

# Breastfeeding Guidelines, Practices and Services in Alberta Health Services

## An Environmental Scan

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Contact:

Farah Bandali, Manager, Early Childhood  
Healthy Children and Families  
Healthy Living  
Population, Public and Aboriginal Health  
Email: [farah.bandali@albertahealthservices.ca](mailto:farah.bandali@albertahealthservices.ca)

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## Executive summary

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### Background

Breastfeeding has been identified as a key public health issue by the World Health Organization (2003) as it offers mothers and infants significant short and long term health benefits such as reduced risk of disease and greater social, emotional and cognitive development. The protection, promotion, and support for breastfeeding is a priority for Alberta Health (AH) and Alberta Health Services (AHS) and as such is cited in several strategic and action plan documents, including the Maternal Infant Health Action Plan (MIHAP). In support of this identified priority, this environmental scan was undertaken within AHS.

### Purpose and objectives

The purpose of the environmental scan was to understand current breastfeeding services within AHS acute care and community facilities. The primary objectives were to 1) highlight current guidelines, practices and services related to breastfeeding, and; 2) develop recommendations to protect, promote, and support breastfeeding, which are in alignment with the provincial MIHAP. A secondary objective was to engage key stakeholders to determine their interest in, and support for, population-based breastfeeding strategies.

### Methods

Data was gathered through a mixed method approach including semi-structured surveys, validation interviews, and document reviews (e.g. breastfeeding guidelines, evaluations, and curricula). Two online surveys were developed for 1) acute care and 2) community facilities. Representatives with expertise and knowledge in breastfeeding practices and services were asked to respond on behalf of their respective acute care or community facility.

### Results

Information was gathered from 43 acute centers and 135 community facilities, with an overall response rate of 93.0%. The findings provide rich insight into the existing state of breastfeeding services and practices, and will also assist in the development of breastfeeding improvement initiatives in alignment with the MIHAP. Five overarching themes were identified in the survey responses.

1. *Policies and guidelines.* Breastfeeding guidelines are used in 49.0% and 57.0% of acute and community facilities, respectively. There was significant variation in the documents provided (i.e. breastfeeding guidelines, evaluations, curricula) across facilities and zones; many documents are from former health regions as there is currently no AHS-wide breastfeeding policy to replace them.
2. *Education, training and support for staff and volunteers.* Eighty-one percent of acute care staff reported receiving education on the benefits of breastfeeding. However, the content, duration, format, and scheduling of the education and training varied between facilities. The need for comprehensive breastfeeding education was repeatedly expressed by the respondents in the validation interviews.
3. *Clinical practices.* Ninety-one percent of surveyed facilities 'always or very often' practiced skin to skin after uncomplicated births. However, 37.2% of respondents reported skin to skin was 'always or very often' practiced after caesarean births; 51.2% of respondents indicated that skin to skin was 'always or very often' uninterrupted until at least the first feed was completed; and 65.0% of acute care respondents reported 'always or very often' practicing exclusive breastfeeding.
4. *Client/patient teaching and support.* Ninety-three percent of acute care facilities reported that mothers were 'always or very often' advised to breastfeed on demand. Conversely, hand expression was seldom discussed, with 30.0% and 39.0% of acute and community

centre respondents respectively, reporting that hand expression was taught to mothers. Additional breastfeeding information provided to mothers varied in content and consistency in both acute care and community settings (e.g. how to access support in the community, breastfeeding after returning to work).

5. Services and resources. Seventy-five percent and 23.0% of community and acute care facilities, respectively, reported that they provide breastfeeding education to women and their partners (e.g. prenatal classes). The availability and accessibility of breastfeeding services and resources varied between facilities. Only 25.0% of acute care facilities and 43.0% of community facilities indicated that they have lactation consultant services. Even fewer acute care (16.0%) and community facilities (24.0%) reported that they provide targeted materials to populations with traditionally low breastfeeding rates (e.g. low income, teens, low literacy).

### Recommendations

The following recommendations are proposed from the environment scan results and AHS literature reviews, and are in alignment with Alberta Government plans and strategies.

Theme	Recommendations
<b>Policies and guidelines</b>	<ul style="list-style-type: none"> <li>• create a corporate policy to establish a supportive environment that supports, promotes, and protects breastfeeding in AHS facilities</li> <li>• create clinical policy to standardize breastfeeding practices and service pathways</li> </ul>
<b>Clinical practices</b>	<ul style="list-style-type: none"> <li>• standardize breastfeeding education and training for staff and/or volunteers</li> <li>• develop consistent approaches to breastfeeding education and supports for women and their partners/supporters, including targeted resources for vulnerable populations</li> </ul>
<b>Services and resources</b>	<ul style="list-style-type: none"> <li>• collaborate with specialized services such as Lactation Consultants to support the development of standards and best practices and provision of support for complex breastfeeding issues</li> <li>• support establishment of equitable community based breastfeeding supports (e.g. peer support programs) and access to those services for women and their partners/supports</li> </ul>
<b>Quality improvement and evaluation</b>	<ul style="list-style-type: none"> <li>• evaluate the effectiveness of the key strategies to support continuous improvement and achievement of key outcomes/performance measures</li> </ul>

**Abbreviations**

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AH	Alberta Health
ABC	Alberta Breastfeeding Committee
AHS	Alberta Health Services
BCC	Breastfeeding Committee for Canada
BFI	Baby Friendly Initiative
CDN	Clinical development nurse
CHC	Community health centre
CHN	Community health nurse
CNE	Clinical nurse educator
CPNP	Canada Prenatal Nutrition Program
FTE	Full time equivalency
IBCLC/LC	International Board Certified Lactation Consultant (a.k.a. lactation consultant)
MIHAP	Maternal Infant Health Action Plan
NICU	Neonatal intensive care unit
PCN	Primary Care Network
PHN	Public health nurse
PHU	Public health unit
RN	Registered nurse
SCN	Special care nursery
SGA	Small for gestational age
STORC	Strategies for Teaching Obstetrics to Rural and urban Caregivers
UNICEF	United Nations Children's Fund
WHO	World Health Organization

## Background and introduction

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### Background

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Breastfeeding is widely recognized as a key public health intervention and is strongly supported by multiple organizations including the World Health Organization (WHO) and Health Canada. Despite this strong support, breastfeeding rates in Canada and other industrialized countries remain below the WHO recommendations. Consequently, improving breastfeeding rates has become a priority for healthcare organizations at the provincial, national, and international levels (United Nations Children's Fund [UNICEF], WHO, 2003).

Promotion of and support for breastfeeding is a priority for Alberta Health Services (AHS) and is cited in the Provincial Obesity Program Business Case (AHS, 2011) and Alberta Health's *Becoming the Best: Alberta's 5-Year Health Action Plan* (Government of Alberta, 2010). In 2012, AHS commissioned a review of current literature to inform the development of initiatives for improving breastfeeding rates in Alberta. The review focused on population health strategies aimed at maintaining and increasing breastfeeding rates (Nagulesapillai, 2013). A qualitative literature review was also completed exploring breastfeeding perceptions, attitudes, and experiences of mothers and their partners (MacKean & Spragins, 2012). In addition, the provincial Ministries of Health, Human Services, and Education worked with representatives from AHS; post-secondary institutions; the Alberta Medical Association; the Alberta Centre for Child, Family and Community Research; and the First Nations and Inuit Health Branch of Health Canada to draft the Maternal Infant Health Action Plan (MIHAP), which outlines a strategic direction toward improving maternal and infant health and development. One of the three priority areas of the MIHAP includes improving breastfeeding rates (Alberta Government, 2013).

In preparation for the approval and launch of the MIHAP, this environmental scan was undertaken to understand the current state related to breastfeeding guidelines, practices, and services within AHS.

### Introduction

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To date, growing bodies of compelling evidence indicated that breastfeeding is beneficial to infants, mothers, and society. Breastfeeding has been shown to decrease the risk of otitis media, gastroenteritis, eczema, and asthma in infants (Kramer et al, 2008). Benefits for the mother include birth spacing (delayed ovulation), decreased postpartum bleeding, and an earlier return to pre-pregnancy weight (Kramer et al, 2008). Breastfeeding has been also linked to the reduced risk of ovarian and breast cancers (Hannula, Kaunonen, & Tarkka, 2008). More recently, breastfeeding has been identified as a significant factor in the prevention of obesity and chronic diseases such as Type 1 and 2 Diabetes (Hannula et al, 2008). In addition to the individual-level health benefits that extend to later life, breastfeeding may provide economic and financial benefits on a societal level in terms of reducing costs to both hospitals and primary care systems (Weimer, 2001).

## Breastfeeding trends

Current Canadian breastfeeding rates continue to remain well below the WHO recommendations<sup>1</sup>. However, slow improvements have been observed in breastfeeding initiation rates<sup>2</sup> between 2003 and 2010, increasing from 81.0% to 87.3%. There was also an increase in the percentage of mothers who exclusively breastfed<sup>3</sup> for six months or more in the same time period, from 17.3% to 25.9% (Health Canada, 2012b). More recently, the national breastfeeding initiation rate reported for 2012 was 90.3% and the exclusive breastfeeding rate at six months or more was 24.2% (Statistics Canada, 2013a).

In Alberta, data from the Canadian Community Health Survey (CCHS) showed that 91.3% of mothers initiated breastfeeding with 27.8% of mothers exclusively breastfeeding at six months (Table 1) (Statistics Canada, 2013a). Although Alberta breastfeeding initiation and exclusivity rates are higher than the Canadian average, the rates are below the WHO recommendations.

The AHS literature review conducted in 2012 suggested that the reasons behind the decline in the percentage of women breastfeeding their infants at birth compared to six months post-partum are multi-factorial, complex, and vary from one individual to the next. Contributing factors may include the mother experiencing: physical challenges associated with breastfeeding (latching), difficulty integrating breastfeeding into the lifestyle, discomfort with breastfeeding in public places and mixed messages from health care providers (Avery & Magnus, 2011; Bailey, 2007; Burns et al, 2010; Goldade et al, 2008).

**Table 1: Breastfeeding initiation and exclusivity rates for Canada and Alberta**

	2008	2009	2010	2011	2012
	Breastfeeding initiation rate (%)				
Canada	88.3	87.5	87.2	88.4	90.3
Alberta	91.6	92.4	89.5	93.3	91.3
	Breastfeeding exclusivity rate at six months (%)				
Canada	25.1	24.4	27.7	27.8	24.2
Alberta	31.4	29.7	29.6	27.1	27.8

Canadian Community Health Survey - Annual Component - 3226; Accessed July 24, 2013  
 Statistics Canada, Table 105-0501 - Health indicator profile, annual estimates, by age group and sex, Canada, provinces, territories

## Purpose and objectives

The purpose of the provincial AHS breastfeeding environmental scan was to understand current breastfeeding services within AHS acute care and community facilities. The primary objectives of the scan were to:

- highlight current guidelines, practices and services related to breastfeeding within AHS; and

<sup>1</sup> WHO recommends exclusive breastfeeding (only breastmilk) for up to six months of age, with continued breastfeeding and appropriate complementary foods up to two years of age or beyond (Health Canada, 2012a).

<sup>2</sup> Initiation Rate: To determine the initiation rate in the CCHS, mothers were asked if they tried to breastfeed their last baby, even if it was for a short time (Statistics Canada, 2013b).

<sup>3</sup> Exclusivity Rate: To determine the exclusivity rate in the CCHS, mothers were asked if and when their baby was introduced to solid foods or other liquids (Statistics Canada, 2013b). A baby was considered to be exclusively breastfed if offered only breastmilk.

- use this information, as well as available evidence, to develop key recommendations to protect, promote, and support breastfeeding in AHS, in alignment with the provincial Maternal Infant Health Action Plan (MIHAP).

A secondary objective for the scan was to:

- engage key stakeholders in AHS to determine their interest in and support for population-based breastfeeding strategies.

## **Environmental scan methodology**

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A mixed methods approach was used for data collection, consisting of self-report electronic questionnaires, validation interviews, and document reviews.

### **Survey tool**

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Two surveys were developed as online questionnaires using the SelectSurvey.NET platform available through AHS. One survey was designed to gather data from acute care facilities<sup>4</sup> and the other from community facilities<sup>5</sup>. Many items differed between the two surveys to recognize the distinct practices, services, and needs of the two types of facilities.

Survey items were developed based on best practices identified in the qualitative and quantitative literature reviews and Baby Friendly Initiative (BFI) principles<sup>6</sup>. The Baby-Friendly Hospital Initiative Self Appraisal Tool (Appendix A) developed by the Breastfeeding Committee for Canada (BCC) was used for both the acute care and community surveys, and the Baby Friendly Initiative Seven Point Plan (Appendix B) was used for the community survey (BCC, 2012).

It is important to note that the surveys were not designed to measure readiness for BFI certification; rather they were intended to determine the current status of breastfeeding guidelines, practices and services within AHS. The development of the survey entailed an initial draft that was piloted with four acute care and four community facilities, then revised and finalized. The acute care breastfeeding questionnaire can be found in Appendix C, and the community breastfeeding questionnaire can be found in Appendix D.

### **Sampling strategy and invitations to participate**

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The focus of the environmental scan was to survey all acute care and community facilities within AHS. Acute care facilities with postpartum units, neonatal intensive care units (NICUs), and/or special care nurseries (SCNs) were asked to complete only one survey for their facility. Community facilities that offered distinct programs within the same physical address such as

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<sup>4</sup> Acute care facilities included all facilities with a labour and delivery unit, postpartum unit, neonatal intensive care Unit (NICU), or special care nurseries (SCN) in AHS. Facilities that did not provide any labour and delivery services such as the University of Alberta Hospital, Alberta Children's Hospital and the Stollery Children's Hospital were not included in this environmental scan. Many of the items in the acute care survey applied to the immediate postpartum period; therefore they would not be applicable to the facilities that were excluded.

<sup>5</sup> Community facilities included all facilities with Well Child Services, Postpartum Community Services, and School Health Services.

<sup>6</sup> Baby Friendly Initiative (BFI) or Baby Friendly Hospital Initiative (BFHI) is a global effort to implement practices that protect, promote and support breastfeeding. The initiative has measurable and proven impact to increase the likelihood of exclusive breastfeeding for the first six months (WHO, 2003).

school health services, well child clinic and postpartum home visits were each asked to complete different surveys. Rural facilities that offered both acute care and community services at the same physical address were also separated and asked to complete one survey per service area.

Invitations to participate in the environmental scan were sent to the Executive Directors/Directors for Public Health in each AHS zone, and the Executive Directors/Directors for acute care facilities across AHS. The invitation letters requested the name of one representative from each acute care and community facility who was in a position to provide information on breastfeeding programs and services. See Appendix E for the acute care facility invitation letter and Appendix F for the community facility invitation letter. The Executive Directors/Directors provided the name of an appropriate survey respondent who was contacted by email, with a link to the online survey. Completed surveys were tracked electronically and survey respondents were subsequently invited via email to participate in a telephone validation interview.

## **Survey distribution**

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### **Phase 1: Survey pilot testing**

The pilot surveys were emailed to four community and four acute care facilities in April. Six pilot surveys were returned and validation interviews were conducted with the participants that led to minor changes to the phrasing of several questions and the addition of Likert scales for questions related to clinical practices. The final versions of the surveys were entered into the SelectSurvey.NET

### **Phase 2: Survey implementation**

The electronic links to the surveys were distributed to key contacts from each acute and community site at the end of April 2013. Additional reminder emails were sent out throughout the months of April, May, and June, with a maximum of two reminder emails and/or phone calls sent before a participant was coded as not participating.

## **Validation interview**

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Validation interviews were conducted between April 2013 and June 2013 with each survey participant. Completed surveys were reviewed prior to each interview to identify key discussion points.

The survey respondents were contacted by telephone during the scheduled meeting time and were provided with an electronic copy of their completed survey. Changes, additions, and deletions to survey responses were made (with the approval of survey respondents) directly into the SelectSurvey.NET. Discussion points and changes to survey responses were also documented using an electronic tracking sheet. The interviews varied in length from seven minutes to 55 minutes, with an average of 15 minutes per interview.

During each validation interview, respondents were asked if they were willing to be informed of and/or participate in any future initiatives that protect, promote, and support breastfeeding in AHS. Their willingness to participate was recorded on an electronic tracking sheet.

## Document review

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Survey respondents were asked to upload breastfeeding guidelines, guideline evaluations, and/or education curricula with their survey, if available. Documents were uploaded directly into SelectSurvey.NET, or sent separately via email to the project team. These were compiled and reviewed by the project team to compare which documents, if any, were currently in use across AHS.

## Data analysis

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Quantitative and qualitative methods were used to analyze the survey data. Statistical Product and Service Solutions (SPSS) version 19 and Microsoft Office Excel were used for the analysis and data presentation for the quantitative data. Descriptive statistics, counts, and frequencies were used to describe the data. Frequency distributions were used to present the survey data at the provincial and zone levels. The zone level results for acute care and community facilities are available upon request. The survey questions were grouped into themes for the purposes of organization of information and clarity in reporting. Themes included: policies and guidelines; education and support for staff and volunteers; clinical practices; client/patient teaching and support; and services and resources.

Additional themes were identified from qualitative data gathered from responses to open-ended survey questions, and validation interviews. These data were stored and themed using Microsoft Office Excel.

To simplify reporting, survey responses were re-coded to a 5 point Likert frequency scale: 100-80% (always or very often); 60-79% (usually); 40-59% (about half the time); 20-39% (seldom); 0-19% (never or very rarely).

## Limitations

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A few limitations of the environmental scan should be noted. The survey tools created for the purpose of understanding breastfeeding services and practices were not validated or standardized, however a pilot survey was carried out. The views and knowledge reflected in each survey were the views of the individual completing the survey and may not be representative of all staff at the facility. Finally, only one survey was requested for each facility, as such, it may not have adequately captured distinct practices between the units within the same facility (e.g. NICU vs. labour and delivery).

## Results

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In the following sections, the results from quantitative data are presented according to the following themes: policies and guidelines; education, and support for staff and volunteers; clinical practices; client/patient teaching and support; services and resources. The qualitative data collected from the open-ended questions and interviews follows the quantitative results.

Given the large amount of data generated from the Scan, only the overall provincial findings are presented in this report. Survey items that provided a level of detail beyond the scope of the environmental scan are not reported here. However, the information obtained from these items will be valuable for future planning and implementation. Items and rationale for exclusion can be found in Appendix G for acute care and Appendix H for community facilities.

## Profile of respondents

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A total of 55 survey invitations were distributed to acute care facilities and 136 survey invitations were distributed to community facilities. Forty-three surveys were completed for acute care facilities providing a response rate of 78.2% and 135 surveys were completed for community facilities, providing a response rate of 99.3%. The overall combined response rate of 93.2%. One hundred and twenty-nine survey respondents<sup>7</sup> were sent email invitations to participate in a telephone validation interview and a total of 118 interviews were conducted. The distribution of survey respondents across the AHS zones for acute care and community facilities is presented in Appendix I.

The service areas represented by respondents from acute care facilities included: labour and delivery, postpartum, antepartum, and NICU/SCN. Service areas represented by community facility respondents included: postpartum home visitation services, well child clinic services, and school health services.

Survey participants also reported a wide range of roles that included both front line staff and management (Table 2).

**Table 2: Respondents' roles in relation to breastfeeding in acute care and community facilities**

Respondents' roles in acute care facilities	Respondents' roles in community facilities
Registered Nurses	Registered Nurses
International Board Certified Lactation Consultants	International Board Certified Lactation Consultants
Head Nurses	Public/Community Health Nurses
Clinical Nurse Educators	Clinical Development Nurses
Managers (Site/Care/Program)	Managers (Area/Program)
	Supervisors

## Policies and guidelines

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Respondents were asked about any existing breastfeeding policies and guidelines relating to: breastfeeding guidelines, plans to pursue BFI certification, availability of promotional items from manufacturers of breastmilk substitutes, organizational supports for pregnant and/or breastfeeding staff for breastfeeding, and environments that welcomed breastfeeding. Their responses are summarized in Table 3.

### Guidelines

Survey respondents from acute care and community facilities were asked if their facility had written guidelines for protecting, promoting, and supporting breastfeeding. For the respondents who answered yes to this question, a copy of the most recent guidelines currently in use was requested.

<sup>7</sup> Only 129 interview invitations were sent to respondents instead of 177, because, some of the respondents represented more than one facility.

### *Acute care*

Almost forty-nine percent of respondents indicated they had guidelines in place (Table 3). Of these respondents, 19.0% submitted documents which were in place across the zones, including: maternal and/or infant health policies, procedures, protocols, and clinical practice guidelines. Some of the documents received were from the former health regions, and respondents expressed uncertainty regarding their validity.

### *Community*

Fifty-seven percent of the community respondents indicated they had guidelines in place (Table 3). Of these, 16.7% submitted documents which included: infant feeding policies, guidelines and procedures; breastfeeding assessment protocols and tools; infant and maternal assessment guidelines; and staff learning packages. At the time of data collection a maternal/infant assessment policy<sup>8</sup> was approved and an associated PHN manual was being developed.

## **Baby Friendly Initiative (BFI) certification**

Community and acute care survey respondents were asked if their facilities had plans to become certified as Baby Friendly. Baby Friendly certification is a status awarded to facilities that have implemented steps that protect, promote, and support breastfeeding in order to improve breastfeeding rates as per the process established by the Breastfeeding Committee for Canada (BCC) [BCC, 2012].

### *Acute care*

There were two acute care facilities in the process of BFI certification. The majority of the remaining respondents (88.4%) indicated their facilities had no plans to become certified as Baby Friendly (Table 3). During the interviews, it was noted that a large majority of the respondents were not knowledgeable about BFI and the process of certification.

### *Community*

Seventy-three percent (72.6%) of the community respondents reported that their facilities were not planning to be certified as Baby Friendly (Table 3). However, one community facility was in the process of BFI certification and respondents from six facilities indicated that they were interested in exploring BFI certification (n=135). During the interviews, it was noted that some respondents were not knowledgeable about the BFI certification and the process involved.

## **Promotional items from manufacturers of breastmilk substitutes**

Respondents were asked to indicate whether their facilities received promotional items or supports from manufacturers of breastmilk substitutes. Examples of promotional items provided included: medical supplies, nipples, baby supplies, stationary, posters, and breastmilk substitutes. Sponsorship of academics, events, and staff perks were included as examples of support from the manufacturers.

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<sup>8</sup> Policy Level 2: Postpartum, Community - Assessment, Nursing Action and Referral. Document # CHW-01; April 15<sup>th</sup>, 2013.

### Acute care

A majority of respondents (78.6%) reported receiving promotional items or support from breastmilk substitute manufacturers (Table 3), with breastmilk substitutes cited as the most frequently received item. Supplies such as: medical supplies, nipples, and stationary were less frequently reported.

### Community

In contrast to the acute care findings, 80.2% of respondents indicated they did not receive promotional items (Table 3). Of the 19.8% who reported they received items, breastmilk substitutes was seldom identified as one of the promotional items received. These respondents indicated items commonly received such as: measuring tapes, breast pads, and nipple creams.

**Table 3: Existence of breastfeeding guidelines, plans to certify as Baby Friendly and promotional items**

Item	Percentage of acute care respondents				Percentage of community respondents			
	Yes	In progress	No	Don't know	Yes	In progress	No	Don't know
Existence of written guidelines for protecting, promoting and supporting breastfeeding (acute care n=43, community n=135)	48.8	14.0	32.6	4.7	57.0	17.0	17.0	8.9
Plans to certify as Baby Friendly (acute care n=43, community n=135)	9.3	-	88.4	2.3	6.7	-	72.6	0.7
Receipt of promotional items or support from manufacturers of breastmilk substitutes (acute care n=42, community n=135)	78.6	-	21.4	-	19.8	-	80.2	-

Fields with an '-' indicate this response option was not available

### Formal and informal supports for pregnant/breastfeeding staff

Acute care and community respondents were asked what types of supports were available to pregnant and/or breastfeeding staff to allow them to continue breastfeeding or maintain lactation while at work. Formal support was described as AHS wide employee benefits such as flexible breaks, onsite daycare, and a safe and private place for milk expression. Informal support was described as having a respectful and supportive manager and colleagues.

### Acute care

Eighty-six percent of the respondents indicated that pregnant and/or breastfeeding staff received informal support for breastfeeding or lactation, 9.3% reported there was no support provided and 4.7% reported both formal and informal support were provided (n=43). Findings from the interviews also indicated that both staff and management were supportive of breastfeeding in their respective departments. Respondents were not aware of whether or not other departments within the facility were also supportive of staff breastfeeding or lactation.

## *Community*

Fifty-two percent (51.9%) of community respondents reported that pregnant and/or breastfeeding staff received informal support related to breastfeeding or lactation). Twenty-four percent (23.7%) of the respondents reported both formal and informal support was provided while 9.6% indicated there was no support offered. Fifteen percent (14.8%) of the respondents answered 'Other' and reported that there had not been a need for this type of support at their facility thus far (n=135). During interviews, most respondents indicated they maintained a work culture that was supportive of breastfeeding or lactation and that they were willing to help any staff member within their facility achieve their breastfeeding or lactation goals.

### **Environment that welcomes breastfeeding (community only)**

Respondents were asked whether their facility had public signage that welcomed breastfeeding in all public areas and whether reading material at their facility was free from promotion of breastmilk substitutes, bottles, and artificial nipples.

Sixty-three percent (63%) of the respondents reported they had public signage promoting breastfeeding at their facility, 36.3% indicated they did not have public signs and 0.7% reported that they did not know (n=135). Findings from the interviews indicated that some community facilities were discouraged from displaying signs due to building codes. Seventy-eight percent (77.8%) of the respondents indicated reading materials were free from promotion. A few facilities reported sharing space with other programs and therefore, were unable to control the content of reading materials available in the common waiting area.

### **Education and support for staff and volunteers**

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The surveys included questions on the education and training available to staff related to breastfeeding and lactation management<sup>9</sup>. For the purpose of this report, education and training are used interchangeably referring to both knowledge acquisition and/or practical skill development. Additional questions on orientation curricula for staff and volunteer were also included.

### **Staff training on the benefits of breastfeeding (acute care only)**

Respondents were asked whether or not all staff were educated on the benefits of breastfeeding for the health of the mother and infant. Overall, 81.4% of respondents reported that staff were educated, whereas 16.3% of respondents indicated that no training was provided and 2.3% reported they did not know (n=43). Moreover, interviews indicated that while breastfeeding education was provided to staff, the content and duration of the programs varied between facilities, as did the frequency of program offerings.

The need for comprehensive breastfeeding education was repeatedly expressed by the respondents in the interviews. One acute care respondent stated that many staff did not feel comfortable working with breastfeeding mothers because they did not feel confident with the level of their skills in this area. Respondents also indicated that available funding in their specific site determined the type and frequency of breastfeeding education offered. In addition,

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<sup>9</sup> Lactation management training includes: the physiology of human lactation, the clinical management of breastfeeding, and evidence based practices that support breastfeeding (United Nations Children's Fund United Kingdom, 2010).

breastfeeding education was subject to competing priorities, where other more urgent educational needs took precedence. Another respondent described this point as follows:

*There are many required courses related to other health issues that take priority [for] nurses' yearly education plans.*

## **Staff orientation**

Respondents from the acute care and community facilities were asked to indicate if all new staff caring for mothers and infants were provided with education on breastfeeding and lactation management within six months of their start date. In the community facilities, staff education on this topic was reported as mandatory, whereas for acute care it was not.

### *Acute care*

Fifty-four percent (53.5%) of respondents indicated that breastfeeding education orientation was provided to staff within six months from the start of their employment, while 25.6% of respondents indicated breastfeeding education was not provided and 2.3% of the respondents reported they did not know (n=43). Approximately nineteen percent (18.6 %) of the respondents that answered 'Other' reported that there was a variation in the timing of the orientation, as the schedule was determined by the availability of the new staff. Respondents indicated that rural facilities had greater difficulty in registering their staff for orientation based on limited resources (e.g. staff from rural facilities waited until orientation was available in the nearest major city).

### *Community*

Sixty-four percent (63.7%) of the respondents reported that the mandatory education was provided to staff within six months of their employment, 11.9% indicated that mandatory education was not provided and 5.2% of the respondents reported they did not know (n=135). Nineteen percent (19.3%) of respondents answered 'Other', and indicated that even though education was offered within six months, it was not mandatory. Staff levels of breastfeeding knowledge and work experience determined the type of education provided and when the education was scheduled. Various forms of education were used including online modules and an 18-hour breastfeeding course.

## **Staff training curriculum (acute care only)**

Respondents were asked whether training offered to staff was based on the WHO/BCC/Alberta Breastfeeding Committee (ABC) guidelines<sup>10</sup>.

Sixty-two percent (61.9%) of the respondents reported the training curriculum followed the WHO guidelines, whereas 16.7% of respondents indicated that it did not, and 21.4% of respondents were unsure (n=42). Interviews revealed that the knowledge of the respondents around BFI and the international breastfeeding guidelines set by WHO/UNICEF was very limited.

During the interviews, respondents identified the need for a standard training curriculum and noted that mothers and families were receiving conflicting information related to breastfeeding

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<sup>10</sup> The Breastfeeding Committee for Canada (BCC) is the National Authority for the WHO Baby Friendly Hospital Initiative in Canada and the Alberta Breastfeeding Committee (ABC) is its Alberta Chapter. As such, the guidelines from all three organizations are the same.

from various care providers, resulting in mixed messages and confusion. One community respondent suggested establishing annual mandatory education for nurses and physicians:

*Annual mandatory education [should be established] for physicians and labour and delivery, post-partum, and public health nurses on support [for] and teaching of breastfeeding.*

Respondents also indicated there was minimal or no reimbursement provided for continuing education, which varied between facilities and zones. Therefore, the need for incentives to encourage staff to pursue additional education in breastfeeding and human lactation was noted.

Some respondents indicated that in general, staff who received specialized breastfeeding training experienced an increase in their workload, without receiving financial compensation or additional time dedicated to supporting breastfeeding. One community respondent explained:

*...even if [a] PHN wants to certify as [a Lactation Consultant], it will only increase [the] work load and no other incentives [are] available for that PHN to want to increase her responsibility.*

## **Volunteer orientation curriculum**

Respondents of both acute care and community surveys who reported they had breastfeeding guidelines were asked whether the guidelines were covered in both the staff and volunteer orientation curricula.

### *Acute care*

Of the 48.8% who reported they had guidelines in acute care, 80.0% reported that the guidelines were covered in the new staff orientation curriculum, and 60.0% reported the guidelines were not covered in the volunteer orientation curriculum (Table 4). Findings from the interviews indicated that some of the respondents did not know what was included in the volunteer orientation curriculum and/or did not have volunteers working with mothers and infants.

### *Community*

Of the 57.0% of respondents who indicated that their facility had guidelines, 88.2% reported that the guidelines were covered in the new staff orientation curriculum. However, when asked whether the guidelines were covered in the volunteer orientation curriculum, 39.5% reported they were not, while nearly one third (30.3%) did not know and the remaining one third (30.3%) answered 'Not Applicable' (Table 4). Findings from the interviews indicated that volunteers were generally not used to support breastfeeding in community settings.

**Table 4: Guidelines covered in staff and volunteer orientation curricula**

Item	Percent of acute care respondents (n=20)				Percent of community respondents (n=76)			
	Yes	No	Don't know	N/A	Yes	No	Don't know	N/A
Guidelines covered in the staff orientation curriculum	80.0	10.0	10.0	-	88.2	0	11.8	-
Guidelines covered in the volunteer orientation curriculum	0	60.0	15.0	25.0	0	39.5	30.3	30.3

Fields with an ‘-’ indicate this response option was not available

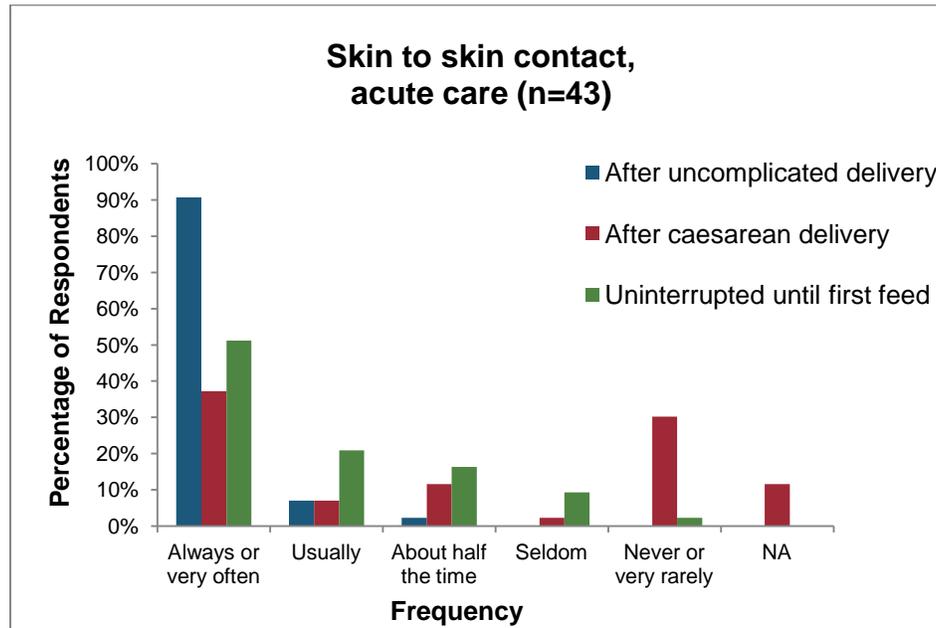
## Clinical practices

Questions about clinical practices by healthcare providers in acute care or community settings included all supports and practices that were associated with improved breastfeeding outcomes: skin to skin contact; offering infant only breastmilk (unless medically indicated); teaching moms how to initiate breastfeeding; discouraging the use of pacifiers; rooming-in; and conducting breastfeeding assessments.

### Skin to skin contact (acute care only)

Respondents from acute care facilities were asked whether mothers with uncomplicated, vaginal deliveries were provided their babies for skin to skin contact within 30 minutes of completion of the second stage of labour. The same question was asked regarding mothers who had a caesarean delivery and were able to respond to their infant. A further inquiry took place around whether the skin to skin contact was uninterrupted until completion of at least the first feed.

For uncomplicated vaginal births, a total of 90.7% of the respondents from across the province indicated that mothers were ‘always or very often’ provided their babies for skin to skin contact. In contrast, the frequency of skin to skin contact after caesarean deliveries was much lower with 37.2% of the respondents indicating it was ‘always or very often’ practiced. One respondent indicated skin to skin was practiced 45 minutes after caesarean deliveries due to a shortage of staff and the time required for the mother to come out of the operating room. Overall, for both caesarean and uncomplicated deliveries, 51.2% of the respondents indicated that skin to skin was ‘always or very often’ uninterrupted until at least the first feed was completed (Figure 1).



**Figure 1: Frequency of skin to skin contact in acute care facilities**

## Breastmilk substitutes and supplementation

Respondents from the acute care survey were asked about supplementation practices within their facility, specifically, if babies received only breastmilk unless supplementation was medically indicated.

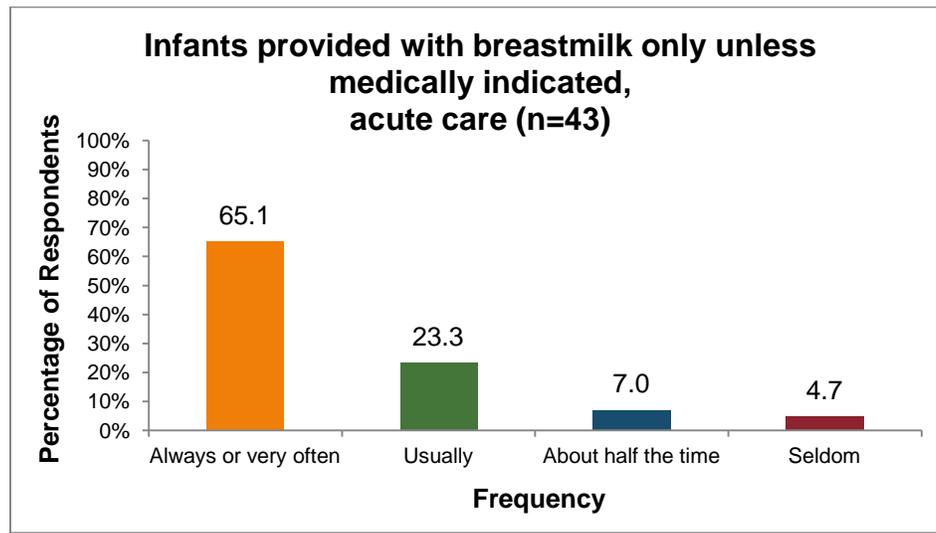
Although there were no questions related to supplementation practices in the community survey, concerns related to supplementation emerged from open ended comments received in the survey and interviews and these are presented in the Community section below.

### *Acute care*

Sixty-five percent of the respondents reported that babies were ‘always or very often’ offered only breastmilk (Figure 2). According to respondents, there were certain circumstances that increased the likelihood of supplementation such as feeding policies for small for gestational age (SGA) infants who required blood glucose monitoring:

*Some policies, e.g., for SGA infants, blood glucose protocols often require babies to be fed [every three hours], which often leads to the introduction of artificial baby milk as amounts of colostrum may be difficult to obtain.*

Another example included staff who had access to free, readily available breastmilk substitutes. One acute care respondent identified supplementation as a potential concern, and noted that some staff believed that a few instances of supplementation would not influence the breastfeeding relationship or the success of that relationship.



**Figure 2: Acute care responses related to providing breastmilk only (unless medically indicated)**

### Community

Some respondents expressed concern that clients were provided breastmilk substitutes by hospitals and from various other points of service. One community survey respondent stated:

*We are informed by clients that the hospital, the client's physician, and retail merchants are providing free samples of formula, [that] the clients consider using... this interferes with breastfeeding success.*

### Offering mothers assistance with breastfeeding initiation (acute care only)

Respondents were asked to indicate the frequency with which staff offered to help mothers initiate breastfeeding during the first hour.

Eighty-six percent (86.1%) of the respondents indicated that mothers were 'always or very often' offered help (Table 5).

### Information on pacifiers and bottles (acute care only)

Respondents were asked whether pacifiers were routinely handed out and whether mothers were provided with information on the risks of using bottles and pacifiers while initiating breastfeeding.

Almost all respondents (92.2%) indicated that pacifiers were 'never or very rarely' routinely handed out to families (Table 5). One respondent also noted that pacifiers were only available in the NICU where they may be deemed medically necessary.

Almost half (48.8%) of the respondents reported that mothers were 'always or very often' provided with information on the risks of using pacifiers and bottles. Sixteen percent (16.3%) of the respondents indicated this practice 'never or very rarely' occurred (Table 5).

### Rooming in (acute care only)

Respondents were asked to indicate the frequency with which mothers and infants remained together 24 hours a day in the hospital, with the exception of up to an hour for hospital procedures or if medically indicated. Another question asked was whether teaching and infant examinations occurred at the mother's bedside or with her present.

An overwhelming majority (97.7%) of respondents indicated that mothers and infants 'always or very often' remained together (Table 5). One facility cited insufficient space and unaccommodating architectural design of older buildings as challenges to rooming in. An acute care respondent described the situation as follows:

*Sizes of rooms are very small, we need more staff to meet the needs of the mothers and we are not meeting the recommendation [for rooming in].*

Over two-thirds (67.5%) of respondents indicated that teaching and infant examination occurred 'always or very often' at the mother's bedside or with her present (Table 5).

**Table 5: Clinical practices that support breastfeeding in acute care facilities**

Item	Percentage of acute care respondents (n=43)				
	Always or very often	Usually	About half the time	Seldom	Never or very rarely
Offering mothers assistance with initiating breastfeeding	86.1	7.0	4.7	2.3	0
Pacifiers handed out routinely	2.4	2.4	2.4	0	92.9
Providing information on risk of bottles and pacifiers	48.8	18.6	9.3	7.0	16.3
Mothers and infants staying together 24 hours per day	97.7	2.3	0	0	0
Teaching and infant examination occur when mother is present	67.5	25.6	2.3	0	4.7

### Breastfeeding assessment at discharge and follow-up

Respondents from the acute care survey were asked to indicate the frequency with which mothers received a breastfeeding-centered breast exam prior to discharge. The examination entails a thorough assessment of the anatomy of the breast and the infant oral cavity, as well as observing the infant breastfeeding. Respondents were also asked if families with unresolved breastfeeding issues were discharged with written plans to support their breastfeeding goals. In the community survey, respondents were asked whether a thorough assessment was carried out at the first face-to-face visit and if breastfeeding was assessed at follow up visits.

### Acute care

The frequency of performing breastfeeding assessments or examinations prior to discharge varied in acute care facilities. Less than half (45.2%) of the respondents indicated that assessments were 'always or very often' performed. Further, mothers with unresolved breastfeeding issues were seldom provided with a written plan; less than a third (31.7%) of the respondents indicated that they were 'always or very often provided written plans' (Table 6).

**Table 6: Breastfeeding assessment and discharge plans in acute care**

Item	Percentage of acute care respondents (n=43)				
	Always or very often	Usually	About half the time	Seldom	Never or very rarely
Thorough breastfeeding assessment performed	45.2	14.3	11.9	7.1	21.4
Mothers with unresolved breastfeeding issues discharged with written breastfeeding plans	31.7	12.2	4.9	2.4	48.8

### Community

Almost three-quarters (74.6%) of the respondents reported that a thorough breast exam was 'always or very often' performed at the first face-to-face visit. Eighty-four percent (83.7%) of respondents indicated that breastfeeding was 'always or very often' assessed at follow up appointments (Table 7).

**Table 7: Breastfeeding assessment and follow up practices in community facilities**

Item	Percentage of community respondents (n=135)					
	Always or very often	Usually	About half the time	Seldom	Never or very rarely	Other
Breastfeeding assessment at first face to face contact	74.6	11.2	8.2	0.7	5.2	0
Breastfeeding assessed at follow up visits	83.7	3.0	3.7	3.7	2.2	3.7

### Client/patient teaching and support

The questionnaires included items that covered various teaching and supports provided to clients/patients to initiate and sustain breastfeeding. Respondents were asked to indicate whether their site encouraged on demand feeding; provided women with the opportunity to ask questions; taught how to hand express breast milk; offered breastfeeding information; offered additional support to women with no breastfeeding experience or who are at risk of complications; or provided women with information on how to access support in the community.

### On demand feeding (acute care only)

Survey respondents were asked how frequently mothers were advised to breastfeed their infants on demand (as often as they wanted to feed). Ninety-three percent of acute care respondents reported that mothers were 'always or very often' advised to breastfeed their infants on demand (Table 8).

### Opportunity to discuss concerns and ask questions (acute care only)

The survey asked respondents how frequently mothers were given the opportunity to discuss any breastfeeding concerns and ask questions. Ninety-eight percent (97.7%) of the respondents indicated mothers are 'always or very often' given this opportunity (Table 8).

**Table 8: Acute care responses related to on demand feeding and opportunities for concerns and questions**

Item	Percentage of acute care respondents (n=43)				
	Always or very often	Usually	About half the time	Seldom	Never or very rarely
Mothers advised to breastfeed on demand (as often as their baby wants to feed)	93.0	4.7	2.3	0	0
Mothers provided with the opportunity to discuss concerns and ask questions	97.7	2.3	0	0	0

### Hand expression of breastmilk

Survey respondents from acute care and community facilities were asked how frequently mothers were taught to hand express their breastmilk.

#### *Acute care*

Thirty percent (30.3%) of the respondents indicated they 'always or very often' taught mothers hand expression, 20.9% of the respondents indicated that mothers were 'usually' taught how to hand express (Table 9).

#### *Community*

Thirty-nine percent (39.2%) of the respondents indicated that hand expression was 'always or very often' taught to mothers, while 22.2% of respondents reported that hand expression was 'usually' taught (Table 10).

### Additional supports

Survey respondents from both acute care and community facilities were asked how frequently they offered additional supports to women with no breastfeeding experience, with a history of breastfeeding complications, or to those who were at risk for breastfeeding complications (e.g. breast reduction).

### Acute care

Seventy-nine percent of the respondents indicated that mothers with no breastfeeding experience were ‘always or very often’ offered additional supports. Seventy-four percent (74.4%) of the respondents reported that mothers with a history of breastfeeding complications or at risk for complications were ‘always or very often’ provided with additional support (Table 9).

### Community

Seventy-two percent (72.1%) of the respondents indicated that mothers with no breastfeeding experience were ‘always or very often’ provided with additional support. Seventy-one (71.2%) percent of the respondents indicated that mothers with a history of breastfeeding complications or who were at risk for complications were ‘always or very often’ provided with additional support (Table 10).

**Table 9: Teaching and supports provided to clients/patients in acute care facilities**

Item	Percentage of acute care respondents (n=43)				
	Always or very often	Usually	About half the time	Seldom	Never or very rarely
Mothers taught to hand-express breastmilk	30.3	20.9	25.6	4.7	18.6
Additional support for women with no breastfeeding experience	79.1	9.3	4.7	0	7.0
Additional support for women with a history of or at risk for breastfeeding complications	74.4	14.0	4.7	0	7.0

**Table 10: Teaching and supports provided to clients/patients in community facilities**

Item	Percentage of community respondents				
	Always or very often	Usually	About half the time	Seldom	Never or very rarely
Mothers taught to hand-express breastmilk (n=135)	39.2	22.2	14.8	4.4	19.3
Additional support for women with no breastfeeding experience (n=133)	72.1	6.8	3.0	2.3	15.8
Additional support for women with history of or at risk for breastfeeding complications (n=132)	71.2	3.8	7.6	11.4	6.1

### Breastfeeding information (community only)

Respondents from community facilities were asked several questions related to what information their site provided to mothers regarding: exclusive breastfeeding for first six months of life, starting solid foods, breastfeeding an older child (one year plus) and breastfeeding after returning to work.

A majority (88.0%) of the respondents indicated that mothers were ‘always or very often’ encouraged to breastfeed exclusively. An overwhelming majority (97.8%) of the respondents indicated mothers were ‘always or very often’ provided with information on starting solids. Findings related to breastfeeding an older child and breastfeeding after returning to work were much more varied. Just over one third (34.3%) of the respondents indicated they ‘always or very often’ provided information related to breastfeeding an older child, while 20.1% of the respondents answered ‘Other’ indicating that questions related to breastfeeding an older child were not very common and support was provided only when the mother requested it. Thirty-five percent (34.6%) indicated ‘always or very often’ providing information about breastfeeding after returning to work (Table 11).

**Table 11: Information provided to clients/patients in community facilities**

Information provided to clients/patients	Percentage of community respondents						
	Always or very often	Usually	About half the time	Seldom	Never or very rarely	Other	N/A
Mothers advised to breastfeed exclusively for first six months of life (n=134)	88.0	9.0	1.5	0	1.5	-	-
Information provided to mothers on starting solid foods (n=135)	97.8	0	0	0.7	0	-	1.5
Information provided to mothers on breastfeeding an older child (1 year+) (n=134)	34.3	12.7	3.7	6.0	23.1	20.1	-
Information provided on breastfeeding after returning to work (n=133)	34.6	22.6	12.8	9.8	20.3	-	-

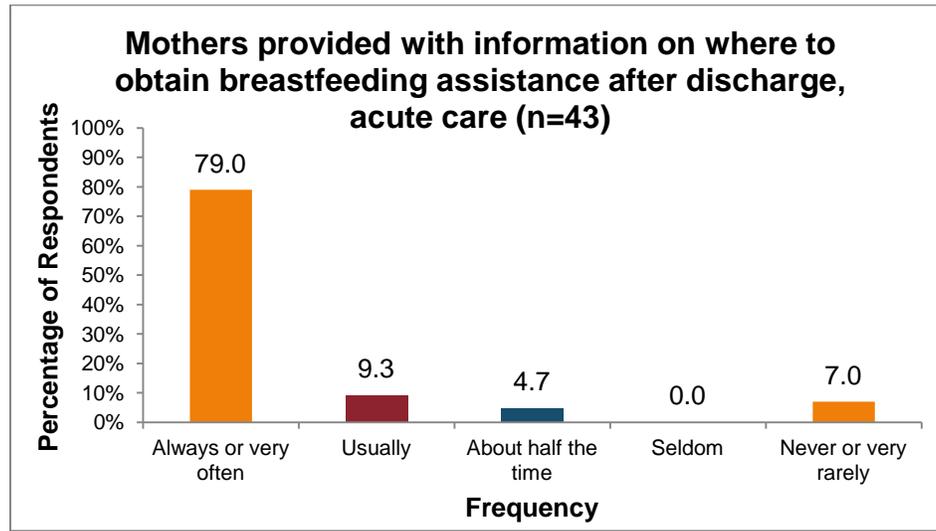
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## Breastfeeding supports in the community

Both the acute care and community surveys asked respondents to indicate the frequency with which mothers were referred to breastfeeding supports in the community. The community survey also asked what type of information was provided regarding how to access community based breastfeeding supports such as informal groups (e.g. community mothers groups) and long term support (e.g. La Leche League).

### Acute care

Seventy-nine percent of the respondents indicated that mothers were ‘always or very often’ offered information on where to obtain breastfeeding assistance following discharge from acute care facilities (Figure 3).



**Figure 3: Acute care responses related to providing mothers with information on community based supports following discharge**

### *Community*

Almost sixty percent (59.7%) of the community respondents indicated that mothers were provided with information about accessing informal groups, while 35.8% indicated that their facility provided information about accessing long-term support groups and 20.9% indicated other (n=134).

### **Services and resources**

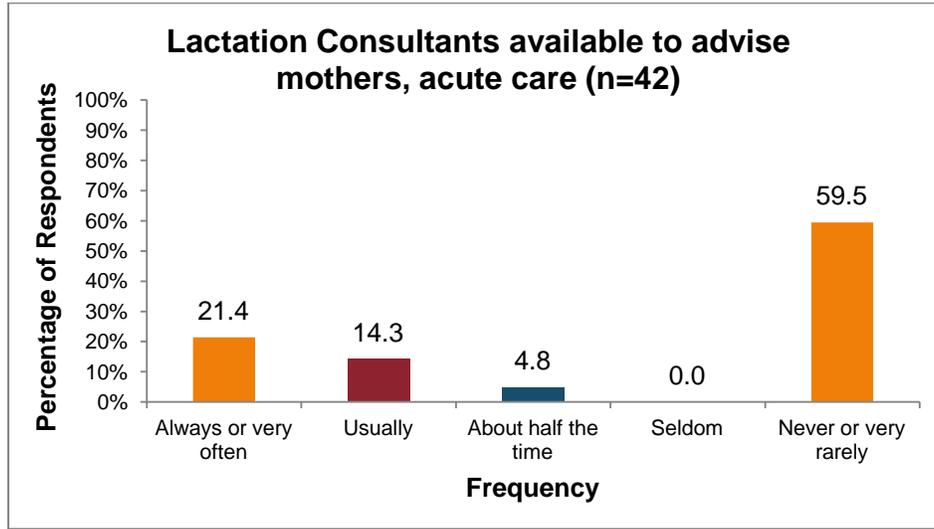
Breastfeeding services and resources included survey items related to the availability of lactation consultants, breastfeeding committees, prenatal educational opportunities, educational materials; and peer support programs.

### **Lactation Consultants**

Survey respondents were asked if Lactation Consultants (LCs) were employed at their facility and to identify what proportion of the LC's time was dedicated to supporting breastfeeding. In acute care sites, the respondents were asked to identify how frequently LCs were available to provide advice to mothers related to breastfeeding.

### *Acute care*

Almost three quarters (75%) of the respondents indicated that they did not have LCs employed at their facility. Of the LCs employed, 36.4% did not have any time dedicated to breastfeeding (n=43). In terms of providing advice to mothers, 59.5% of the respondents indicated that a LC was 'never or very rarely' available, while 21.4% of the respondents indicated a LC was 'always or very often' available (Figure 4).



**Figure 4: Availability of lactation consultants to support breastfeeding in acute care facilities**

### *Community*

Forty-three percent of the respondents indicated that they have LCs employed at their facilities and 57.0% of the respondents did not. Of the LCs employed, 60.3% did not have any Full Time Equivalency (FTE) dedicated to breastfeeding (n=135).

### **Breastfeeding committees**

Respondents were asked whether there was a breastfeeding committee at their facility that provided guidance on matters related to breastfeeding.

Findings showed that 23.3% of the respondents from acute care and 66.7% of the respondents from community facilities indicated they had a breastfeeding committee (Table 12).

Interviews from smaller community facilities indicated that they did not have their own breastfeeding committees; therefore they participated in, or received information from a zone level breastfeeding committee.

### **Breastfeeding education for mothers and their partners/supporters**

The survey asked whether breastfeeding education was offered to women and their partners/supporters. Survey items also focused on how partners/supporters supported the breastfeeding mother at home. Respondents were asked to upload a copy of the curriculum (if any) used for breastfeeding education at their facility.

Although the intent of this question was to assess whether classes were being offered by AHS, this was unclear in the question asked. Therefore, the results should be interpreted with caution. For example, some respondents indicated that prenatal classes were held at their facility; however, they were operated by an external agency and not by AHS.

### Acute care

Twenty-three percent of the respondents indicated that breastfeeding education for women was provided (Table 12). Very few respondents (4.8%) indicated that their facility offered prenatal breastfeeding education, whereas 21.4% indicated that postnatal breastfeeding education was offered and 14.3% indicated that breastfeeding education was offered in the prenatal and postnatal periods (n=42). Just over half (54.8%) of respondents indicated that their facility did not offer any prenatal education for partners/supporters (n=42).

One respondent submitted the *Healthy Parents, Healthy Children* resource as the curriculum they use for breastfeeding at their facility.

### Community

Nearly three quarters of respondents (74.8%) indicated that breastfeeding education for women was provided (Table 12). Forty-seven percent of the respondents indicated that prenatal breastfeeding education to partners/supporters was offered, while 49.6% indicated it was not and 3.0% reported it was not applicable (Table 12).

Nineteen percent (18.7%) of the respondents submitted various documents used for breastfeeding education at their respective facilities (n=135). The documents included PowerPoint presentations; handouts for parents; education guidelines; curriculums and content outlines.

**Table 12: Services and resources in acute care and community facilities**

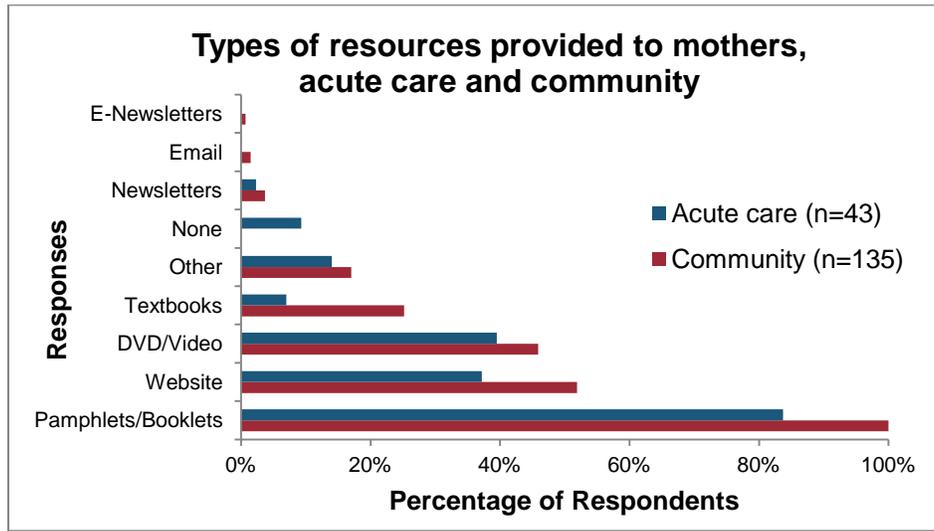
Service or resource	Percentage of acute care facility respondents (n=43)			Percentage of community facility respondents (n=135)			
	Yes	No	Don't know	Yes	No	Don't know	N/A
Existence of breastfeeding committee (Facility or zone level committee)	23.3	76.7	0	66.7	31.9	1.5	-
Breastfeeding education for women (Prenatal class)	23.3	74.4	2.3	74.8	24.4	0.7	-
Breastfeeding education for partners/supporters	-	-	-	47.4	49.6	0.0	3.0

Fields with an '-' indicate this response option was not available

### Educational materials

Respondents were asked what types of resources were provided to breastfeeding mothers, and whether their facility had education materials that targeted populations with traditionally low breastfeeding rates (e.g. low income, teens, low literacy, etc.). The respondents selected from a list of resources that were provided.

Figure 5 illustrates the type of resources provided in acute care and community facilities. The most common resources provided in both facility types were pamphlets/booklets, followed by websites and DVDs/videos.



**Figure 5: Types of resources provided to breastfeeding mothers**

Resources targeted to populations with traditionally low breastfeeding rates were generally not available in either facility type; 74.1% of community facilities (n=135) and 69.8% of acute care facilities (n=43) reported they did not provide targeted materials. Sixteen percent (16.3%) of acute care facilities reported they did provide targeted materials and 14.0% answered don't know. Twenty-four percent (23.7%) of the community facilities reported they provided targeted materials and 2.2% answered don't know.

### Peer support (community only)

Respondents were asked whether prenatal or postnatal peer support services were offered in their facility.

Survey respondents identified a lack of peer support programs in community facilities across the province. Sixty percent of the respondents indicated they did not have prenatal or postnatal peer support programs available at their facilities, whereas 32.6% of respondents indicated that there were postnatal peer support services available (n=135). None of the respondents indicated that they had any prenatal peer support services. When asked about availability of both prenatal and postnatal peer support service, 6.7% indicated such services were available (n=135).

Comments from survey respondents revealed concerns related to the lack of peer support groups or programs. Several respondents commented on the lack of such programs as a barrier contributing to the current breastfeeding rates in AHS. One respondent indicated that some peer support was taking place between mothers using social media and online groups:

*...Mothers seem less inclined to come out to formal groups in my area so they can be isolated and miss out on peer support. Peer support does seem to happen on Facebook and online Mom's groups.*

### Access to breastfeeding services

Survey respondents were asked to indicate barriers that interfered with increasing breastfeeding rates at their facilities as well as opportunities for improvement or addressing these barriers.

Some respondents from the community survey cited concerns related to accessing breastfeeding services such as: lengthy travel distances, low family income, language barriers, and availability of breastfeeding equipment.

### *Travel distances*

Travel distances were perceived to be an issue for mothers who needed to access breastfeeding services, particularly in rural areas. One community respondent described the situation as follows:

*... Some families in our rural community live 45-60 minutes from our Community Health Centre. We make home visits but the distance makes ongoing follow-up more difficult when the family can't just stop in for weight checks and breastfeeding support on a regular basis.*

### *Family income*

Low family income limits the families' access to breastfeeding services and resources to support breastfeeding, such as prenatal classes and transportation to breastfeeding follow-up appointments at CHCs. One community respondent noted:

*... I work in a low income area. Many moms do not have transportation for appointments [and] we do not have enough nursing staff to continue to see clients [at] home.*

### *Language*

Survey respondents stated that when working with immigrant populations, using the Language Line Solutions (interpretative services company) took a lot of extra time, leaving less time to focus on providing breastfeeding support. One community respondent described this situation:

*[There are a lot] of low income families, [and many] immigrants from low income housing. [The] time element is a barrier for supporting moms using [the] language line as this takes a lot of time. Likely two-thirds of the...participants are immigrants.*

### *Breastfeeding equipment*

Several survey respondents identified limited access to breastfeeding equipment (e.g. breastpumps, breastshields, etc) as well as the lack of quality equipment as barriers to supporting breastfeeding. Some examples included outdated and broken equipment which did not have accessories or had costly, single-use accessories. One community respondent stated:

*[We] have ancient breast pumps, none of which work well [suppliers] don't even make attachments for them. [We] have to re-sterilize them after each use. Attachments wear out and don't work as well. [We] lend the pumps out to moms. [We] have three on site that are lent out most of the time. [We] need modern equipment.*

While many communities have outlets that sell or rent breastfeeding equipment across the province, survey respondents from some community facilities explained that there were no breastpumps available for rent or purchase in their geographic locations:

*[There is no] access to breastfeeding equipment in our community to support initiation and continuation of breastfeeding when current breastfeeding challenges require this*

*intervention (i.e.: breast shields). The community does not have local access to any breast pump rentals or purchase.*

## **Additional findings**

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Open-ended survey questions and interviews provided survey respondents with the opportunity to articulate opportunities for, and barriers to, supporting breastfeeding. Many of these comments have been included in the previous sections; however, some of the comments reflected areas that were not specifically covered by the survey questions. These are presented below.

### **Attitudes and beliefs**

Some respondents identified family influence as a barrier to breastfeeding success. For example, they identified situations where clinical breastfeeding information provided by health care professionals was often superseded by inaccurate guidance from family members. One community survey respondent stated:

*Many times there is influence from older family members that did not breastfeed when they had their children and believe that the baby is not getting enough breastmilk to be satisfied. These influences often lead our new moms to stop breastfeeding early and give formula.*

Certain cultural practices within families were also presented as a challenge to supporting breastfeeding. For example, one community respondent found it difficult to assist mothers who were very private as a result of cultural beliefs:

*Cultural differences where patients are very private - won't call nurse to observe/assist with [breastfeeding]*

Many respondents expressed concern over the knowledge, beliefs, and practices of AHS staff related to breastfeeding that were not current or evidence based. There continues to be challenges in having consistent messaging and practices among staff and clinicians. One example given by an acute care respondent was:

*We overall are supportive of breastfeeding, with the exception of some...staff who were trained differently. Their attitudes towards breastfeeding is not positive and change is resisted.*

### **Coordination and continuity of services**

Some respondents noted the importance of coordination and continuity of breastfeeding services across the continuum of care from preconception/pregnancy through the first year postpartum. They identified service gaps that have the potential to negatively impact breastfeeding outcomes. For example, community respondents indicated there were few opportunities for PHNs to interact with mothers during the prenatal period.

*[We] need increased promotion from physicians and other health professionals involved prenatally as they are more likely to see clients [than] PHNs. Other respondents expressed concerns related to the immediate postpartum period; mothers who are not able to latch their babies independently may be discharged before having their milk 'come in':*

*I believe that you undermine breastfeeding success when mothers/babes are discharged <48 hrs and breastfeeding is not established, milk not in, etc. If you really want breastfeeding to be successful it is important to have enough postpartum staff to help with several feeds and not discharge before 72 hrs or more if there are issues - particularly first time moms.*

Once discharged, respondents reported almost all mothers and infants were contacted by a PHN within 24 hours. However, in some rural areas they may not be seen by a PHN for several days.

According to respondents, another important aspect for establishing and maintaining breastfeeding included the critical period of time between the first few days postpartum and the two month appointment at a well child clinic. It was noted by one respondent that several physiological changes take place for the mother and infant that can be misinterpreted if the mother does not have sufficient knowledge and support, leading to supplementation with a breastmilk substitute:

*... Then at 4-6 weeks babes will spend more time crying, [and] women will start to have doubts related to breast changes and output and start supplementing at that time. [We] need to connect with moms at that period of time...*

Respondents also indicated that the time frame between six to twelve months was another key period to offer supports for the continuation of breastfeeding. Community respondents commented that this was a missed opportunity to support breastfeeding mothers:

*We do not see moms when babies are between 6-12 months; we miss out on a valuable time to encourage [breastfeeding].*

And:

*... Once mothers and infants are seen in [the] well child clinic at 12 months of age, many of them have already stopped breastfeeding and are returning to work.*

Community respondents also identified concerns about the ability of staff to provide breastfeeding support to mothers in the well child clinic setting due to time constraints. One community respondent stated that the primary focus of well child clinic visits was vaccinations, leaving little time for breastfeeding:

*When Public Health Nurses are in clinic assessing feeding, there may be insufficient time to explore and/or address and give anticipatory guidance regarding breastfeeding as our primary focus is vaccinations.*

This point was further supported by another community respondent who described the multitude of other health assessments and referrals that PHNs needed to address in addition to vaccinations, in a limited time frame of 30 – 40 minutes, for the entire visit:

*... The visits are jam-packed - vaccination (with all that entails), growth assessment, hips, eyes, dental, head shape, development, nutrition, safety for the baby. Smoking, maternal coping, domestic violence, need for referrals to food bank or milk fund or for in-home support for moms. [Writing] referrals to physicians, dietitians, external organizations, [doing] electronic data entry, and [making] entries in the client progress notes when needed. All in 30 minutes.*

## Discussion

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The purpose of this environmental scan was to understand current breastfeeding services and practices within AHS. Overall, the survey response rate was high and the findings have provided rich insight into the existing state of breastfeeding services and practices across acute care and community facilities in AHS. The respondents across all zones indicated a keen interest in and support for a provincial breastfeeding strategy. The findings have also provided promising opportunities to enhance and positively impact breastfeeding in AHS.

## Policies and guidelines

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The scan revealed the existence of various types of guidelines and/or policies across just over half of the acute care and community facilities surveyed. The guidelines and documents received varied significantly and included maternal and/or infant health or feeding policies, guidelines, procedures, protocols, assessment tools, and staff learning packages. While many of the documents were from the former health regions, one was a new maternal/infant assessment policy<sup>11</sup>. Breastfeeding policies have been shown to be essential for ensuring that breastfeeding is a priority within a healthcare organization (Hector & King, 2005), creating an organization wide commitment towards breastfeeding.

Informal supports were available to the majority of breastfeeding staff, in acute care and community facilities across AHS. Breastfeeding policies can ensure that all facility users are provided with a safe and encouraging environment to breastfeed, including staff, volunteers, patients, families, and visitors (Alberta Human Rights Commission, 2010; Mills, 2009). Workplaces were among settings where women described feeling a lot of discomfort with both breastfeeding and pumping their breastmilk, which highlights the importance of creating an environment where women feel comfortable breastfeeding (McKean and Spragins, 2013). Women who returned to paid employment were more likely to continue breastfeeding if they were employed by an organization supportive of breastfeeding. They also benefited from fewer and less severe infant illnesses (Centers for Disease Control and Prevention [CDC], 2013; Mills, 2009; Witters-Green, 2003). Organizations also profited from increased productivity, decreased employee absenteeism, and turnover (CDC, 2013; Mills, 2009).

Our findings indicated that while the use of promotional items from manufacturers of breastmilk substitutes was not common in community facilities, it was common in acute care settings. Breastfeeding policies may also encourage the creation of supportive environments that include considerations such as signage welcoming breastfeeding and removal of promotional items from manufacturers of breastmilk substitutes. The promotion of breastmilk substitutes has been shown to have a negative effect on breastfeeding duration and exclusivity (CDC, 2013; WHO, 1981); a concern which was also reflected in the comments from survey respondents.

Women frequently look to health care professionals for support in getting breastfeeding established (McKean and Spragins, 2013). Developing a healthcare system and culture that is supportive of breastfeeding and provides consistent and coordinated care is critical. Therefore, policies that support standardization of practices and services across AHS facilities would support a shift in the health services culture to one that protects, promotes, and supports breastfeeding across all care sites.

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<sup>11</sup> Policy Level 2: Postpartum, Community - Assessment, Nursing Action and Referral. Document # CHW-01; April 15<sup>th</sup>, 2013.

## Clinical practices

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Clinical practices supportive of breastfeeding have been adopted in many of the AHS facilities surveyed. The majority of respondents (90.7%) indicated that babies were 'always or very often' given to their mothers for skin to skin contact for uncomplicated births. However, the numbers were much smaller for cesarean births (37.2%) and for skin to skin contact being uninterrupted until completion of the first feed (51.2%). While rooming-in was practiced very frequently according to the findings, some of the teachings related to the use of breastmilk substitutes and provision of information on the risk of using bottles and pacifiers did not occur consistently. Certain clinical practices implemented immediately after birth have been shown to promote breastfeeding, such as skin to skin and rooming in (Hannula, Kaunonen, & Tarkka, 2008; Hector & King, 2005). Practices such as the use of pacifiers and unnecessary supplementation can also be detrimental to a successful breastfeeding experience.

Successful adoption and implementation of beneficial clinical practices is dependent on timely, consistent education and training of staff working with breastfeeding mothers, including physicians, nurses, LC, and support staff (Hector & King, 2005). Just over half of the respondents indicated they had access to breastfeeding guidelines in some form and training was provided for staff. The respondents also noted the importance of having a standardized training curriculum and staff education to ensure consistency in messaging across various providers and standardization of services and practices from preconception to two years of age; a time that is critical for establishing and continuing breastfeeding.

## Services and resources

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Our findings indicated that while breastfeeding mothers and their partners were provided with information, the frequency varied between acute care and community facilities. Respondents also expressed the need for effective communication and collaboration between providers and healthcare disciplines to ensure consistency in the information provided. Conflicting advice from healthcare professionals can be detrimental to women's self esteem and confidence, and subsequently to breastfeeding outcomes (McInnes & Chambers, 2008; Dykes, 2005). Further, the information provided to women and their partners needed to be relevant, useful, and consistent between providers (Hector & King, 2005).

The findings also indicated the need for specialty services and supports, such as LCs in AHS. Some complex breastfeeding issues require expertise of a LC to manage (USCLA, 2012). LCs maybe a valuable resource to support the development and implementation of standardized practices and services for breastfeeding across AHS facilities and provide specialized services for complex breastfeeding challenges.

Our findings showed that community-based supports were not readily available across AHS. The benefit of community-based supports beginning in the prenatal period has been shown to have a positive impact on breastfeeding rates (Bai et al, 2009; Ingram et al, 2010; Kaunonen et al, 2012). A recent review suggested that developing peer support initiatives can positively contribute to breastfeeding rates (McKean and Spragins, 2013). Opportunities exist to explore such effective programming in Alberta communities.

Maternal confidence in the ability to initiate and continue breastfeeding results from a dynamic interaction between each woman's expectations, the physical aspects of breastfeeding, her baby's breastfeeding behaviour, sources of support, and the complex social context within

which breastfeeding and motherhood is embedded (McKean and Spragins, 2013). AHS can play a significant role in supporting mothers establish and continue breastfeeding through the standardization of practices and service pathways that contribute to the achievement of Alberta’s breastfeeding outcomes.

## Recommendations

The following recommendations (Table 13) are based on the results of the Breastfeeding Environmental Scan, the AHS qualitative literature review (MacKean & Spragins, 2012), the AHS quantitative literature review (Nagulesapillai, 2013, February), the AHS Health and Business Plan: 2013-2016 Strategic Directions (AHS, 2013), Alberta’s Maternal-Infant Health Action Plan (Alberta Government, Alberta Health, 2013), and available evidence.

**Table 13: Recommendations resulting from environmental scan and available evidence**

Theme	Recommendations	Rationale
Policies and guidelines	<ul style="list-style-type: none"> <li>• Create a corporate policy to establish a supportive environment that protects, promotes and supports breastfeeding in AHS facilities</li> <li>• Create clinical policy to standardize breastfeeding practices and service pathways</li> </ul>	<ul style="list-style-type: none"> <li>• Breastfeeding Environmental Scan</li> <li>• AHS qualitative literature review</li> <li>• AHS Health Plan and Business Plan 2013-2016</li> <li>• Alberta’s Maternal Infant Health Action Plan</li> <li>• available evidence (CDC, 2013; Hector &amp; King, 2005; Mills, 2009; Witters-Green, 2003)</li> </ul>
Clinical and education practices	<ul style="list-style-type: none"> <li>• Standardize breastfeeding education and training for staff and/or volunteers</li> <li>• Develop consistent approaches to breastfeeding education and supports for women and their partners/supporters, including targeted resources for vulnerable populations</li> </ul>	<ul style="list-style-type: none"> <li>• Breastfeeding Environmental Scan</li> <li>• AHS qualitative literature review</li> <li>• AHS quantitative literature review</li> <li>• AHS Health Plan and Business Plan 2013-2016</li> <li>• Alberta’s Maternal Infant Health Action Plan</li> <li>• available evidence (Hannula, Kaunonen, &amp; Tarkka, 2008; Hector &amp; King, 2005)</li> </ul>
Services and resources	<ul style="list-style-type: none"> <li>• Collaborate with specialized services such as LCs to support the development of standards, best practices and provision of support for complex breastfeeding issues</li> <li>• Support the establishment of equitable community based breastfeeding supports (e.g. peer support programs) and access to those services for women and their partners/supporters</li> </ul>	<ul style="list-style-type: none"> <li>• Breastfeeding Environmental Scan</li> <li>• AHS qualitative literature review</li> <li>• AHS quantitative literature review</li> <li>• AHS Health Plan and Business Plan 2013-2016</li> <li>• Alberta’s Maternal Infant Health Action Plan</li> <li>• available evidence (f et al, 2009; Dennis &amp; Kingston, 2008; Dykes, 2005; Ingram et al, 2010; Kaunonen et al, 2012; McInnes &amp; Chambers, 2008; USCLA, 2012)</li> </ul>
Quality improvement and evaluation	<ul style="list-style-type: none"> <li>• Evaluate the effectiveness of strategies to support continuous improvement and achievement of key outcomes/performance measures</li> </ul>	<ul style="list-style-type: none"> <li>• Breastfeeding Environmental Scan</li> <li>• AHS Health Plan and Business Plan 2013-2016</li> <li>• Alberta’s Maternal Infant Health Action Plan</li> </ul>

## References

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- Alberta Government (2013, February). *Health Business Plan 2013-16*, from Ministry of Health, <http://www.finance.alberta.ca/publications/budget/budget2013/health.pdf>, retrieved June 9, 2013.
- Alberta Government, Alberta Health (2013, March). *Healthy mothers, healthy babies: Alberta's maternal infant health action plan*. Unpublished manuscript.
- Alberta Health Services. (2013). *Alberta Health Services Health Plan and Business Plan 2013-2016*. Retrieved from <http://www.albertahealthservices.ca/Publications/ahs-2013-16-health-business-plan.pdf>
- Alberta Health Services, Data Integration, Measurement & Reporting (2013). *Livebirths in Alberta acute care hospitals by institution fiscal years 2009/10-2012/13* [FY201213 Metabolic\_Screening\_Length\_of\_Stay\_report\_10096.xlsx].
- Alberta Human Rights Commission. (2010, September). *Interpretive Bulletin: Rights and Responsibilities Related to Pregnancy, Childbirth and Adoption* (ADR 2013). Retrieved from [http://www.albertahumanrights.ab.ca/Bull\\_pregnancy.pdf](http://www.albertahumanrights.ab.ca/Bull_pregnancy.pdf)
- Alexander, A., Dowling, D., & Furman, L. (2010). What do pregnant low-income women say about breastfeeding? *Breastfeeding Medicine*, 5, 17-23.
- Avery, A. B. & Magnus, J. H. (2011). Expectant fathers' and mothers' perceptions of breastfeeding and formula feeding: A focus group study in three US cities. *Journal of Human Lactation*, 27, 147-154.
- Bai, Y. K., Middlestadt, S. E., Joanne Peng, C. Y., & Fly, A. D. (2009). Psychosocial factors underlying the mother's decision to continue exclusive breastfeeding for 6 months: An elicitation study. *Journal of Human Nutrition & Dietetics*, 22, 134-140.
- Bailey, J. (2007). Modern parents' perspectives on breastfeeding: a small study. *British Journal of Midwifery*, 15, 148.
- Batal, M., & Boulghaurjian, C. (2005). Breastfeeding initiation and duration in Lebanon: Are the hospitals "mother friendly"? *Journal of Pediatric Nursing*, 20(1), 53-59.
- Breastfeeding Committee for Canada (2000). *Using the Baby-Friendly Hospital Initiative self-appraisal tool*. Retrieved from <http://breastfeedingcanada.ca/documents/BFI%20self%20appraisal%20tool.pdf>
- Breastfeeding Committee for Canada (2012, February). *The Baby-Friendly Initiative (BFI) in Canada: Status report February 19<sup>th</sup> 2012*. Retrieved from [http://breastfeedingcanada.ca/documents/BFI\\_Status\\_report\\_2012\\_FINAL.pdf](http://breastfeedingcanada.ca/documents/BFI_Status_report_2012_FINAL.pdf)
- Breastfeeding Committee for Canada (2012, May). *Integrated 10 steps & WHO Code practice outcome indicators for hospitals and community health services: Summary*. Retrieved from [http://www.breastfeedingcanada.ca/documents/2012-05-14\\_BCC\\_BFI\\_Ten\\_Steps\\_Integrated\\_Indicators\\_Summary.pdf](http://www.breastfeedingcanada.ca/documents/2012-05-14_BCC_BFI_Ten_Steps_Integrated_Indicators_Summary.pdf)

- Burns, E., Schmied, V., Sheehan, A., & Fenwick, J. (2010). A meta-ethnographic synthesis of women's experience of breastfeeding. [Review]. *Maternal & Child Nutrition*, 6, 201-219.
- Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Division of Nutrition, Physical Activity, and Obesity (2013). *Breastfeeding report card-United States*, 2012. Retrieved from <http://www.cdc.gov/breastfeeding/data/reportcard/reportcard2012.htm>
- Centers for Disease Control and Prevention. (2013). *The CDC Guide to Strategies to Support Breastfeeding Mothers and Babies*. Retrieved from <http://www.cdc.gov/breastfeeding/pdf/BF-Guide-508.PDF>
- Dennis, C. & Kingston, D. (2008). A systematic review of telephone support for women during pregnancy and the early postpartum period. *JOGNN: Journal of Obstetric, Gynecologic & Neonatal Nursing* 37(3): p. 301-314.
- DiGirolamo, A. M., Grummer-Strawn, L. M., & Fein, S. (2008). Effects of maternity-care practices on breastfeeding. *Pediatrics*. 122(2), S43-S49.
- Dykes, F. (2005). A critical ethnographic study of encounters between midwives and breastfeeding women in postnatal wards in England. *Midwifery*, 21, 241-252.
- AHS. (2011). Provincial obesity program business case. AHS Program Governance Office.
- Francis-Clegg, S., Intermountain Healthcare Lactation Standardization Project (2007), & Francis, D. T. (2011). Improving the "Bottom-Line": Financial justification for the hospital based Lactation Consultant role. *Clinical Lactation*, 2(1), 19-25. Retrieved from <http://www.clinicallactation.org/content/improving-bottom-line-financial-justification-hospital-based-lactation-consultant-role>
- Goldade, K., Nichter, M., Nichter, M., Adrian, S., Tesler, L., & Muramoto, M. (2008). Breastfeeding and smoking among low-income women: results of a longitudinal qualitative study. *Birth*, 35, 230-240.
- Government of Alberta, Alberta Health Services (2010). *Becoming the best: Alberta's 5-year health action plan 2010-2015*. Retrieved from <http://www.health.alberta.ca/documents/Becoming-the-Best-2010.pdf>
- Hannula, L., Kaunonen, M., & Tarkka, M. (2008). A systematic review of professional support interventions for breastfeeding. *Journal of Clinical Nursing* 17(9), 1132-1143.
- Health Canada (2012a). *Nutrition for healthy term infants: Recommendations from birth to six months*. Retrieved from <http://www.hc-sc.gc.ca/fn-an/nutrition/infant-nourisson/recom/index-eng.php>
- Health Canada (2012b). *Trends in breastfeeding practices in Canada (2001-2010)*. Retrieved from <http://hc-sc.gc.ca/fn-an/surveill/nutrition/commun/prenatal/trends-tendances-eng.php#a3>
- Hector, D., & King, L. (2005). Interventions to encourage and support breastfeeding. *New South Wales Public Health Bulletin*, 16(3-4), 56-61.

- Infant Feeding Action Coalition [INFACT Canada]. (2005). *Maternity Benefits and Breastfeeding. Providing Structural Support for Breastfeeding is Good for All* [Newsletter]. Retrieved from [http://www.infactcanada.ca/Newsletter\\_Fall\\_2005\\_Pg01.htm](http://www.infactcanada.ca/Newsletter_Fall_2005_Pg01.htm)
- Ingram, L., MacArthur, C., Khan, K., Deeks, J. & Jolly, K. (2010). Effect of antenatal peer support on breastfeeding initiation: a systematic review. *Canadian Medical Association Journal*, 182(16), 1739-1746.
- International Board of Lactation Consultant Examiners in the Americas (2012). *Facts and figures: Number of IBCLCs per province or territory in Canada*. Retrieved from <http://americas.iblce.org/facts-and-figures>
- Kaunonen, M., Hannula, L., & Tarkka, M. (2012). A systematic review of peer support interventions for breastfeeding. *Journal of Clinical Nursing*, 21(13/14), 1943-1954.
- Kramer, M. S., Aboud, F., Mironova, E., Vanilovich, I., Platt, R. W., Matush, L.,...Shapiro, S. (2008). Breastfeeding and child cognitive development: New evidence from a large randomized trial. *Archives of General Psychiatry*, 13(5), 578–584. doi:10.1001/archpsyc.65.5.578.
- MacKean, G., & Spragins, W. (2012.) The challenges of breastfeeding in a complex world: A critical review of the qualitative literature on women and their partners'/supporters' perceptions about breastfeeding. Unpublished manuscript.
- McInnes, R. J. & Chambers, J. A. (2008). Supporting breastfeeding mothers: qualitative synthesis. *Journal of Advanced Nursing*, 62, 407-427.
- Mills, S. P. (2009). Workplace lactation programs: A critical element for breastfeeding mothers' success. *American Association of Occupational Health Nurses Journal*, 57(6), 227-231.
- Moore, E. R., Anderson, G. C., Bergman, N., & Dowswell, T. (2012). Early skin-to-skin contact for mothers and their healthy newborn infants. *Cochrane Database of Systematic Reviews*, 2012(05), doi:10.1002/14651858.CD003519.pub3
- Murray, E. K., Ricketts, S., & Dellaport, J. (2007). Hospital practices that increase breastfeeding duration: Results from a population-based study. *Birth*, 34(3), 202-211.
- Nagulesapillai, T. (2013, February). Population health strategies to maintain or increase breastfeeding rates: A review of systematic reviews. Unpublished manuscript.
- National Institute for Health and Clinical Excellence (2005, May). *The effectiveness of public health interventions to promote the duration of breastfeeding: Systematic review (1<sup>st</sup> ed.)*. Retrieved from [http://www.nice.org.uk/niceMedia/pdf/Breastfeeding\\_vol\\_1.pdf](http://www.nice.org.uk/niceMedia/pdf/Breastfeeding_vol_1.pdf)
- Public Health Agency of Canada (2009). *What mothers Say: The Canadian maternity experiences survey* (Cat.: HP5-74/2-2009E-PDF, ISBN: 978-1-100-10828-5). Retrieved from: <http://www.phac-aspc.gc.ca/rhs-ssg/pdf/survey-eng.pdf>
- Schmied, V., Beake, S., Sheehan, A., McCourt, C., & Dykes, F. (2011). Women's perceptions and experiences of breastfeeding support: a metasynthesis. *Birth*, 38, 49-60.

- Stanford School of Medicine (2013). *Frenotomy*. Retrieved from <http://newborns.stanford.edu/Frenotomy.html>
- Statistics Canada (2013a). *Breastfeeding Practices by Province and Territory (Percent)* [CANSIM Table 105-0501 and Catalogue no. 82-221-X]. Retrieved from <http://www.statcan.gc.ca/tables-tableaux/sum-som/l01/cst01/health92b-eng.htm>
- Statistics Canada (2013b). *Canadian Community Health Survey (CCHS)-2012*. Retrieved from [http://www23.statcan.gc.ca/imdb-bmdi/instrument/3226\\_Q1\\_V9-eng.htm#a67](http://www23.statcan.gc.ca/imdb-bmdi/instrument/3226_Q1_V9-eng.htm#a67)
- The Academy of Breastfeeding Medicine Protocol Committee. (2009). ABM clinical protocol #3: Hospital guidelines for the use of supplementary feedings in the healthy term breastfed neonate, revised 2009. *Breastfeeding Medicine*, 4(3), 175-182. doi:10.1089/bfm.2009.9991
- United Nations Children's Fund United Kingdom. (2010). *The Baby Friendly Initiative: Seven point plan*. Retrieved from <http://www.unicef.org.uk/BabyFriendly/Health-Professionals/Going-Baby-Friendly/Community/Seven-Point-Plan-for-Sustaining-Breastfeeding-in-the-Community/>
- United States Lactation Consultant Association. (2010, July). *International Board Certified Lactation Consultant staffing recommendations for the inpatient setting*. Retrieved from [http://uslca.org/wp-content/uploads/2013/02/IBCLC\\_Staffing\\_Recommendations\\_July\\_2010.pdf](http://uslca.org/wp-content/uploads/2013/02/IBCLC_Staffing_Recommendations_July_2010.pdf)
- Weimer, J. (2001). *The economic benefits of breastfeeding: A review and analysis (Report 13)*. Retrieved from United States Department of Agriculture, Economic Research Service website: [http://www.ers.usda.gov/media/329098/fanrr13\\_1\\_.pdf](http://www.ers.usda.gov/media/329098/fanrr13_1_.pdf)
- World Health Organization, United Nations Children's Fund. (2003). *Global strategy for infant and young child feeding* (ISBN: 92 4 156221 8). Retrieved from [http://www.who.int/nutrition/topics/global\\_strategy/en/](http://www.who.int/nutrition/topics/global_strategy/en/)
- World Health Organization, United Nations Children's Fund. (2006). *Breastfeeding promotion and support in a Baby-Friendly hospital: A 20 hour course for maternity staff*. Retrieved from [http://www.unicef.org/nutrition/index\\_24850.html](http://www.unicef.org/nutrition/index_24850.html)