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Title	The organization of primary health care services for those with chronic disease across Newfoundland and Labrador: a descriptive analysis of publicly funded service provision
Authors	R. Buote BSc MSc, S. Asghari MD PhD, K. Aubrey-Bassler MSc MD, J.C. Knight PhD, J. Lukewich RN PhD
Reviewer 1	Fatoumata Korika Tounkara
Institution	Research Chair in Emergency Medicine, Université Laval CHAU — Hôtel-Dieu de Lévis, Lévis, Que.
General comments (author response in bold)	The background presented represent the current knowledge of the fields. However, there is little information about the rural populations. Yet, these populations need more effective primary health care. **Thank you for this suggestion. Although we shortened the background section we added some detail about the rurality of Newfoundland and Labrador. Page 3, line 14 to page 4, line 1 now read: "National studies have indicated inequities in care between urban and rural areas, with rural regions of the country reporting lower likelihood of accessing health care services, attributed to greater barriers accessing care (e.g., travel times, greater cost) (15,16). As a result, Canadians living in rural areas are more likely to report poorer health outcomes than their urban counterparts. Given that approximately 50% of people in Newfoundland and Labrador reside in a rural community (17), it is important to examine the primary health care attributes for populations living in different geographical settings. Although one study conducted in Western Newfoundland has indicated difficulties with individuals accessing primary health care services (18), to this point no study has established the availability and nature of primary health care services across the province as a whole."** No, the research question is not clear enough. Please, give more precision. **We have re-worded the study aim to make it more specific (see above). "Therefore, the aim of this study is to describe the availability of primary health care programs and services provided by regional health authorities across Newfoundland and Labrador. Specifically, the objectives of this study are: (1) To describe the availability of primary health care programs and services for chronic diseases provided by regional health authorities across Newfoundland and Labrador, and (2) To examine differences in the nature of programs and services for chronic diseases provided by regional health authorities available in urban and rural regions of Newfoundland and Labrador."** Please remove procedure section before variable section. **We have removed the subheading "Procedure". However, information contained in this section aligns with items on the CHERRIES checklist and has been kept in the manuscript.** The results are reasonable and surprising. Indeed, in interpretation section line 17 to 18, authors confirm that « Findings indicate that rural PHC sites in NL offer a greater variety of services as compared to sites in urban areas ». This is probably because most of study participant were from rural areas. Urban respondents were underrepresented. **The findings of this study represent Regional Health Authority funded primary health care sites in Newfoundland and Labrador, in which there are more rural sites than urban sites. Publicly funded urban sites are not underrepresented, just fewer in number in comparison to publicly funded rural sites.** Partially, the study does not evaluate the accessibility of services. As consequence, it is difficult to know which services are available in rural vs urban areas. **Thank you for this comment. You are correct in stating that this study does not evaluate the accessibility of services, only whether sites deliver the services in question (i.e. availability of services). We hope that in future studies we can examine the degree to which these services are offered and accessed, as well as other patient and provider-level descriptors, to determine how accessible and effective these services are to patients across the province.**
Reviewer 2	Erin Wilson
Institution	School of Nursing, University of Northern British Columbia, Prince George, BC
General comments (author response in bold)	Your objective is to "characterize the attributes of PHC in NL" (p. 4), however this objective is not met. You outline services that are provided but you neither define the attributes or go on to characterize them in the paper. For example, you might see Haggerty et al 2007): https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1934980/ **Thank you for identifying this important distinction. The aim of this study was to describe the availability of primary health care programs and services across Newfoundland and Labrador. The questionnaire did not collect enough detail to allow us to truly characterize the attributes of primary health services, therefore, this language has been removed from the paper. This is the first known study in Newfoundland and Labrador to describe primary health care services at a provincial-level. Future exploration and characterization of organizational attributes is warranted.** You describe how settings are identified but is there rationale for how these settings were selected? For example, how CIHI defines PC / PHC settings? Further, how did you conduct your analysis to reflect which services might be appropriate for each setting? For example, if a setting is a location offering only mental health care (p. 4 line 21), did you analyze the data with this in mind - that the site likely would not be doing colorectal screening or prenatal care etc? **The decision as to which sites were primary health care sites was made by the Working Group established by the Newfoundland Centre for Health Information Their definition of primary health care appears on Page 4, lines 17-19: "A primary health care site was defined as any location that offered primary health care services (e.g. primary care, community support centres, mental health care)."** **Primary health care is generally recognized as a broad concept, encompassing many services. CIHI describes primary health care as "an important source of chronic disease prevention and management" including care such as "mental health care, maternity and child care, psychosocial services, health promotion and disease prevention, nutrition counselling, and end-of-life care." The definition used in this study aligns the CIHI definition of primary health care.** **To address the second part of your comment, we agree that this would be a useful analysis to perform. Unfortunately, the questionnaire did not collect data necessary to perform such an analysis (e.g., number/type of health care providers on-site). We hope to contextualize these findings in future studies by acquiring and examining other sources of data (e.g. health human resource data).** What was the relationship between the Chair of the PHC Review Working Group and the selected respondents who had the survey emailed to them? Is the PHCRWG run by the health authority? Would respondents have felt obligated to respond? Do the respondents have a robust understanding of the day-to-day clinical work and are on-site themselves?

	This comment aligns with comment #11 from the editor regarding composition and establishment of the working group. We have clarified the composition of the working group on Page 4, line 23 - Page 5 line 5. This section now reads: "This survey was administered by the Newfoundland and Labrador Centre for Health Information with the goal of identifying primary health care services offered across the province. To develop the questionnaire, a working group was established by the Newfoundland and Labrador Centre for Health Information. This working group was chaired by an employee of the Newfoundland and Labrador Centre for Health Information and consisted of two members from each provincial regional health authority who were employed at the primary health care management-level and an additional representative from the Newfoundland and Labrador Department of Health and Community Services." **To elaborate, the Chair of the Working Group did not have an existing relationship with the selected survey respondents. The Chair selected members from the Regional Health Authorities to be members for the Working Group to facilitate connections with primary health care sites across the province. The Regional Health Authority representatives on the Working Group had existing professional relationships with the survey respondents. Committee members were responsible for selecting individuals from primary health care sites who had knowledge of the primary health care site and the day-to-day clinical work (i.e. availability of programs/services), and who could most accurately complete the survey. The Working Group was led by an employee of the Newfoundland and Labrador Centre for Health Information.** Could you provide wording or some overview of how the 21 questions were organized? It is a problem that the tool does not sound very robust. For example, it is important to know whether the questions asked if the services are available vs are the services offered / delivered. There may be a disconnect in saying, for example, that tobacco cessation services are available if there is a nurse or information / supplies on site, vs a program running and whether patients have to ask for this service vs clinicians proactively offering it. **To address this important comment, we have modified the description of the questionnaire within the methods section and added details to the limitations section. Page 5, lines 6-13 reads: "The survey questionnaire consisted of 21 questions, distributed across 13 pages. Responses to items on the questionnaire were categorical. For each program or service, respondents could indicate whether it was 'not delivered' or offered by 'on-site personnel', 'a visiting health care professional', or 'telehealth'. Respondents could choose all delivery modes that applied, although responses were not mandatory. If a program or service was delivered by any mode, it was coded as "Delivered". The survey was reviewed in detail by all members of the Primary Health Care Review Working Group for content and clarity and to ensure that the questions would have meaning for respondents within each regional health authority across the province."** **Additionally, page 10, line 21 to page 11, line 1 reads: "The questionnaire used in this study asked participants to indicate whether the service was delivered at the site (yes/no) and the mode of delivery. Data do not indicate whether the services are regularly accessed by patients or how health care professionals are offering services to their patients. Future studies should examine whether patients are aware of these services, whether they are accessible and how frequently services are accessed."** A bit more description of what rural health services in NL from a policy perspective would be helpful. Has the province made any recent changes in adding services or team members? Does the province define rural the same way you defined it for your study? What are the strategic priorities for health in NL at this time? Is it improved CDM, or increased utilization of telehealth or ... ? **We appreciate this important comment. There is very limited information available about the landscape of primary health care services in Newfoundland and Labrador, both in urban and rural settings. This study addressed this gap in the literature. With respect to policy, in 2017, Newfoundland and Labrador Department of Health and Community Services released their strategic plan for 2017-2020. This plan outlined five priorities which included improving primary health care services and generating evidence to improve health care delivery.** **The definition of "rural" that we have used in this manuscript is one commonly cited by Statistics Canada. We have added this on Page 6, lines 20-21, which read "This definition was developed by Statistics Canada and allows for national comparisons of study results." Our rationale for this choice was that it is a standard definition that will allow for a comparison across studies conducted in other provinces/territories.** The discussion could be richer. For example, to consider the disconnect between services offered and poor health, is it worth discussing that screening services may be offered, but then patients have to travel for the next step, e.g. colonoscopy? **We agree that this would be worth discussing, although it is outside the scope of this study. Indeed, patients in the province may need to travel for their treatment but this survey did not capture patient experiences. We hope that future studies could examine this question.** One finding I thought surprising was how many sites had nutritional counselling and OT. Why might this be? **This finding is peculiar but certainly interesting. It may be due to the fact that among Canadian provinces, Newfoundland and Labrador report some of the poorest health behaviours, such as lowest rate of fruit and vegetable consumption and the highest rates of smoking and drinking along with the highest average age. These factors may have created a greater need for nutritional counselling and OT services. Regardless, this is the first study that documents this and we hope to better contextualize this in future studies.** On p. 10 line 7 you say that GPs are more likely to work in urban settings and this may account for some of the disparity: There is an embedded assumption here that is unclear. Do you mean that MDs working in urban FFS are likely providing many of the services that are not being included in urban PHC settings? **We have clarified the limitations section on page 10, lines 14-17 to address this comment. This section now reads: "This study included all regional health authority funded primary health care sites. Services offered by non-regional health authority-funded employees, such as fee-for-service physicians, were not included. Fee-for-service physicians are more likely to work in urban Newfoundland and Labrador and it is very uncommon for these physicians to offer allied health services from their offices."** Lastly, you mention that telehealth is used for specialist CDM but remains underutilized. What other services would be suited for telehealth delivery? What could you recommend? Is there lit to help identify reasons for under-utilization in NL? For example, could it be staff time or turnover resulting in lack of education or comfort with the technology? Is it a lack of providing sites to offer services to rural settings vs issues on the receiving site side? **The use of telehealth in Newfoundland and Labrador has increased, but data on services offered through this mode are unavailable. Recent reports have shown the overall usage of telehealth has increased, but in Newfoundland and Labrador, educational sessions make up a small percentage of appointments. We have**

	identified self-management and education as a service that would be suited for telehealth delivery. This appears on page 9, lines 2-4, which now read: "Primary health care services, such as self-management and education, and routine primary care services, such as family physician or nurse practitioner services could be made more widely available through telehealth." Lastly, if you were able to connect any service utilization data with this data, it would provide a much clearer picture to help explain some of your findings. If you're unable to do this easily, provide some rationale: for example, how many health authority sites (not FFS) are using EMRs? What is or is not available on provincial platforms beyond the data sources you mention on p. 9 line 14/15? **We are exploring the linkage of this survey data with some of the data sources listed in the manuscript (e.g., Canadian Chronic Disease Surveillance System, Chronic Disease Registries). As expected, due to the complexity of existing data sources, it is not surprising that we are encountering challenges. Regardless, this is our interest and focus for future research. In terms of EMR use, although exact numbers are not known, uptake is relatively low. A recent report from the Newfoundland and Labrador Centre for Health Information indicates that 156 physicians in the province are using EMRs, representing nearly 100,000 patients. This represents less than 20% of the population and is not specific to primary health care settings. We are interested in linking utilization data, but expect to face challenges. We will explore this in future studies.**