A Critical Look at a Nascent Field

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ABSTRACT

A broad coalition of partners, entitled PHIRIC (Population Health Intervention Research Initiative for Canada), are working to increase the amount/quality of population health intervention research (PHIR) in our country. A central theme is to advance the science in this area. The current CJPH Supplement is welcomed as a set of diverse studies done to further our understanding of PHIR. The papers illustrate the range of questions that can be addressed and the variety of methods that need to be utilized. There is a need for critical reflection on three questions: 1) what constitutes PHIR? 2) which intervention parameters can be researched? and 3) what methods are recognized by the research community? Although legitimate attempts to define PHIR exist, the boundaries remain elusive. (Even the choice of articles in the current Supplement might be questioned.) It has cogently been argued that 'true' public health interventions intend to change risk conditions and alter distributions of health risk. This commentary suggests an important amendment to prior evaluation questions in stating that PHIR must pay attention to how intervention outcomes are distributed. There are also questions inherent in assessing the equity and distribution of an outcome. The bottom line is that we need to spread the word: more research is needed.

La traduction du résumé se trouve à la fin de l'article.

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Since 2006, a broad coalition of partners from organizations involved in health policy and programs, social and health research and the diffusion of scientific knowledge has been implementing a work plan to increase the amount and quality of population health intervention research (PHIR).¹ One of the important items on this work plan is to advance the science of PHIR.² As a founding member of this coalition, PHIRIC (Population Health Intervention Research Initiative for Canada), I welcome the publication of this special issue of the CJPH that reports on nine studies undertaken to further our understanding of population health interventions. Not only do the papers presented here illustrate the wide range of interventions, in the form of policies and programs that are created and implemented to improve population health, but they also exemplify the diversity and richness of the research questions that can legitimately be addressed to interventions and consequently the variety of research methods that need to be utilized to provide valid answers to those questions. In developing the science of PHIR, inevitably we will have to critically reflect on those three issues that are basic to all sciences: 1) what constitutes a proper object for our field, i.e., what is a population health intervention? 2) Which intervention parameters can legitimately be researched? and 3) What methods are recognized as valid by the community of population health intervention researchers? It is certainly not the role of a special issue like this one to provide definitive answers to those questions; however, it can and should contribute to this reflection.

Population health intervention has been defined as a "policy or program, within or outside of the health sector that has the potential to impact health at the population level".³ Whereas this definition clearly identifies a policy such as water fluoridation (as in McLaren and Herbert's article⁴) as a receivable object for PHIR because it aims at changing the exposure of the whole population

to a protective factor in oral health, it also casts some doubts about other interventions that were selected for this special issue. For example, is a home visiting nursing program⁵ a population intervention or is it a nursing preventive practice that takes place in a community? Is it because this largely "social" practice of health professionals takes place outside of the medical setting that it can be qualified as "population"? I would argue that many interventions are difficult to classify, especially those that are dealing with preventive medical services. In reference to Rose,⁶ Hawe and Potvin⁷ insisted that a population health intervention "intend[s] to change the conditions of risk in order to alter the distribution of health risk". Contrary to the argument made by Jack and colleagues,⁵ I do not believe that the program of interest in their paper is a population health intervention, as it will not affect the distribution of health risk in the population. I acknowledge however that there is an overlapping zone between PHIR and medical care/health services research. To the extent that the research question deals with issues that are related to the delivery and access to specific groups in a population, an argument could certainly be made about the relevance of this type of study for a science of population health intervention.

Concerning the types of questions that are acceptable for a population health intervention science, Hawe and Potvin⁷ listed a series of evaluation questions that appeared relevant to guide enquiries on population health interventions. An important amendment needs to be made to this list. As exemplified in a couple of the papers published in this issue, PHIR pays particular attention to how the intervention outcomes are distributed in a population. Whereas this concern could be addressed under the generic issue of

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outcome evaluation, I believe that PHIR has much to gain if it were to champion the idea that outcome distribution across the whole population matters. There are a number of difficult methodological questions associated with assessing the equity of an intervention's outcome distribution⁸ and PHIR should lead methodological development with regard to those questions.

Finally, it should be clear after having read the collection of papers presented in this special issue that, as a multidisciplinary endeavour, PHIR welcomes a diversity of methods. I believe that there are many more acceptable methods for PHIR than what was published here. Synthetic review, for example, although much more complex to implement when dealing with population health interventions than when assessing clinical interventions, is a very powerful methodology to synthesize knowledge about specific interventions and families of interventions. There is a need for serious methodological development that will provide guidelines for dealing with implementation variations in population health interventions.

The science of PHIR is still young. There is so much more to be known about population health interventions than the knowledge cumulated to date. That such knowledge is critical for public health practice should be obvious by now. We need to spread the word: more research is needed!

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RÉSUMÉ

Une large coalition de partenaires appelée l'IRISPC (Initiative de recherche interventionnelle en santé des populations du Canada) travaille à accroître la quantité et la qualité de la recherche interventionnelle en santé des populations (RISP) au pays. L'un de ses thèmes centraux est de faire progresser la science dans ce domaine. Le présent supplément à la *Revue canadienne de santé publique* est le bienvenu, car on y publie diverses études qui améliorent notre compréhension de la RISP. Les articles illustrent la gamme de questions que l'on peut aborder et la diversité des méthodes que l'on peut employer. Il faut réfléchir de façon critique à trois questions : 1) qu'est-ce que la RISP? 2) quels paramètres d'intervention peut-on étudier? et 3) quelles sont les méthodes reconnues dans le monde de la recherche? Bien qu'il existe des tentatives légitimes de définir la RISP, ses frontières demeurent floues. (Même le choix des articles pour ce supplément peut être mis en question.) Certains ont fait valoir de façon convaincante que les « vraies » interventions de santé publique ont pour intention de changer les conditions de risque sanitaire et d'en modifier la répartition. Dans ce commentaire, nous proposons d'apporter une modification importante aux questions d'évaluation antérieures, en énonçant que la RISP doit s'intéresser à la répartition des résultats d'une intervention. Il y a aussi des questions inhérentes à l'évaluation de l'équité et de la répartition d'un résultat. Pour l'essentiel, nous devons faire passer ce message : il est nécessaire de poursuivre la recherche.