



Supporting breastfeeding in rural Newfoundland and Labrador communities during COVID-19

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Abstract

Exclusive breastfeeding for the first 6 months of life has become the global standard of infant feeding for its extensive benefits to maternal and infant health. Public health programs, such as the Baby-Friendly Initiative, have helped increase the national breastfeeding initiation rate to 90%. However, initiation rates in Newfoundland and Labrador (NL) continue to rank the lowest in the country at 70%, with a 6-month exclusivity rate of 16%. This commentary will discuss the influence of geographical location, societal norms, and accessibility to health care services on breastfeeding in rural and remote NL communities. While the SARS-CoV-2 virus itself does not impact the mother's ability to breastfeed, the indirect impacts of COVID-19 on health care services, social isolation, and economic burden challenge breastfeeding initiation and continuation. Priority solutions will draw on capacity building by emphasizing relationships within the community to deliver innovative and appropriate support programs. Continued education with health practitioners and further research into breastfeeding barriers in rural communities is critical moving forward.

Résumé

L'allaitement maternel exclusif pendant les six premiers mois de la vie est devenu la norme mondiale de l'alimentation du nourrisson en raison de ses nombreux avantages pour la santé maternelle et infantile. Les programmes de santé publique, tels que le Baby Friendly Initiative, ont contribué à porter le taux national d'initiation à l'allaitement maternel à 90 %. Cependant, le taux d'initiation à Terre-Neuve-et-Labrador, à 70 %, se classe parmi les plus bas du pays, avec un taux d'exclusivité de 6 mois de 16 %. Ce commentaire discutera l'influence de la localisation géographique, des normes sociétales et de l'accessibilité des services de soins de santé sur l'allaitement maternel dans les communautés rurales et éloignées de Terre-Neuve-et-Labrador. Bien que le virus SRAS-CoV-2 lui-même n'empêche pas l'allaitement, les impacts indirects du COVID-19 sur les services de santé, l'isolement social et le fardeau économique compliquent l'initiation et la poursuite de l'allaitement. Les solutions s'appuieront sur le renforcement des capacités en mettant l'accent sur les relations au sein de la communauté pour offrir des programmes de soutien innovants et appropriés. La formation continue des praticiens de la santé et des recherches supplémentaires sur les obstacles à l'allaitement dans les communautés rurales sont essentielles pour aller de l'avant.

Keywords Breastfeeding · Infant nutrition · Rural health services · COVID-19 · Pandemic

Mots-clés Allaitement · nutrition infantile · soins de santé ruraux · COVID-19 · pandémie

Introduction

Exclusive breastfeeding, defined as infants receiving breastmilk only for the first 6 months of life, is the undisputed optimal infant nutrition choice for its extensive short- and long-term health benefits (World Health Organization [WHO], 2020). Literature supports a dose-response relationship between breastfeeding and infant mortality, whereby infants partially or not breastfed have a significant 6-fold

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increase in mortality compared with those exclusively breastfed (Sankar et al., 2015). Programs such as the Baby-Friendly Initiative have helped improve Canadian breastfeeding rates, with approximately 90% of mothers breastfeeding at birth and 57% of infants exclusively breastfeeding for 6 months (Public Health Agency of Canada [PHAC], 2019). However, Newfoundland and Labrador (NL) rank lowest in the country, with a 70% breastfeeding initiation rate and a 16% exclusivity rate at 6 months (Perinatal Program Newfoundland Labrador [PPNL], 2014; PHAC, 2019). Nationally, geographical area of residence does not present a significant difference in breastfeeding statistics; however, limited studies understanding barriers to breastfeeding in rural contexts exist (Lukeman et al., 2019; PHAC, 2019). In contrast with urban communities, NL's unique geography presents a widely rural and dispersed population having strong traditional roots and reliance on community supports (Bonia et al., 2013; Robertson et al., 2020). The COVID-19 pandemic poses a threat to breastfeeding rates through increased social isolation, health resource diversion, and heightened maternal stress (Lebel et al., 2020; Robertson et al., 2020; Yoshikawa et al., 2020). This commentary will emphasize the need to ensure breastfeeding rates do not decline in NL as a result of the COVID-19 pandemic.

Barriers to breastfeeding in rural and remote NL communities

A woman's decision on how she will feed her infant and commit to her choice is influenced by societal and cultural norms, family and peer encouragement, and effective clinical support (PHAC, 2019). A societal stigma of embarrassment and sexualization associated with breastfeeding has contributed to NL's low breastfeeding rates and consequently has normalized bottle-feeding (Bonia et al., 2013; Vieth et al., 2016). These beliefs have also resulted in a perception of inconvenience, as women express the need to seek privacy to feed their infant (Bonia et al., 2013). Baby-Friendly NL initiated a poster campaign, distributing breastfeeding images in public spaces across NL to normalize breastfeeding in society. Surveys conducted in two rural community shopping centres in NL revealed that the campaign provided significant improvement ($p < 0.05$) in perceived acceptability of public breastfeeding in specific settings among those who had seen the posters. However, discomfort with public breastfeeding in NL persists (Vieth et al., 2016).

The decision to breastfeed is often made during pregnancy (PHAC, 2019). Women often look to their mothers during decision-making around infant feeding, and their mothers' personal experiences and deep-rooted traditions further encourage the societal norm of bottle-feeding in NL (Bonia

et al., 2013). A theme specific to mothers from rural communities of NL was that a younger childbearing age influenced their lack of interest in discussing breastfeeding with their primary care provider and, consequently, their decision to formula feed (Bonia et al., 2013).

For mothers who decide to breastfeed, the support available can profoundly influence breastfeeding duration and continuation (PHAC, 2019). Mobilization of health supports in rural settings has numerous barriers, often not accounted for in urban-designed health services (Lukeman et al., 2019). Access to specialized services, such as a lactation consultant, is often centralized to regional hospitals. Mothers within rural regions may not have peer support in their communities. The geographical community dispersion in NL rural areas can create long commutes for mothers and their infants, increasing reliance on public health nurses and community organizations for breastfeeding support in rural communities (Bonia et al., 2013; PPNL, 2014).

Indirect burden of COVID-19 pandemic on breastfeeding

Concern regarding the SARS-CoV-2 virus transmission in breastmilk has been at the forefront of conversation for maternal and infant health. WHO (2020) reported that the SARS-CoV-2 virus is not transmitted through breastmilk, and encouraged global support in initiation and continuation of breastfeeding among mothers with suspected or confirmed COVID-19. To ensure timely breastfeeding initiation, the Canadian Pediatric Society, PHAC, and WHO recommend mothers and newborns not be separated at birth, even in COVID-19-positive cases, and emphasize hospital policies' importance in supporting the practice (Breastfeeding Committee for Canada, 2020). However, the indirect impacts of the COVID-19 pandemic can affect breastfeeding rates (Robertson et al., 2020; Yoshikawa et al., 2020). Increased stress and social isolation during the pandemic may contribute to breastfeeding cessation when challenges are faced, especially when routine clinical and peer supports are not in place (Lebel et al., 2020). Additionally, early introduction of infant formula feeding can lead to an increased financial burden on individuals and the health care system (Taylor et al., 2020).

Breastfeeding, unfortunately, is not always an easy process. National surveys identified 'not enough milk' and 'difficulty with breastfeeding technique' as the most prevalent concerns among Canadian women that lead to breastfeeding cessation (PHAC, 2019). These experiences reflect the importance of accessible support in navigating breastfeeding challenges. Social isolation from peers and group settings, as experienced with the COVID-19 pandemic, decreases conversations around breastfeeding and opportunities to normalize the practice (WHO, 2020). Not only will this impact breastfeeding

initiation rates, but also continuation rates as women lack breastfeeding peer-support.

The COVID-19 pandemic has also resulted in changes in health care provider supports and services during the perinatal period as public health nurses are diverted to pandemic response efforts. The interruption of health care services and in-person support may increase breastfeeding cessation, thereby increasing risk of adverse health impacts for mothers and infants (Lebel et al., 2020; Robertson et al., 2020; Sankar et al., 2015; Yoshikawa et al., 2020). Researchers have predicted that a 5% reduction in health care providers' availability, service accessibility, and resource allocation for maternal and newborn health during the pandemic response can equate to an approximately 8–10% increase in maternal and infant mortality (Robertson et al., 2020; Yoshikawa et al., 2020). Many rural and remote communities have limited numbers of health care providers. While breastfeeding support is a fraction of the perinatal services provided, these conservative statistics underline the impact of resource diversion away from perinatal health. Conversely, the mothers facing breastfeeding challenges may be less willing to seek health providers' assistance during the COVID-19 pandemic (Robertson et al., 2020). Breastfeeding concerns may be self-perceived as an unimportant health need, in addition to the perceived risk of contracting the virus by visiting health centres (Lebel et al., 2020; Robertson et al., 2020).

The economic impact of COVID-19 has created additional stress on families of NL. In acknowledging the national economic crisis predicted to follow the public health emergency of COVID-19, former Premier Dwight Ball emphasized the uniqueness of NL's economy and its reliance on resources such as tourism, fishery, and oil and gas; all of which have been adversely impacted in 2020 (Antle, 2020). Families affected by lay-offs and income loss are subject to food insecurity, impacting those who have decided to formula feed. Furthermore, infant malnutrition risk will increase as families face the financial burden of formula feeding and rural regions experience limited formula inventory from a potentially depleted supply chain (Breastfeeding Committee for Canada, 2020; Robertson et al., 2020).

Solutions

Policymakers must support breastfeeding in rural communities during COVID-19 through continued perinatal services in order to, at a minimum, maintain existing initiation and exclusivity rates (Breastfeeding Committee for Canada, 2020; Robertson et al., 2020; WHO, 2020; Yoshikawa et al., 2020). Given that decisions for infant feeding often occur in the pre-natal period, frequent, informative conversations around breastfeeding before childbirth can positively influence decision-making (PHAC, 2019). WHO (2018) recommends

that breastfeeding counselling occur a minimum of six times during the pre- and post-natal period, ideally through face-to-face conversations. In navigating care delivery during pandemic restrictions, interventions must be innovative yet appropriate. While online platforms create an opportunity for improved health support services, they also have the potential to further exacerbate inequities in rural and remote communities that lack high-speed internet connectivity. Furthermore, personal privacy concerns arise with internet-based video communication to provide real-time breastfeeding assistance and education. Robertson et al. (2020) advocate for routine public health services when possible during the global pandemic. The isolation of rural communities provides an advantage in its ability to control and trace rates of COVID-19. When permitted by public health officials, small-sized breastfeeding support groups should be encouraged.

Health care providers have a strong influence on a woman's decision to breastfeed when a supportive relationship is established, especially among young mothers in rural communities (Bonia et al., 2013; PHAC, 2019). Postpartum nurses within regional birthing centres have a unique opportunity to assist in navigating early and anticipated breastfeeding challenges before community discharge. Continued support for evidence-based tools in clinical settings, such as the Baby-Friendly Initiative, is necessary to optimize policies and practice that promote breastfeeding in the immediate postpartum period (WHO, 2018).

A knowledge gap exists in the literature regarding influencing factors for breastfeeding rates specific to NL rural communities. Similarly, a recent study in Nova Scotia investigating factors affecting Baby-Friendly Initiative uptake has recommended future research into breastfeeding barriers specific to rural districts (Lukeman et al., 2019). Data collection on breastfeeding rates and influencing factors during the COVID-19 pandemic is required to understand the potential health burden and necessary supports in rural settings in the future.

Conclusion

Best practice guidelines indicate breastfeeding protection, promotion, and support are essential in humanitarian emergencies, such as global pandemic (WHO, 2018). Societal norms and health support strongly influence breastfeeding for infant nutrition in NL (Bonia et al., 2013; Vieth et al., 2016). The COVID-19 pandemic creates barriers to positive influences of breastfeeding, particularly in rural communities, and further risks a decline in maternal and infant health in NL. It is critical that health providers and policymakers optimize opportunities to provide physical breastfeeding support in hospital and community settings moving forward (Lebel et al., 2020; WHO, 2018; Yoshikawa et al., 2020).

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References

- Antle, R. (2020). Dwight Ball warns of “economic crisis” looming after COVID-19 emergency. *CBC Newfoundland & Labrador*. <https://www.cbc.ca/news/canada/newfoundland-labrador/nl-dwight-ball-economic-crisis-covid-19-1.5512858>. Accessed 14 Oct 2020.
- Bonia, K., Twells, L., Halfyard, B., Ludlow, V., & Newhook, L. A. (2013). A qualitative study exploring factors associated with mothers decisions to formula-feed their infants in Newfoundland and Labrador, Canada. *BMC Public Health*, *13*, 1–9. <https://doi.org/10.1186/1471-2458-13-645>.
- Breastfeeding Committee for Canada. (2020). *Key messages: Infant feeding and COVID-19* [PDF]. <https://breastfeedingcanada.ca/wp-content/uploads/2020/06/Key-Messages-COVID-May-2020-1.pdf>. Accessed 14 Oct 2020.
- Lebel, C., MacKinnon, A., Bagshawe, M., Tomfohr-Madsen, L., & Giesbrecht, G. (2020). Elevated depression and anxiety symptoms among pregnant individuals during the COVID-19 pandemic. *Journal of Affective Disorders*, *277*, 5–13. <https://doi.org/10.1016/j.jad.2020.07.126>.
- Lukeman, S., Davies, B., McPherson, C., & Etowa, J. (2019). Understanding evidence-informed decision-making: A rural interorganizational breastfeeding network. *BMC Health Services Research*, *19*(337), 1–10. <https://doi.org/10.1186/s12913-019-4138-6>.
- Perinatal Program Newfoundland Labrador (PPNL). (2014). *A breastfeeding strategic plan for Newfoundland and Labrador 2014-2017*. <http://www.easternhealth.ca/Professionals.aspx?d=2&id=1981&p=1972>. Accessed 28 Sept 2020.
- Public Health Agency of Canada (PHAC). (2019). *Chapter 6: Breastfeeding [PDF]*. (Green, M., Chalmers, B., Hanvey, L., LeDrew, M., Menard, L. M., & Watters, N. E.). <https://www.canada.ca/content/dam/phac-aspc/documents/services/publications/healthy-living/maternity-newborn-care-guidelines-chapter-6/maternity-newborn-care-guidelines-chapter-6.pdf>. Accessed 28 Sept 2020.
- Roberton, T., Carter, E. D., Chou, V. B., Stegmuller, A. R., Jackson, B. D., Tam, Y., Sawadogo-Lewis, T., & Walker, N. (2020). Early estimates of the indirect effects of the COVID-19 pandemic on maternal and child mortality in low-income and middle-income countries: A modelling study. *The Lancet*, *8*, e901–e908. [https://doi.org/10.1016/S2214-109X\(20\)30229-1](https://doi.org/10.1016/S2214-109X(20)30229-1).
- Sankar, M. J., Sinha, B., Chowdhury, R., Bhandari, N., Taneja, S., Jose, M., & Bahl, R. (2015). Optimal breastfeeding practices and infant and child mortality: A systematic review and met analysis. *Acta Paediatrica*, *104*, 3–13. <https://doi.org/10.1111/apa.13147>.
- Taylor, A., Chowdhury, S., Gao, Z., Nguyen, H. V., Midodzi, W., Gill, N., Halfyard, B., Newhook, L. A., & Twells, L. (2020). Infant feeding mode predicts the costs of healthcare services in one region of Canada: A data linkage pilot study. *BMC Research Notes*, *13*(385), 1–6. <https://doi.org/10.1186/s13104-020-05228-6>.
- Vieth, A., Woodrow, J., Murphy-Goodridge, J., O’Neil, C., & Roebothan, B. (2016). The ability of posters to enhance the comfort level with breastfeeding in a public venue in rural Newfoundland and Labrador. *Journal of Human Lactation*, *32*(1), 174–181. <https://doi.org/10.1177/0890334415593944>.
- World Health Organization (WHO). (2018). *Guideline: Counselling of women to improve breastfeeding practices*. <https://www.who.int/nutrition/publications/guidelines/counselling-women-improve-bf-practices/en/>. Accessed 1 Oct 2020.
- World Health Organization (WHO). (2020). *Breastfeeding and COVID-19: Scientific brief*. <https://www.who.int/news-room/commentaries/detail/breastfeeding-and-covid-19>. Accessed 1 Oct 2020.
- Yoshikawa, H., Wuermli, A. J., Britto, P. R., Dreyer, B., Leckman, J. F., Lye, S. J., Ponguata, L. A., Richter, L. M., & Stein, A. (2020). Effects of the global coronavirus disease-2019 pandemic on early childhood development: Short and long-term risks and mitigating program and policy action. *Journal of Pediatrics*, *223*, 188–193. <https://doi.org/10.1016/j.jpeds.2020.05.020>.

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