evaluation of campaign impacts.

4.3.2 Findings

The primary assumption in social marketing literature is that positive outcomes will be attained through the delivery of a properly designed and well-executed social marketing campaign. While some of the principles and assumptions inherent to social marketing have been confirmed by research findings, there are also gaps between theory and practice.

The main findings of this review in the domain of social marketing were as follows:

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- *Nature of parent-focused social marketing campaigns:* Most social marketing campaigns do not integrate behaviour change theories. Campaigns often target specific parenting behaviours for the objective of reducing infant morbidity or mortality, and few focus on promoting constructive social, emotional, and cognitive development and parental support.
 - *Status of the parenting social marketing literature:* Much effort is devoted to audience analysis in the design of social marketing campaigns, but few campaigns were shown to evaluate effectiveness. Campaigns inclusive of evaluations were found to be methodologically weak, thereby limiting interpretation of outcomes and impact.

While the literature in this field is diverse and in some respects undergoing development, the review revealed several themes across studies in this domain. The following conclusions are possible based on the synthesis of these findings:

- Including health professionals as a target audience appears to be an important factor contributing to successful social marketing campaigns.
- Community-based social marketing campaigns that utilize a mixed-media approach, including face-to-face strategies, were effective as targeted approaches for both marginalized and/or ethno-culturally diverse populations.
- Tailored approaches are necessary even within a population-level framework. Audience segmentation practices that encompass an analysis of cultural beliefs, practices and barriers to behaviour change were found to be essential attributes for effective campaign strategies.
- Evidence suggests that campaigns that connected behaviour change to adverse child outcomes were successful in altering parental practices.

While this review found relative promise in the efficacy of social marketing campaigns, the high cost and resource intensive nature of these strategies must be acknowledged. Findings also demonstrate gaps between the formative stages of the design of social marketing interventions and the completion of evaluative components. These gaps resulted in largely anecdotal, assumed, or inferred conclusions of effectiveness.

Adoption of social marketing principles by public health may require a reorientation of values, namely around the use of audience segmentation as a means of securing maximum

campaign impact. It is significant to note that public health has limited experience with true social marketing, and has traditionally employed social advertising strategies to support strategic health messaging priorities. Thus, success in this domain is contingent upon the inclusion and maintenance of social marketing principles throughout the marketing cycle, as well as the provision of sufficient funding to ensure messaging is impactful at a population level.

Refer to Appendix C-3 Evidence for Practice Summary - Nurturing the Next Generation: Social Marketing.

5.0 Preliminary Recommendations

Based on the findings of this review, the following recommendations should be considered in planning population-level interventions that support early child development from the prenatal period to the end of the first year of life:

- Interventions should reflect goals of equity and a respect for diversity to meet the needs of individuals, groups and communities in Peel. Strategies should be flexible and adaptable so that these needs can be met effectively across contexts and settings. Emphasis should be placed on the provision of a ‘just in time’ menu of services that provides parents with what they need, when they need it.
- Peel Public Health should consider undertaking an analysis that identifies barriers to program access and uptake among families, and fosters a stronger understanding of the needs of families who are often missed.
- Reaching and engaging parents require the use of strategies that incorporate adult learning principles. Programming should also aim to be participant-driven, employing community development principles, father-inclusive practices and family-systems intervention practices.
- Consistent with theories of adult learning, interventions should explicitly link learning to parental experience, given that learning outcomes are principally influenced by the time pressures that parents face and the relevance of information.

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- Services should be designed to meet parents in places they already frequent in the course of their day-to-day activities. Attempting to provide services in sites that are not frequented by parents contributes to poor reach and participant attrition.
 - Social marketing strategies should be designed using the social marketing principles of audience analysis and segmentation. This is an important consideration in promoting equity in programming and service delivery.
 - Further effort should be channelled towards investigating the potential efficacy of internet and internet-facilitated programming as a flexible, potentially cost-effective alternative to class-based educational programming.
 - Programming directed at the needs and perspectives of fathers must be expanded and evaluated to inform programs to improve engagement and retention.
 - Professional services are not needed by most parents. Parenting environments where formal and informal supports are readily available will contribute to positive child development outcomes. Fostering informal supports in the current parenting milieu will increase capacity for parents to support one another.
 - Program evaluation and long-term outcome measurement will be essential in determining the impact of future programs and services. Evaluation of process, outputs and family and child development outcomes are all important.

6.0 Conclusion

There are evidence-informed population-level approaches in the domains of parent education, social connectivity and social marketing that can be used to develop innovative population-level interventions to support the transition to parenthood and meet the needs of Peel's diverse communities. This realist review also identified the need for further exploration and highlighted the value of hearing directly from Peel's parents. Peel Public Health and other health departments should examine their programs in light of these research findings and recommendations.

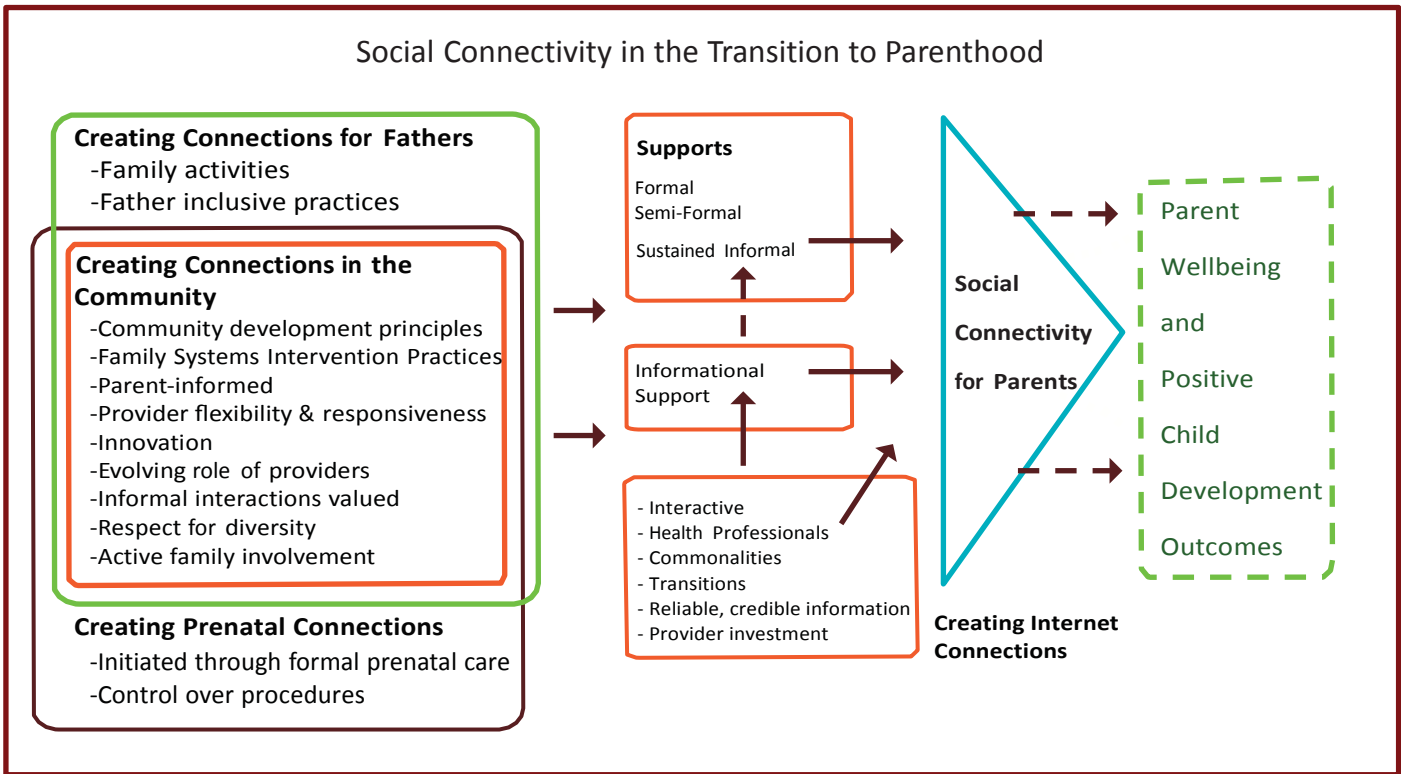
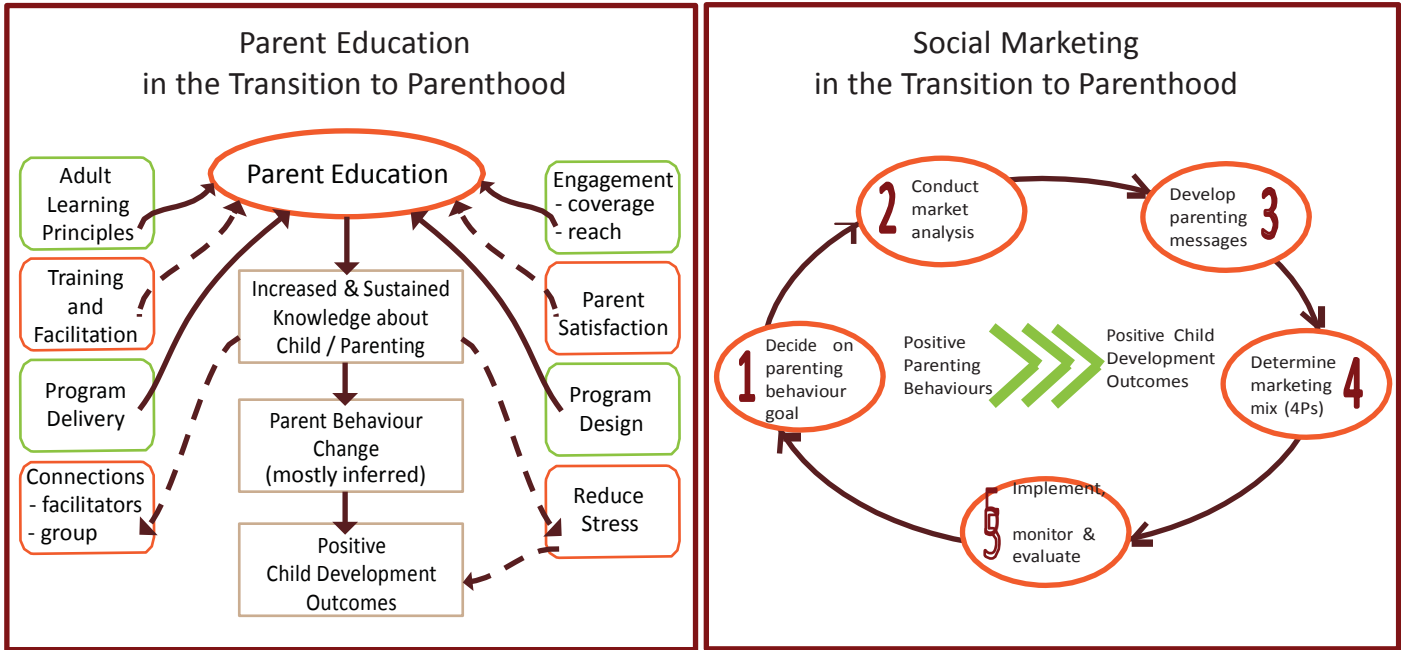
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Appendices

Appendix A	Implementation Chains
Appendix B-1	Parent Education Assumptions
Appendix B-2	Social Connectivity Assumptions
Appendix B-3	Social Marketing Assumptions
Appendix C-1	Evidence for Practice Summary - NTNG: Parent Education
Appendix C-2	Evidence for Practice Summary - NTNG: Social Connectivity
Appendix C-3	Evidence for Practice Summary - NTNG: Social Marketing

Implementation Chains



Parent Education Assumptions

Assumptions	<ul style="list-style-type: none"> • Parents lack knowledge about some aspect of parenting • A lack of knowledge undermines parenting • All parents can benefit from parent education 	A parent education program can be designed to meet the perceived knowledge gap	Parents will attend to components of the program	Parents will value, believe and remember the information they receive through the program	Parents will use this new information to make a change in their behaviour	The change in the parents' behaviour will cause improvements in their child's behaviour	The learning and behaviour change will be sustained
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Parent Education Program Cycle	<ol style="list-style-type: none"> 1. Perception that there is a learning need at a universal level • Parent education is feasible at a population-level 	<ol style="list-style-type: none"> 2. Designing the program to meet the perceived lack of knowledge <ul style="list-style-type: none"> • Underlying theory • Who decides what the program should involve • Credibility of the program 	<ol style="list-style-type: none"> 3. Delivery of the program <ul style="list-style-type: none"> • Design • Program is delivered as designed • Parents can access the program • People are available to teach it • Parents remain and complete the designed program 	<ol style="list-style-type: none"> 4. Efficacy <ul style="list-style-type: none"> • Parents are satisfied with the program • Program delivers what it says it will • Parents' knowledge does increase • Parents have learned new skills and feel confident in trying those skills 	<ol style="list-style-type: none"> 5. Parents will use this new knowledge or new skills to change their parenting behaviour in a positive way 	<ol style="list-style-type: none"> 6. New parenting behaviours will positively affect child development 	<ol style="list-style-type: none"> 7. This new knowledge or new skills will be sustained over time and continue to positively impact child development
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Supporting Literature	Parents are not consulted	Program content is primarily expert driven	Small numbers sign up for classes - motivated by topics of interest and perceived consequences of not improving some aspect, primarily first-time parents. Attrition rates are consistently high, even when stipends and other incentives are provided.	Evidence to suggest knowledge increases – measured using parent report. Parent satisfaction most common measure. An effective facilitator and making connections with others in the group can affect satisfaction positively.	Behaviour change is not measured	There is no evidence to support a clear link between parent education and parent behaviour change. Rather the link has been inferred.	No studies measuring parental behaviour change
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Social Connectivity Assumptions

<p>Assumptions</p>	<p>Parents have poorer wellbeing and are less effective when they are socially isolated.</p>	<p>Parents can benefit from the collective knowledge of others.</p>	<p>Isolated parents have higher levels of toxic stress, which is decreased by social connections.</p>	<p>It is possible to positively impact or facilitate social connections for parents.</p>	<p>Social connections, once established, can be self-sustained.</p>	<p>The parenting environment in 2012 has barriers to social connectivity that can be overcome.</p>	<p>Social connectivity can promote “good’ as opposed to “bad” (connections resulting in undesirable behaviours).</p>	<p>Connections through electronic means may not provide the support that is required to achieve benefits in overall wellbeing.</p>	<p>Social connectivity for parents will result in better wellbeing and child development outcomes.</p>	
<p>Supporting Literature</p>	<p>Literature supports that social connections are associated with greater wellbeing. We generalize these findings for parents as a population.</p>	<p>Parents seek out and value the information that they receive from others when undergoing transitions and when it is <i>just in time</i>.</p>	<p>Stress in individuals generally is decreased by social connections and the support that they provide. It is inferred that the same is true for parents.</p>	<p>Studies have demonstrated that parents have increased their social connections through programs, services and the internet.</p>	<p>There is no intervention literature related to parents supporting this assumption.</p>	<p>The social environment has changed for people generally, and parents in particular (e.g., less access to helpful others, changing sense of community and working outside the home).</p>	<p>The intervention literature related to social connections between parents does not report any detrimental or unintended effects.</p>	<p>Connections through social networking sites provide a good source of <i>just in time</i> informational support but very little emotional or other types of support.</p>	<p>There is no evidence to support this assumption in the early parenting literature. It has been demonstrated in one study of school age children.</p>	
<p>Promising Practices</p>	<p>Social networking websites have been shown to provide parents informational support at the transition times of pregnancy and birth.</p> <p>Expectant fathers value connections with others like them during prenatal classes. Women value the connections they make with in group prenatal care.</p>		<p>Family resource programs, prenatal education with a father component and a male facilitator, and group prenatal care have reported that participant social connections have increased.</p>			<p>Innovation and technology will be required to overcome these barriers. Interventions have not been identified.</p>		<p>Internet interventions that provide opportunity for social interactions provide a valued source of informational support for parents.</p>		<p>One meta-analysis has demonstrated an indirect positive effect on child development as a result of Family Systems Intervention Practices.</p>

Social Marketing Assumptions

Assumptions (based of Social Marketing Theory)	There are specific parenting behaviours that parents will adopt or change for the benefit of their children. The perceived benefits must outweigh the costs.	A single campaign strategy will not be meaningful to all parents. A segmented approach is needed to understand and impact all parent audiences and other stakeholders.	High value is placed on understanding parents as consumers. Consideration is given to understanding competing behaviours and values. Campaigns can overcome cynicism, apathy and other barriers to behaviour change. Based on behaviour-change theory.	Social marketing campaigns capture the attention of parents if a balance of marketing strategies are applied strategically: 4Ps – Product, Place, Promotion and Place. (Some sources refer to a 5 th P for Partnerships).	Parents will remember, believe and value the campaign information. Parents are motivated capable and ready to seek more information, support and/or adopt the behaviour.	Parents will adopt and sustain the desired behaviour as a result of the campaign. Regular campaign feedback loops are present to ensure campaign fidelity and to address improvements. Parent behaviour change will result in positive outcomes for their child.
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Parenting Social Marketing Cycle	1. Decide on parenting behaviours or practices to be adopted or changed.	2. Conduct market analysis: Identify target parent populations and segment based on key demographic and psychographic characteristics, and careful assessment of current behaviours.	3. Develop parenting campaign messages based on audience analysis.	4. Determine the ideal marketing mix – parent and stakeholder audiences.	5. Implement, monitor and evaluate the parent social marketing campaign for effectiveness (e.g., exposure, recall, message resonance, behaviour change, positive child outcomes).
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Supporting Literature / Literature Gaps	Predominance of specific parental behaviours: breastfeeding, smoking cessation in pregnancy, SIDS prevention. Few examples of campaigns promoting the broader goals of healthy infant development.	Most parenting social marketing campaigns conduct market analysis prior to campaign development, employing both primary and secondary research. Parenting populations are segmented most often by low-income, ethnicity or geographical location. Health care providers are often identified as an important audience segment for parenting campaigns.	Clear links between audience analysis and development of key messages and campaign strategies are not articulated well in most studies. Use of behaviour change theory to develop appropriate messaging is extremely limited. Some evidence to support how such theories successfully address barriers to change.	Most parenting social marketing campaigns do not explicitly reference the “4P” framework in campaign development. Analysis of most campaigns reveals an over-emphasis on “Promotion” to the exclusion of the other Ps. Most campaigns engaged a multiple approach to promotion strategies with print media, radio and televisions ads, websites, call centres, posters, and information booklets among the most popular strategies.	<ul style="list-style-type: none"> • Campaign implementation details are seldom discussed in the literature, making campaign fidelity difficult to assess. • Most interventions (with the exception of national campaigns) are limited in duration and scope. • Reach is estimated versus measured. Campaign recall is often the measure of success. • Many campaigns are descriptive accounts and lack evaluation data. • Some campaigns measure knowledge only, few measure attitudinal shifts, intent to change behaviour, behaviour change or child health outcomes. • Campaigns that include evaluations lack methodological rigour preventing definitive conclusions about effectiveness and impact. • Campaigns that include health professionals as a target audience are effective for a broad range of parenting topics. • Community-based social marketing campaigns are an effective targeted approach for reaching disadvantaged populations and/or ethnically diverse audiences. • Positive behavioural outcomes for parents and children have been reported for campaigns focussed on: SIDS prevention, breastfeeding, smoke-free homes, child-seat safety, health-service seeking behaviour, monitoring of developmental milestones and parent-child interaction.
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1. Clearly define the question or problem
2. Efficiently search for research evidence
3. Critically appraise the research sources
4. Synthesize data and form recommendations
5. Adapt the information to the local context
6. Implement
7. Evaluate

Draft



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Evidence for Practice

FAMILY HEALTH REALIST REVIEW

OCTOBER 2013

Sharing the Research Evidence

Nurturing the Next Generation: Parent Education

Authored by: Cyndi Gilmer

Realist Review Findings

Question:

What are the population health parent education interventions that public health can realistically do to support early child social, emotional, and cognitive development from the prenatal period to the end of the first year of life?

Overview of the Search Process:

- The initial search identified 1477 articles. Articles were *included* if they focussed on parent education programs designed and implemented at a universal level. Articles were *excluded* if they were not in English or were involved in extensive teaching through home visiting programs.
- A total of 78 papers were considered for in-depth review.
- The papers were then assessed based on the emerging model 'what works for whom, under what conditions' (Pawson, 2006).

Conclusions:

1. There is no one parent education intervention strategy that results in improved child development outcomes. Parents appreciate and require a menu of services to meet their diverse needs.
2. There is evidence that parents are drawn to 'just-in-time' information that is flexible, convenient, timely and perceived as useful to them.
3. There is evidence to support that increased knowledge does not necessarily result in behaviour change.
4. In group settings, an effective and engaging facilitator is important.

Implications for Practice

The results of the realist review will contribute to the Nurturing the Next Generation strategic priority decision-making process and future operations in the Family Health Division.

As such Peel Public Health will:

- Promote the ongoing development of versatile and effective facilitation skills for staff, as they are key in delivering effective parent education programming.
- Develop evidence-informed programming that is based on adult learning principles and provides a continuum of service options.
- Participate in practice behaviour that actively involves family members making informed decisions and using their existing strengths to obtain resources, support and advice that they identify as important, in a manner and at a time that suits them.
- Explore the implications for practice as it relates to the perceptions of different cultural groups.

REGION OF PEEL

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Evidence for Practice

FAMILY HEALTH REALIST REVIEW

OCTOBER 2013

Sharing the Research Evidence

Nurturing the Next Generation: Social Connectivity

Authored by: **Claudine Bennett**

Realist Review Findings

Question:

What are the population health social connectivity interventions that public health can realistically do to promote social, emotional and cognitive development from the prenatal period to the end of the first year of life?

Social Connectivity is defined as family and community connections in the early parenting environment that provide actual and/or perceived support.

Overview of the Search Process:

- Over 1500 papers / articles were reviewed by title and abstract
- 27 of the most relevant papers formed the basis of the findings

Findings:

1. **Community connections:** formal and semi-formal supports are useful to families and can lead to sustained, valuable informal connections. Agency attempts to connect parents must incorporate family-friendly approaches, community development, relationship building, empowerment, and respect for diversity. There is value in 'coming together' as a goal in and of itself.
2. **Internet connections:** internet-based social networking sites have the potential to provide pregnant and parenting families with informational support.
3. **Prenatal connections:** combined prenatal care and classes offer opportunities for social connections in a place where pregnant families are already going. These connections are sustained over time.
4. **Father connections:** fathers value the opportunity to connect with other fathers in a 'fathers-only' prenatal environment. Father-inclusive practices have been developed but they are often not considered as an audience for parenting supports.

Implications for Practice

The results of this realist review will contribute to the Nurturing the Next Generation Strategic Priority decision-making process and future operations in the Family Health Division.

As such Peel Public Health (PPH) will:

- Consider the important role of social connections as one of the ways to promote healthy child development.
- Evaluate current social networking initiatives and consider other interventions that provide information and promote social connections for families.
- Consider the role of public health in fostering social connections for families through current programs and services.
- Consider the need to engage with fathers in different ways than with mothers.
- Consider the role PPH can play to support community development, program planning and evaluation.
- Work with community partners to reinforce the message that social connectivity is a valid and valuable goal of parent programs.

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Evidence for Practice

FAMILY HEALTH REALIST REVIEW

OCTOBER 2013

Sharing the Research Evidence

Nurturing the Next Generation: Social Marketing

Authored by: Melanie Gillespie

Realist Review Findings

Question:

What are the population health social marketing campaigns that Peel Public Health can realistically do to support early social, emotional, and cognitive development from the prenatal period to the end of the first year of life?

Definition:

Social marketing is the systematic application of marketing techniques to planning, implementation and evaluation of interventions that improve health. A social marketing strategy begins with a specific behaviour change goal, and then uses audience analysis and segmentation. The four Ps of marketing: Product, price, place and promotion are used to develop an effective campaign.

Overview of the Search Process:

- A search of both published and grey literature was conducted between 2000 – 2011.
- Parents were the population of interest and *social marketing* was the intervention.
- 600 citations were reviewed by title and abstract. Papers were *included* if they focussed on parents of young children and adhered to social marketing principles. Papers were *excluded* if they targeted parents of older children.
- 74 papers form the basis of the findings; 16 of which were evaluated.

Conclusions:

1. Many social marketing campaigns focus on promotion only and are more accurately described as social advertising campaigns..
2. There are significant gaps between social marketing theory and practice.
3. Using social marketing interventions to target parents of young children is an underdeveloped strategy.
4. There is some evidence of success in specific areas of breastfeeding, smoking cessation during pregnancy, SIDS prevention and car seat safety.
5. Social marketing campaigns that target parents are effective when parents understand that not changing their behaviour pose risks to their children.
6. Few campaigns target positive social, emotional and cognitive infant development, or support for parents.

Key Implications for Practice

Results of the realist review will contribute to the Nurturing the Next Generation strategic priority decision making process and future operations in the Family Health Division As such Peel Public Health will:

- Acknowledge parents as a diverse audience requiring systematic analysis of their needs.
- Develop social marketing campaigns that use both media and face-to-face strategies particularly when using targeted approaches for reaching disadvantaged populations and or ethnically diverse audiences.
- Recognize that parent-focussed social marketing campaigns are effective when: behaviour is easy to change, health professionals are targeted, and barriers to change are addressed by the campaign.