

Healthy Parents, Healthy Children Initiative Evaluation Report May 2015









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LIST OF ABBREVIATIONS

AHS Alberta Health Services

C/PHC Community/ Public Health Centre

HCP Healthcare Provider

HPDM Health Product Development Model
HPHC Healthy Parents, Health Children
HUTV Health Unlimited Television

LGS Low-German speaking
n Number of participants
NICU Neonatal Intensive Care Unit

PEaCh – HPC Preconception to Early Childhood Health Promotion Collaborative

PEaCh – PIT Prenatal to Early Childhood Provincial Integration Team

PEaCh – WG Prenatal to Early Childhood Working Group

QI Quality Improvement

HEALTHY PARENTS, HEALTHY CHILDREN INITIATIVE EXECUTIVE SUMMARY

Healthy Children and Families, Alberta Health Services (AHS) created *Healthy Parents, Healthy Children* (HPHC) print and online products in response to an identified need to have standardized, evidence-informed pregnancy, birth and early childhood provincial products. Two books were created for expectant parents, parents of young children up to six years of age, and healthcare providers (HCPs): The *HPHC: Pregnancy and Birth* and *HPHC: The Early Years*. HPHC print and online products provide readers with comprehensive and reliable information on best practices from pregnancy to parenting.

Initiative Goal and Objectives

The HPHC initiative goal was to develop, implement, disseminate and evaluate the standardized provincial product(s) for expectant parents, parents of children from birth up to six years of age and HCPs working with these populations. The initiative objectives were to:

- develop product(s) that respond to parental and HCP needs
- utilize the Health Product Development Model (HPDM) to develop, design and disseminate the HPHC products
- encourage parents and HCPs working with these populations to adopt the information available through the HPHC online and print products
- establish and incorporate findings from ongoing evaluation and quality improvement (QI) for enhancements to the HPHC product(s)

Product Development, Implementation, Marketing, and Dissemination

Images of the HPHC Products that have been developed to date

HPHC Products

The Early Years

Book Book

HPHC Promotional Products

Website

Redemption Card

Promotional Card

Poster

An internal project team supported by provincial stakeholders developed online and print products which were available in June 2013. Promotion to both HCPs and the public was undertaken. A new system for provincial dissemination across Alberta was created. This included contact points through primary care, Community/Public Health Centres (C/PHCs) and other community service agencies.

Evaluation Objectives

The following primary objectives guided the evaluation and are reported in this executive summary. Additional objectives are described in the full HPHC evaluation report.

- 1. To assess the dissemination of the HPHC print and reach of online products.
- 2. To assess parent and HCP awareness, knowledge, utilization and satisfaction with the print and online products.
- 3. To examine the perceptions of parents who may be more vulnerable to poor health outcomes regarding the HPHC online and print products.

Methods

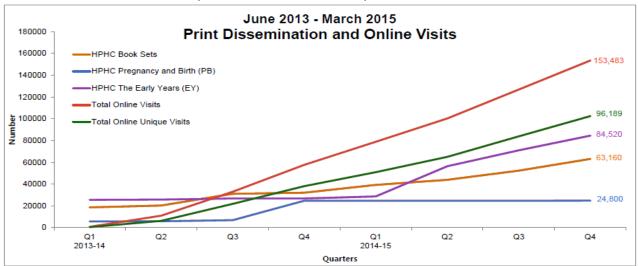
The HPHC evaluation used a complex, mixed methods approach which applied a variety of study designs and data collection approaches. The data collection approaches reported here are listed below:

- direct measurement of book dissemination and online resource data
- cross-sectional semi-structured surveys of Alberta parents and HCPs
- key informant interviews with HCPs working with populations vulnerable to poor health outcomes
- focus groups across the province with populations vulnerable to poor health outcomes

Please see the Appendix A for a complete description of all methods used in the evaluation.

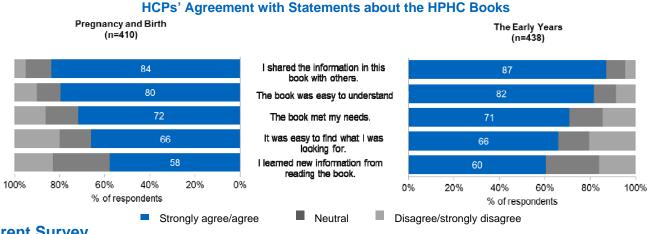
Evaluation Findings

A total of 63,160 HPHC book sets, 24,800 Pregnancy and Birth, and 84,520 The Early Years books were disseminated across Alberta from June 2013 to March 2015. In addition, there were 96,189 unique online visits with 79% of visitors from Alberta. Estimates of the dissemination of the products indicated that if these books reached their intended audiences, 81% of the pregnancy cohort from the past 22 months would have received a book set or a *Pregnancy and Birth* book. Additionally, 45% of the parents of children from birth up to six years of age would have received *The Early Years* book. Approximately 25% of the intended audience of parents visited the online product.



Healthcare Provider Survey

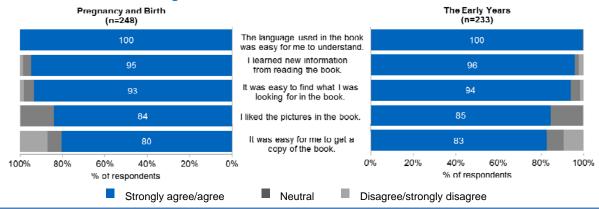
A total of 503 electronic surveys were completed by HCPs who worked in public health, prenatal, postpartum and early childhood areas. The majority of respondents were aware (68%) or somewhat aware (22%) of the dissemination process. 65% of the HCPs who disseminated books reported no difficulty with the process. The most commonly cited difficulty with dissemination (about 35% of comments) was that parents had not received redemption cards from their primary care providers. HCPs described the inconvenience of the two-stage redemption process. A majority of HCPs were satisfied with the products and shared them with their clients.



Parent Survey

In total, 465 parents of children from birth up to six years of age completed a survey. Eighty-six percent of surveyed parents had seen at least one of the HPHC products before. Two-thirds (65%) of all parent respondents received print copies of the complete set of two books or at least one of the HPHC books (Pregnancy and Birth, and/or The Early Years). About 30% of parents had seen the online product. Parents were highly satisfied with the HPHC products.

Parents' Agreement with Statements about the HPHC Books



What Parents Like Most

"I was relieved to see all the information about how labour will proceed. When the actual labour started I knew what to expect."

"Pictures about how something works were easy to understand."

I love to read about children('s) milestones. It's something interesting and what I enjoy with these books."

What Parents Like Least

"Speaking about giving formula negatively.
Breastfeeding is obviously preferred; however,
some people have no choice but to formula feed."

Sometimes I found it hard when I was looking for something specific. Sometimes very opinionated, it should say this is what is recommended because at the end of the day mothers know best."

Evaluation among populations vulnerable to poor health outcomes

Part of the evaluation was to examine the perceptions of parents from populations who may be more vulnerable to poor health outcomes regarding the HPHC products. Specific populations included: Aboriginal, including First Nation and/or Métis parents; new Canadians; pregnant or parenting teens; low income families; and Low-Germanspeaking (LGS) Mennonites. Twelve HCPs who worked directly with one of the identified targeted populations were purposefully selected to participate in key informant interviews. A total of seven focus groups were held across Alberta with expectant and parents with children from birth up to six years of age who attended existing parenting groups or programs that specifically served one of the target populations. There were 74 participants who attended the groups.

Themes arising from the interview and focus group data: Impressions of the current HPHC products: All parents reported

liking the books and commented on how helpful the photos and illustrations were in the books.

Topics important for these unique populations and missing from

HPHC: Parents and key informants identified issues and concerns that remained unaddressed in the book: Adoptions and navigating child services, multi-family housing and parenting large families, and parenting benefits and subsidies.

To translate or not to translate: There were mixed feelings from Aboriginal groups, new Canadians and LGS Mennonite groups about translation of the books. Most felt that simple English would be better because: it would help them practice English; they don't read their first language well; and they don't know the vocabulary for pregnancy and parenting topics in their first languages. Some new Canadians felt that translation might help, but that more pictures and plain English would address their needs.

Dissemination strategies: Participants provided a number of excellent suggestions for locations to disseminate the products.

What Unique Groups said about HPHC

"[The books] are exactly like what it should be and how it should look."

[Focus Group Participant]

"English is the best.
Simple, basic English with pictures." [Key Informant]

"In Aboriginal homes, there are multiple families living in one home. This book represents one, single family view on a family."
[Key Informant]

CONCLUSIONS AND RECOMMENDATIONS

Overall, the HPHC products were received well by parents and HCPs. There are some improvements to consider in the dissemination of the books, to enhance their user-friendliness among HCPs, and to the content, based on parent suggestions.

Topic	Recommendation	Supported by Universal Population Results	Supported by Vulnerable Population Results
Health Product Development Model	Further refinement of the HPDM (e.g., developing guidelines outlining the outcomes for each phase of the model and supporting tools) for future products. Internal Recommendation		
HPHC Product Dissemination	Continue communication efforts of the dissemination and ordering processes of print products to HCPs and the dissemination process to parents.	*	*
	Consider expanding the definition of HCP or the sites for dissemination to include areas where care providers work with parents outside of the healthcare system. This may include social workers, pharmacists and those working with teens.	*	
	Continue to increase the number of locations disseminating the products and reduce restrictions, allowing providers to use their preferred dissemination process (e.g. providing books or redemption cards).	*	
	Continue to increase awareness among parents and HCPs on how to access and use the online product.	*	
HPHC Product	Continue with the ongoing content review process and incorporate parent suggestions where feasible (e.g., incorporating more pictures and images; parental anecdotes and case studies; using inclusive language and tone in recommendations, especially regarding breastfeeding/formula feeding; improving the usability of the index and glossary; adding more space for note taking, etc).	*	
	Continue with the ongoing content review process and incorporate HCPs suggestion where feasible (e.g., developing quick-reference tools [one-page sheets and/or bookmarks] of the HPHC content for HCP use; adding tabs to print product chapters; creating a frequently-asked-questions document; developing key messages).	*	
	Continue with enhancements to the online product including improvements to the search ability, functionality and interactivity of the product.		
	Continue to ensure and expand the use of plain language and images to express information.	*	*
Social Media Campaign	Examine the cost effectiveness, including staff time, of using the various marketing strategies to drive users to the online product.	ł	ernal
	Consider developing a multi-year engagement strategy for future campaigns, rather than a short-term strategy.	Recommendation	

HEALTHY PARENTS, HEALTHY CHILDREN INITIATIVE EVALUATION REPORT

PURPOSE OF THE REPORT

This report summarizes the evaluation findings related to the development, implementation and dissemination of the *Healthy Parents, Healthy Children* (HPHC) products led by the Reproductive Health and Early Childhood teams within Healthy Children and Families from 2011-2015. This report also provides recommendations for the initiative.

INTRODUCTION

Alberta Health Services (AHS) created the HPHC print and online products in response to an identified need to have standardized, evidence-informed pregnancy, birth and early childhood provincial products. Prior to the development of HPHC, a variety of products were distributed in Alberta to expectant parents, parents of young children up to six years of age and healthcare providers (HCPs). Having multiple pregnancy and parenting products in Alberta created inconsistent messaging and access, duplicate information and increased production and development costs. HPHC print and online products provide readers with comprehensive and reliable health information based on today's knowledge, evidence and best practices from pregnancy to parenting. The HPHC products were developed as a universal health promotion strategy for the Alberta parenting population and HCPs working with these populations.

HEALTHY PARENTS, HEALTHY CHILDREN DEVELOPMENT, IMPLEMENTATION AND DISSEMINATION

Initiative Goal and Objectives

The HPHC product initiative goal was to develop, implement, disseminate and evaluate the standardized provincial product(s) for expectant parents, parents of children from birth to six years of age and HCPs working with these populations. The initiative objectives were to:

- develop product(s) that respond to parental and HCP needs
- utilize the Health Product Development Model (HPDM) to develop, design and disseminate the HPHC products
- encourage parents and HCPs working with these populations to adopt the information available through the HPHC online and print products
- establish and incorporate findings from ongoing evaluation and quality improvement (QI) for enhancements to the HPHC product(s)

Development of Products

A HPDM was used throughout the initiative to guide the planning, product analysis, development, implementation (including dissemination) and QI/evaluation. Clear objectives, scope and accountabilities were established. An internal project team called the Prenatal to Early Childhood Provincial Integration Team (PEaCh – PIT) was formed to complete day-to-day activities and was supported by provincial committees with key stakeholders (PEaCh – Health Promotion Collaborative [HPC] and Working Group [WG]). An environmental scan of existing products, together with parent and HCP needs assessments, guided the development of HPHC products. Content development for the products was the lengthiest phase of the initiative—spanning over 14 months. Content was pulled from existing AHS products and disseminated to multiple provincial stakeholders to review to ensure that the content was up-to-date and evidence-informed. There were multiple feedback cycles with over 200 stakeholders. This phase also included the designing (formatting, illustrations, photo shoots, selecting photos for purchase), writing and editing of both the print and online products. The following HPHC products and promotional items were developed:

HPHC Products

- Healthy Parents, Healthy Children: Pregnancy and Birth (printed book or downloadable e-book):
 a guide for the three trimesters of pregnancy, labour and delivery and up to six weeks postpartum.
- Healthy Parents, Healthy Children: The Early Years (printed book or downloadable e-book): a guide to caring for children from the newborn stage up to six years of age HealthyParentsHealthyChildren.ca (online product): both books' content in an online format

Promotional Items

- Redemption cards: distributed to expectant parents by primary care providers and provide information about the online resource or can be used to exchange for the book set from the local Community/Public Health Centre (C/PHC).
- Promotional cards: distributed by HCPs and community organizations to any parent with a child up to six years of age to drive parents to the online resource.
- Posters: available to all HCPs and community organizations.

Product Implementation, Promotion and Marketing



The online product and print books were available in June 2013 with a public launch in November 2013. Several mediums were used to build awareness of the new HPHC products both within and outside of AHS. Key to this was the process for dissemination of HPHC through HCPs. Promotion to HCPs included announcements, telehealth sessions, presentations and advertising. The promotion and marketing to the public included a media launch, eight week webisode campaign, advertising and articles in parenting magazines and via TV interviews, posters, two direct mail campaigns and Public Service Announcements airing on Health Unlimited Television (HUTV).

Two e-marketing tactics were used between November 11, 2013 and February 9, 2014 to drive the target audience to www.HealthyParentsHealthyChildren.ca: (1) social media platforms (Twitter and Facebook), and (2) online paid advertising via parenting websites. This e-marketing campaign included:

- a pre-campaign period with randomized HPHC content on social media and no paid advertising
- an active campaign with nine weeks of themed content on Twitter, Facebook and paid advertising
- a post-campaign period with randomized health content on social media and no paid advertising Invitations were sent to the PEaCh HPC and WG members during the pre-campaign period inviting them to follow on Facebook and Twitter and to cascade the invitation to their networks.

Dissemination

At the time when the HPHC products were ready for dissemination, there was no existing provincial system in place to reach all expectant parents. Therefore the PEaCh – PIT created a system for provincial dissemination that included the following:

- Print books were packaged and distributed as a set to ensure access to both products.
- Initial shipments of books were sent to all C/PHCs for dissemination.
- An exception was made for the North Zone per their request, where parents received the print copy
 of HPHC: Pregnancy and Birth from the C/PHCs and the HPHC: The Early Years book at the
 postpartum home visit.
- An online ordering system for HCPs was developed for independent ordering of book sets, promotional cards, redemption cards and posters, as needed.

- Primary care providers were instructed to order redemption cards to disseminate to expectant parents. The expectant parents could then choose to obtain their HPHC book set at the nearest C/PHCs or access the online version.
- Parents with children from birth up to six years of age were provided with a promotional card for the online product. Any HCP or community organization working with families could order these cards.
- Human Services and Alberta Health also distributed a single allotment of books to targeted programs.
- Once the dissemination plan was implemented, early feedback identified that the process of taking
 a redemption card to a C/PHC in order to receive a book set was a barrier for some expectant
 parents. Provisions were made to support unique populations to have access to print copies without
 having to go to a C/PHC. This included parents with infants in Neonatal Intensive Care Units
 (NICUs) and parents more vulnerable to poor health outcomes. Primary care providers and partner
 programs were able order the book sets directly for expectant families with access barriers.

EVALUATION OBJECTIVES

An evaluation was designed to inform future decision-making for the HPHC initiative related to quality improvements and enhancements. The following objectives guided the evaluation:

- 1. To examine how the HPDM informed the identification, development, production and dissemination of the HPHC content and resources.
- 2. To assess the dissemination of the HPHC print and reach of online products.
- 3. To assess parent awareness, knowledge, utilization and satisfaction with the print and online products.
- 4. To assess HCP awareness, knowledge, utilization and satisfaction with the print and online products.
- 5. To determine whether the social media strategy used for the HPHC initiative was successful.
- 6. To examine the perceptions of parents who may be more vulnerable to poor health outcomes regarding the HPHC products.

METHODS

The HPHC evaluation used a complex, mixed methods approach which applied a variety of study designs and data collection approaches. The data collection approaches included:

- retrospective surveys of the internal PEaCh PIT members
- assessment and comparison of the newly developed HPHC products and previous products utilizing the Product Filtering Tool
- direct measurement of book dissemination and online resource data
- cross-sectional semi-structured surveys of Alberta parents and HCPs
- semi-structured interviews of PEaCh –PIT and WG members who were involved in the social media campaign
- key informant interviews with HCPs working with populations vulnerable to poor health outcomes
- focus groups across the province with populations vulnerable to poor health outcomes

Data Collection, Data Sources, Sampling and Recruitment Procedures, and Analysis

See Appendix 1 for a detailed description of the data collection methods, data sources, a brief description of the methods and the timeframe for the approaches that were used to address each of the evaluation objectives. The data analysis approach is also described. In the following sections, the results from the data are organized and presented according to evaluation objectives, data source and audience (parents and HCPs, respectively).

EVALUATION FINDINGS BY OBJECTIVE

Evaluation Objective 1: To examine how the HPDM informed the identification, development, production and dissemination of the HPHC content and resources.

Semi-Structured Survey Results

Ten members of the original PEaCh – PIT continue to be employed with AHS. Of these, four replied to the invitation to participate and completed the survey. All four indicated that they had been involved with the HPHC initiative since 2011 or 2012.

Respondents were polarized in their assessment of the HPDM (see Figure 1), as measured by open-

ended questions, and a Likert scale asking their level of agreement with how helpful the model was in guiding the work. Overall, two respondents found the model to be helpful and would recommend using the model for other initiatives, and two did not find the model useful and would not recommend using the model for



another initiative. Respondents suggested that the model would require adaptations prior to its implementation in future initiatives due to the length of time required for its use. Specifically, respondents suggested connecting it to existing health promotion models that are already being used.

Product Filtering Results

100%

80%

60%

40%

% Score

20%

0%

In the winter of 2014, the product filtering process initially used during the product analysis phase was repeated. Seven health professionals reviewed the nine previously used products as well as the HPHC products and rated them using the Product Filtering Tool that was developed based on the HPDM and parents' needs assessment conducted in 2011. The Tool's 35 criteria, based on what parents wanted, included aspects about the product's tone, readability, format and usability. Reviewers were somewhat familiar with HPHC products, but unfamiliar with the other products.

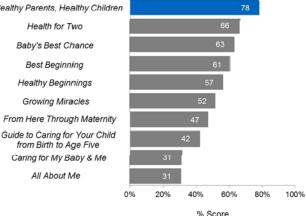
Figure 2 shows a comparison of the average filter score for all ten pregnancy and parenting resources for the 2012 and 2014 iterations. Scoring of the original nine products was consistent between the 2012 and 2014 iterations. The HPHC products scored higher (78%) than the nine other pregnancy and parenting resources (average 50%), both in overall score, as well as by category in the 2014 iteration (i.e. evidence-based; organization; visuals; product content; alternative information/whole picture, consumer-centric; readability). These results are not surprising as the Product Analysis Phase in the HPDM that was used to guide the HPHC development ensured that parenting needs were addressed throughout the products' conception, development and implementation periods.

> Healthy Beginnings Growing Miracles

> > All About Me

2012 Product Filtering 2014 Product Filtering Healthy Parents, Healthy Children Health for Two Baby's Best Chance Best Beginning

Figure 2. 2012 and 2014 Total Overall Filter Score (%) for Each Product



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Evaluation Objective 2: To assess the dissemination of the HPHC print and reach of online products

A total of 63,160 HPHC book sets, 24,800 *Pregnancy and Birth*, and 84,520 *The Early Years* books were disseminated across Alberta from June 2013 to March 2015. In addition there were 96,189 unique online visits with 79% of visitors from Alberta. Estimates of the dissemination of the products indicated that if these books reached their intended audiences, 81% of the pregnancy cohort from the past 22 months would have received a book set or a *Pregnancy and Birth* book (excluding those intended for HCPs). Additionally, 45% of the parents of children from birth up to six years of age would have received *The Early Years* book. Approximately 25% of the intended audience of parents visited the online product. Figure 3 summarizes the cumulative dissemination of the books and use of the online product over the past two years. Data presented in Evaluation Objective 3 will describe how many parents reported receiving and using these products.

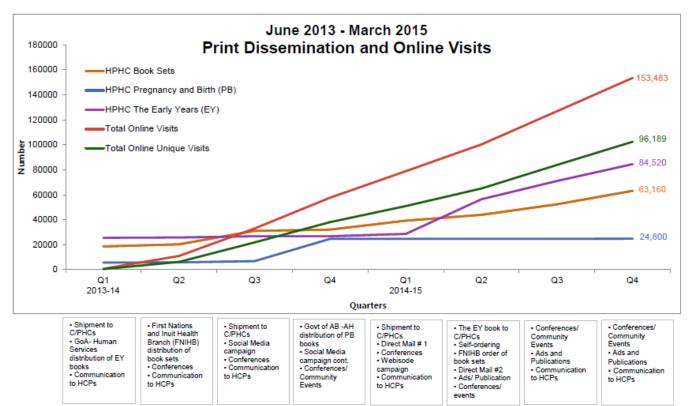


Figure 3. Print Products' Dissemination and Online Visits with Key Activities

Healthcare Provider Participants completing the Semi-structured Electronic Survey

A total of 503 electronic surveys were completed by HCPs who worked in public health, prenatal, postpartum and early childhood areas. Smaller proportions of respondents worked in primary care (13%) and acute care (10%) environments. A majority of respondents were nurses (60%), 15% worked in community agencies, 4% were physicians, and 2% were midwives. Most respondents were from urban AHS Zones: Edmonton (27%) and Calgary (25%). North Zone respondents accounted for 21% of the total, followed by the Central (17%) and South Zones (8%).

Dissemination and Reach of the Products

The majority of respondents were aware (68%) or somewhat aware (22%) of the dissemination process. Among HCPs who were involved in dissemination of the books, 76% reported that they followed the process as intended, and 24% followed a different process. 65% of the HCPs who disseminated books reported *no difficulty* with the process. The most commonly cited difficulty with dissemination (about 35% of comments) was that parents had not received redemption cards from their primary care providers.

Related comments from primary care providers indicated a lack of awareness, consistency or support for handing out redemption cards. In addition, HCPs described the inconvenience of the two-stage redemption process: lack of transportation, being new to a community, language barriers and not understanding the process as barriers. This challenge was addressed early in the implementation stage by changing the process to ensure HPHC book sets could be provided to parents with or without a redemption card at community locations. In addition, primary care providers could order HPHC books directly for parents with access barriers.

The most prominent themes for improving the dissemination process from the HCP data included:

- Some primary care providers requested to be the central point of distribution of the books, or permitted to have a supply of books to give directly to parents.
- Eliminate the redemption card and related processes to allow C/PHCs to give books to parents at their discretion to simplify the current process.
- Clearer communication of the process and rationale of the dissemination with HCPs.
- Include a variety of other sites in the dissemination such as libraries, hospitals (e.g. NICUs), family resource centres and linking with Allied Health pre-school services.

Evaluation Objective 3: To assess parent awareness, knowledge, utilization and satisfaction with the HPHC print and online products.

In total, 465 parents of children from birth up to six years completed a survey. Based on the number of respondents and the population of parenting Albertans, results of the survey are likely accurate to a 4.5% margin of error. More than half (53%) of the respondents were from AHS Calgary Zone. More than half of the parents (53%) saw family doctors for their prenatal care. Less than half (41%) saw an obstetrician/gynecologist, and one-quarter (26%) saw a doctor in a low-risk maternity clinic. Parents could select more than one option for this question regarding the provision of prenatal care.

Awareness and Utilization

Eighty-six percent of surveyed parents had seen at least one of the HPHC products before. Parents were more aware of the printed HPHC books than they were of any other product type. These data are presented in Figure 4 below. About 30% of parents had seen the online product and fewer had seen the electronic copies of the books.

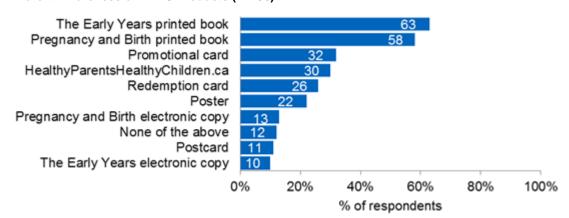


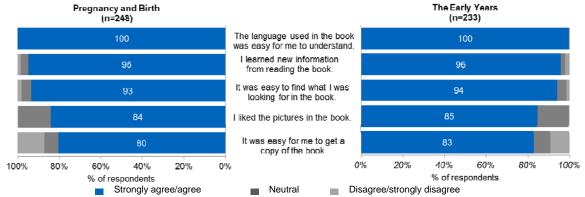
Figure 4. Parent Awareness of HPHC Products (n=456)

Thirty-six percent of all parent respondents reported receiving a redemption card (36%), 41% received a promotional card and 55% received at least one of the cards. Two-thirds (65%) of all parent respondents received printed copies of the complete set of two books or at least one of the HPHC books (*Pregnancy and Birth*, and/or *The Early Years*).

Satisfaction with HPHC Book(s)

A large majority of parents strongly agreed or agreed with five statements designed to assess their satisfaction with the books. This indicates high overall satisfaction and results are provided in Figure 5.

Figure 5. Parent Agreement with Statements about the HPHC Books

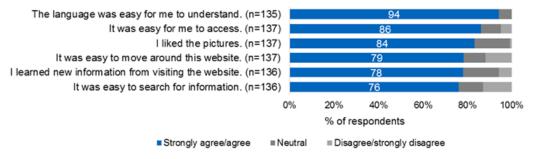


Parent assessment of the level of detail in the products has been used as an indicator of satisfaction with the HPHC products. More than three-quarters (78%) of parents believed the products *had the right amount of detailed information*. Much smaller numbers of respondents felt that the products *did not have enough detailed information* (8%) or that they had *too much detailed information* (4%).

Online Product Utilization and Satisfaction

One-third of parents (33%) reported visiting the HealthyParentsHealthyChildren.ca online product. Among these parents, about one-third (31%) visited the online product after their baby was born, and half (51%) visited during one of the trimesters of pregnancy. Parents who had visited the online product (33% of all parents) were asked to indicate their level of agreement with six statements. Generally, parents showed high agreement with all six of the statements (See Figure 6).

Figure 6. Parent Agreement with Statements about the Online Product



What Parents Liked Most

- "I was relieved to see all the information about how labour will proceed. When the actual labour started I knew what to expect."
- "Pictures about how something works were easy to understand."
- "I love to read about children('s) milestones. It's something interesting and what I enjoy with these books."
- "Encouraged my husband to read these books so he can be as prepared as possible during labour as the support person."

What Parents Liked Least

- "Speaking about giving formula negatively. Breastfeeding is obviously preferred; however, some people have no choice but to formula feed."
- "While having it online is great, I think having some hard copy around is good. Not everyone has access to the internet all the time!"
- "Sometimes I found it hard when I was looking for something specific. Sometimes very opinionated, it should say this is what is recommended because at the end of the day mothers know best."
- "I liked almost everything."

Changes in Parent Behaviour

To assess changes in behaviour, parents were asked to share something they had done as a result of reading the HPHC products. Of all survey respondents who had received at least one book or visited the online product, 50% reported acting after reading the HPHC information. The following sections describe the most prominent themes that emerged from responses as well as some examples of parent comments.

Some respondents (8%) noted that they were more prepared for labour and delivery after reading the books. Popular sections included the topics on what to bring to the hospital, pain medication options, and questions to ask their HCP.

Preparing for Labour and Delivery

"I started to walk when I was pregnant and I keep walking every day now."

"Refused an epidural during childbirth because of the cons listed in the pregnancy + birth book."

"Received an epidural during labour after 12 hours of contractions, I felt more comfortable with my decision because of the info I had learned."

Parents also spoke about how they felt more confident with how to take care of and interact with their child as result of reading the books. Almost 30% of responding parents gave examples of changes to behaviours related to caring for the health and developmental needs of their children.

Caring For Baby

"I have positioned my baby very specifically during play to help with head shape."

"I clean my baby's gums every morning and night even though he doesn't have any teeth yet."

"I keep my daughter in a sleep sack in her crib with no toys or extra blankets/pillows."

"Skin to skin cuddling. We both love it."

Child Development

"Knowing where my child is developmentally helps me know how to interact with him better."

"Worried less its nice to have a concern or question and be able to read about it. Very reassuring."

"I have started reading, singing and copying my baby's noises to help promote his learning and development"

Many respondents (30%) offered comments concerning feeding, of which nearly half (49%) related to breastfeeding. Other feeding modifications and introducing solid foods emerged from parent comments.

Breastfeeding and Feeding

"I have chosen to exclusively breastfeed the first 6 months before introducing solids."

"Introduced solids according to recommendations in book - iron fortified cereal and meat and alternatives first"

"Toddlers still need vitamin D drops supplement, which I have not been doing and will start to do it now."

A number of parents (8%) commented that they had contacted their HCP or HealthLink, joined other classes (prenatal and parenting), or shared the books with others after reading the products.

Evaluation Objective 4: To assess HCP awareness, knowledge, utilization and satisfaction with the HPHC print and online products.

HCP respondent characteristics were provided in an earlier section, Evaluation Objective 2.

Awareness

Most HCPs reported high awareness of the HPHC products. HCPs were more aware of the printed HPHC books than of any other product type, with about 90% reporting being aware of each book. A large majority of HCPs were aware of the online HealthyParentsHealthyChildren.ca product (75%). Fewer HCP respondents were familiar with the promotional card (65%) and the redemption card (62%).

Utilization and Satisfaction

A large majority of respondents referred parents to the HealthyParentsHealthyChildren.ca online product (76%) and/or provided parents with the printed books (73%). More than half handed out promotional cards and referred parents to the electronic copies of the books (55%, each), which were available online. Most HCPs (75%) actively used the products in their interactions and teaching with parents. Less than half (40%) used the online product.

A majority of HCPs strongly agreed or agreed with all five satisfaction statements (see Figure 7). The same patterns emerged from the data for the *Pregnancy and Birth* book and *The Early Years* book.

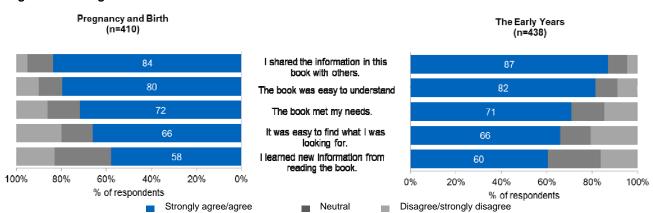


Figure 7. HCP Agreement with Statements about the HPHC Books

The online product moderately meets the needs of HCPs. About half of respondents strongly agreed or agreed that the online product is *appropriate for (their) needs*, that *the search function helps them find what they are looking for*, and is *easy to navigate*. Nearly half reported that they learned new information from reading the online product. Among HCP respondents who reported that using the HealthyParentsHealthyChildren.ca online product is applicable to their work, 27% reported no difficulty using the online product. Reported difficulties included pages taking a long time to open (30%), pages failing to load properly (25%) and not having internet access while working with the target populations (24%). The printed HPHC books were clearly preferred by 80% of HCP respondents.

Improvements to the Online and Print Products

In an open-ended question some HCPs suggested enhancing the user-friendliness and supplementing the HPHC books with quick-reference tools. Specific suggestions were to add tabs to sections and to develop quick-reference sheets and a frequently-asked-questions document. One-quarter of respondents thought there was specific content information missing and these suggestions have been forwarded on to be addressed in the content update. Many HCPs expressed a need for the HPHC books to be adapted for unique and more vulnerable populations. Lower literacy and translated materials, as well as simplified or brief information were all suggested.

Evaluation Objective 5: To determine whether the social media strategy used for the HPHC initiative was successful.

Google Analytics Target Audience







Google analytic data indicated that participants who visited social media (Facebook, Twitter, and the HPHC online product) were the intended target audience (women, parents and professionals working with these populations). 88% of Facebook likers were from Canada, 80% from Alberta. The top five locations of fans were Calgary (38%); Medicine Hat (18%); Edmonton (16%); Lethbridge (7%); and High River (6%). Half of the Twitter Followers were health-related organizations or businesses.

Pre-, Active and Post-Campaign Periods

Increases in the number of new Facebook Likers and Twitter Followers were most notable in the precampaign period and during the early weeks of the actively-themed campaign. (See Table 1.) There were over 20,000 homepage views during the active campaign. Promisingly, the top traffic sources to the HPHC online product (where the visitors typically came from) were Facebook Likers and Twitter Followers – this trend was consistent during the full campaign period. It is important to note that both Facebook and Twitter were initially seeded with staff, stakeholders and their networks, accounting

Table 1. HPHC Facebook Likers during pre-, active and post-social media campaign

f	Like	Like
Pre-Campaign	79	1
Active Campaign	158	8
Post Campaign	14	0

for the strong numbers of Likers and Followers during the pre-campaign and early weeks of the active campaign.

For the social media platform Twitter, 35 Followers were added during the entire campaign. The highest engagement occurred for the Tweets related to active living and play and the random content during the pre-campaign weeks. Staying healthy, healthy eating and communication Tweets were also high performing.

With regard to the online advertising or banner ads, there was increased engagement with the HPHC products as a result of paid advertising. Over one thousand people visited via an ad. This trend was particularly relevant in areas such as pregnancy eating (5% or 106 of ad viewers clicked to HPHC), introduction of solids and sleep (2% or 100 individuals clicked-through from each ad topic).

Key Informant Interviews Results

The respondents (n=6) who participated in the key informant interviews were PEaCh – PIT members who completed a variety of tasks: e-marketing planning; implementation planning and management; content assurance; reviewing, writing and editing social media posts or advertisements; loading and scheduling social media posts; content approvals and social media analytics.

Staff discussed the strengths, challenges and recommendations related to the HPHC e-marketing campaign. They spoke positively about the planning of the campaign and the informal pre-test research conducted early in the project. Staff described the lengthy approval process for the HPHC e-marketing campaign as a challenge for maintaining timelines. Overall, interviewed staff suggested the following for future e-marketing campaigns: setting clear performance goals and indicators; providing staff training for health-related social media and e-marketing campaigns; conducting formative and pre-test research with the target audiences; and building in/planning longer timelines to account for a detailed content approval process.

Evaluation Objective 6: To examine the perceptions of parents who may be more vulnerable to poor health outcomes regarding the HPHC resources.

The HPHC products were developed to meet the needs of a universal Alberta expectant and parenting population. However, many HCPs were also using the products with those who had unique needs: Aboriginal, including First Nation and/or Métis parents; new Canadians; teens; low income families; and Low-German-speaking (LGS) Mennonites. Therefore, we sought to specifically examine the perceptions of expectant and parenting populations who may be more vulnerable to poor health outcomes regarding the HPHC products.

Key informant interviews with HCPs

HCPs who worked directly with one of the identified targeted populations were purposefully selected to participate in key informant interviews. Interviews were held with 12 individuals from five AHS Zones. A variety of informants were interviewed including managers, clinicians, community liaisons, educators and researchers. The purpose of these interviews was twofold: to examine the perceptions of HCPs working with these unique populations to understand their experiences using the products with the target populations as well as to inform the development of focus group questions.

Focus groups with populations vulnerable to poor health outcomes

A total of seven focus groups were held across Alberta. Expectant parents and parents with children from birth up to six years of age who attended existing parenting groups or programs that specifically served one of the target populations were recruited. There were a total of 74 participants who attended these focus groups. Expectant women and parents ranged in age from 15 to middle-age (note: some participants were unaware of their exact birth date making the range less specific). The characteristics of the parents who submitted socio-demographic data are presented in Table 2. These demographics illustrate that those who participated were from the target populations.

Themes arising from the interview and focus group data

Table 2. Demographics of those participating in focus groups.

Category	n (%)	
Gender (n=70)	68 (97%) Female	
	2 (3%) Male	
Aboriginal descent (n=68)	25 (37%) Yes	
	42 (63%) No	
Marital status (n=70)	29 (41%) Married	
	27 (39%) Common law	
	14 (20%) Single, separated or divorced	
Highest level of education	30 (45%) Less than high school	
completed (n=68)	19 (27%) High school	
	19 (28%) College, trade, or university	
Number of children (n=70)	9 (13%) Pregnant	
	38 (54%) One or two	
	27 (39%) Three or more	
Born in Canada (n=68)	46 (68%) Yes	
	22 (32%) No	
Household income (n=68)	46 (68%) \$60,000 or less	
(Note: 2012 Alberta median household income = \$94,460 (Stats Can, 2014).	22 (32%) \$60,000 or more	

Impressions of the current HPHC products: All parents reported liking the books. Few participants had visited the online product, but many teens, new Canadians and North Zone parents talked about the importance of online information. All parents and key informants commented on how helpful the photos and illustrations were in the books. Many parents could name images that they found particularly helpful. Some examples included the images of breastfeeding positions and photos of infant stools. Some parents suggested adding more photos and images. All parents talked about their interest in getting suggestions, tips and advice from other parents. The need for the products to be in plain language was

"They're [the books] exactly like what it should be and how it should look."

"They [the books] give you all the information you need."

"Yeah, pictures and everything, diagrams."

[Focus Group Participants]

brought up consistently by all participants.

Topics important for these unique populations and missing from HPHC: Parents and key informants were able to identify a number of issues and concerns that remained unaddressed in the book. These topics were important to a variety of these unique populations, not only a single group.

Adoption and Navigating Child Services

Some parents were interested in their options for adoption for their current pregnancies; others were interested in their rights for their current pregnancy if they had previously had a child that was adopted.

"I didn't get through both of the books, but say if you wanted to give your baby up for adoption, like open adoption or closed." [Focus Group Participant]

Multi-family housing and parenting large families

A key informant identified that the different situations in which some unique populations reside and raise their children may not be reflected in the current products. Topics that arise in these multi-family situations may need an increased focus in the products: handwashing, breastfeeding others' children and tandem nursing.

"In Aboriginal homes, there are multiple families living in one home. This book represents one, single family view on a family."

"Aboriginal mothers will breastfeed each other's children if there are children who are the same age. Women will 'have kids together' so kids can grow up together." [Key Informants]

Parenting benefits and subsidies

Some participants identified a need for more information on financial benefits and subsidies that might be available to them, especially any specific to Alberta residents.

"I guess it all depends, like benefits and credits with the child tax and things like that."

"The universal benefit for children under the age of six." [Focus Group Participants]

To translate or not to translate: There were mixed feelings from Aboriginal groups, new Canadians and LGS Mennonite groups about translation of the books. Most felt that simple English would be better because: it would help them practice English; they don't read their first language well; and they don't know the vocabulary for pregnancy and parenting topics in their first languages. Some new Canadians felt that translation might help, but that more pictures and plain English would address their needs.

"English is not my -- my first language, but, still, I prefer to read and write in English because it gives the exact meaning; and if I read in Arabic, and lose the thought, and I would lose the meaning. That's me. I'm -- that's my opinion." [FG Participant]

"English is the best. Simple, basic English with pictures."

[Key Informant]

Dissemination strategies: Participants provided a number of suggestions for locations to disseminate the products. These included: women's prisons, addiction centres, women's and homeless shelters and in programs serving teens. It became clear from our conversations that the books need to be coordinated with HCP/champion support as many of the issues described are complex and an entry in a book may not provide the answers needed. In addition, many people preferred to talk to a HCP they trust and interact with frequently for these complicated issues.

"I was incarcerated and pregnant with my first one for a little bit. There's a lot of women who are still pregnant and have their kids in jail, and there's a lot of information that they do not tell [you]." [Focus Group Participant]

DISCUSSION

- 1) Health Product Development Model: The HPDM was a helpful approach to frame the development of a new provincial product. There were mixed opinions about using the HPDM in the future due to the need to allow enough time to complete each stage. The Product Analysis phase in the HPDM ensured that parent needs were addressed throughout all stages of product conception, development and implementation. Adaptations to the model would be needed prior to future implementations.
- 2) Dissemination and online use of HPHC: Because of the variations in the delivery of prenatal services in Alberta, there was no existing single, universal approach to delivering the HPHC products. A number of factors affected this: variations in the zones' service delivery models, prenatal care models for high-risk vs. low-risk maternity clients, urban vs. rural service delivery models, etc. Due to this, it was challenging to find a single, simple, cost-effective approach to providing the products to our target audience. As a result, the dissemination process was adapted based on the feedback of stakeholders throughout the project and will continue to be addressed as a result of these evaluation results. Despite these challenges the reach of the products seems to be moderate to high based on both dissemination and parent utilization data.
- 3) Parent awareness, utilization and satisfaction: There was moderate awareness of the HPHC print products among parents, but high uptake among those who were aware. Less than half of parents received a redemption card which speaks to the challenges of dissemination to this population. Parents were more aware of the printed HPHC products than the online product. In general, parents indicated a preference for print products. It is important to note that many of the surveyed parents had children greater than two years of age and would not have been part of the cohort that received the redemption cards in the prenatal visit. The survey was disseminated to parents of children up to six years of age and therefore, the reach of the redemption cards was underestimated.

Among parents who had visited the online product, satisfaction was high. Many users of the online product found it easy to navigate; however, some comments did emerge from open-ended questions about difficulties with navigation and searchability. Since these data were collected, improvements to the functionality of the online products have been made. Promotion of the online product is necessary and in process. Parents who used the HPHC products were highly satisfied and could describe things they had *learned* and *done differently* as a result of reading the products.

- 4) HCP awareness, utilization and satisfaction: There was high awareness, utilization and satisfaction with the HPHC products among HCPs, with a strong preference for the print products. HCPs recommended the HPHC products to colleagues and parents, and the products met their practice needs. Online product utilization among HCPs was not as high as for print books. In contrast to parents, HCPs found the searchability and navigation of the online product to be difficult.
- 5) Social media evaluation: Results demonstrated that the target audience was actively engaged with the social media platforms and it was a reasonably effective tool for directing the target audience to the HPHC product. During their periods of use, online advertisement resulted in 7% of hits to the website, Facebook accounted for 3%, and Twitter for less than 1%. Staff provided important recommendations for planning and implementing future e-marketing campaigns.
- 6) Evaluation with populations more vulnerable to poor health outcomes: The books are being used by many Albertans of various backgrounds and family situations. Many of the families find the products helpful in answering their pregnancy and parenting questions. There are some topics that are important to unique populations that were missing from the current products. Many of the topics identified were complex and inclusion in a book may not provide all of the answers needed by these populations. There was limited support for translating the products. There was considerable support for existing content to be further adapted to include plain language and with additional visuals. Participants also provided excellent suggestions for content additions and dissemination.

CONCLUSIONS AND RECOMMENDATIONS

Overall, the HPHC products were received well by parents and HCPs. There are some improvements to consider in the dissemination of the books, to enhance their user-friendliness among HCPs, and to the content, based on parent suggestions. Recommendations are presented in Table 3.

Table 3. Recommendations for future HPHC enhancements and improvements

	Table 3. Recommendations for future HPHC enhancements and improvements					
Topic	Recommendation	Supported by Universal Population Results	Supported by Vulnerable Population Results			
HPDM	Further refinement of the HPDM (e.g., developing guidelines outlining the outcomes for each phase of the model and supporting tools) for future products.	Internal Red	commendation			
HPHC Product Dissemination	Continue communication efforts of the dissemination and ordering processes of print products to HCPs and the dissemination process to parents.		*			
	Consider expanding the definition of HCP or the sites for dissemination to include areas where care providers work with parents outside of the healthcare system. This may include social workers, pharmacists and those working with teens.	*				
	Continue to increase the number of locations disseminating the products and reduce restrictions, allowing providers to use their preferred dissemination process (e.g. providing books or redemption cards).	*				
	Continue to increase awareness among parents and HCPs on how to access and use the online product.					
HPHC Product	Continue with the ongoing content review process and incorporate parent suggestions where feasible (e.g., incorporating more pictures and images; parental anecdotes and case studies; using inclusive language and tone in recommendations, especially regarding breastfeeding/formula feeding; improving the usability of the index and glossary; adding more space for note taking, etc).					
	Continue with the ongoing content review process and incorporate HCPs suggestion where feasible (e.g., developing quick-reference tools [one-page sheets and/or bookmarks] of the HPHC content for HCP use; adding tabs to print product chapters; creating a frequently-asked-questions document; developing key messages).	*				
	Continue with enhancements to the online product including improvements to the search ability, functionality and interactivity of the product.					
	Continue to ensure and expand the use of plain language and images to express information.					
Social Media Campaign	Examine the cost effectiveness, including staff time, of using the various marketing strategies to drive users to the online product. Consider developing a multi-year engagement strategy for	Internal Rec	commendation			

APPENDIX 1: DATA COLLECTION METHODS, DATA SOURCES, DESCRIPTIONS, ANALYSIS

Evaluation Objective	Data Collection Methods (Timeframe)	Data Source/ Sample description	Description	Analysis
1 To examine how the HPDM informed HPHC content and products	A semi-structured electronic survey of PEaCh – PIT members (February 2015)	Ten current and former PEaCh – PIT members who were involved in the development of the HPHC products from 2011-2013.	Participants were asked to provide feedback on the HPDM, identify whether it played a clear role in each phase of the initiative, and specify how the model could be improved.	counts and % of responses open coding of qualitative comments, reported by theme
	Health product filtering analysis (Jan-Feb 2015)	Filtering ratings from seven professionals uninvolved in the development of the HPHC products.	All nine previous health promotion resources and the HPHC products were examined and rated using the PEaCh Product Filtering Tool that was developed based on the HPDM and parents' needs assessment conducted in 2011. Criteria established from the needs assessment were included in the filter for a total of 35 criteria.	 pre-existing filtering tool was used to assess the HPHC products as well as the nine former resources each criterion was weighted with equal importance and given a score of one. A total percentage score was then calculated mean total filtering scores were calculated and compared for each of the 10 products
2 To assess the dissemination of the HPHC print and reach of online products	DATA Group Analytics (Ongoing)	DATA Group provided information for the ordering of products.	Data regarding the following outputs were collected: number of books ordered number of promotional and redemption cards ordered	counts of the number of ordered books, promotional and redemption cards will be reported
	Google Analytics (Ongoing) A semi-	Direct measurements from online analytics software were used to understand the number and types of individuals using the online resource. Eligible participants	Data regarding the following outputs were collected: number of online visits number of unique visits location of users HCPs were recruited through a	counts of the number of "hits" and online usage overall and during the social media campaign counts and % of responses

Evaluation Objective	Data Collection Methods	Data Source/ Sample description	Description	Analysis
	(Timeframe)			
	structured electronic survey of provincial HCPs (criterion sampling) (Aug- Sept 2014)	included physicians, midwives, nurses, nurse practitioners, obstetricians and gynecologists; dietitians; pre- and postnatal educators; and, community/agency workers or any HCPs from specialized programs, primary care and public health in Alberta.	variety of methods. The survey was available through the AHS Insight home page and other electronic communications. Emails with an attached flyer and embedded survey link were sent to various internal AHS and external program contacts.	open coding of qualitative comments, reported by theme
3 To assess parent awareness, knowledge, utilization and satisfaction with the HPHC products	A semi- structured electronic or paper survey of parents (criterion sampling) (Aug- Sept 2014)	Eligible participants included parents with child(ren) up to six years of age visiting a C/PHC in Alberta.	Parents could complete either the paper or online survey. The electronic survey was created using SelectSurvey.NET, an AHS application. Parents who completed the survey were eligible for a draw for a \$100 gift certificate.	 counts and % of responses open coding of qualitative comments, reported by theme
To assess HCP awareness, knowledge, satisfaction and utilization of the HPHC print and online	A semi- structured electronic survey of provincial HCPs (same survey as noted in Evaluation Objective 2 above)	Eligible participants included physicians, midwives, nurses, nurse practitioners, obstetricians and gynecologists; dietitians; pre- and postnatal educators; and, community/agency workers or any HCPs from specialized	HCPs were recruited through a variety of methods. The survey was available through the AHS Insight home page, and other electronic communications. Emails with an attached flyer and embedded survey link were sent to various internal AHS and external program contacts.	counts and % of responses open coding of qualitative comments, reported by theme

Evaluation Objective	Data Collection Methods (Timeframe)	Data Source/ Sample description	Description	Analysis
products	(Aug- Sept 2014)	programs, primary care and public health in Alberta.		
5 To determine whether the social media strategy used was	Google/ Social Media Analytics (Summer 2014) Semi-structured interviews	Direct measurements from online analytics software were used to understand the number and types of individuals using the online product. PEaCh – PIT and WG Members who were	Data regarding the following outputs were collected: • number of online, unique, and repeat visits • location of users • number directed from Facebook, Twitter, online advertising Participants were asked to provide feedback on the social media	 counts of the number of "hits" and online usage overall and during the social media campaign open coding of qualitative comments, reported by theme
successful	(criterion sampling) (Summer 2014)	involved with the social media campaign.	campaigns, perceived benefits and challenges of this advertising approach, as well as areas of improvement.	comments, reported by theme
6 To examine the perceptions of parents who may be more vulnerable to poor health outcomes	Key informant interviews with HCPs working with populations vulnerable to poor health outcomes (Fall 2014-Winter 2015)	HCPs who worked directly with one of the following targeted parenting populations: Aboriginal, First Nation and/or Métis; new Canadians; parenting or pregnant teens; low income families; and, LGS Mennonites.	Participants were asked to provide feedback on the existing resources, elements that they liked, suggestions for improvements to both the dissemination and content of the resources.	open coding of qualitative comments, reported by theme

Evaluation Objective	Data Collection Methods (Timeframe)	Data Source/ Sample description	Description	Analysis
regarding the HPHC products.	Focus groups with populations vulnerable to poor health outcomes. (Fall 2014-Winter 2015)	The inclusion criteria was expectant parents and parents with children up to six years of age in Alberta who attended existing parenting groups or programs that served one of the described targeted populations.	Participants were asked to provide feedback on the existing resources, elements that they liked, suggestions for improvements to both the dissemination and content of the products.	open coding of qualitative comments, reported by theme