

## A B S T R A C T

Despite its undeniable currency in research and policy circles, there remains considerable confusion about what 'population health' is. We propose a lexicon for population health in the hope of clarifying issues and advancing this important research emphasis and policy agenda. It distinguishes population health in its literal meaning from a population health perspective, population health research, a population health framework, and a population health approach to policy. Population health is more than just thinking in aggregate terms or about identifying vulnerable or at-risk subpopulations. A population health perspective is fundamentally concerned with the social nature of health influences. The social structures that shape health experiences transcend the characteristics or actions of any one individual, providing population health with analytic advantages over individualistic-oriented approaches to health and to health policy.

## A B R É G É

Malgré son indéniable popularité dans les milieux de la recherche et de la politique, ce qu'est la « santé de la population » reste très confus. Nous proposons un lexique sur la santé de la population dans l'espoir de clarifier les questions et faire avancer cet important sujet d'intérêt en recherche et dans l'agenda politique. Il distingue santé de la population, dans sa signification littérale, de perspective en santé de la population, recherche en santé de la population, cadre d'analyse en santé de la population et approche de recherche et politique en santé de la population. La santé de la population signifie plus que réfléchir en termes agrégés ou qu'identifier les populations vulnérables ou à risque. Une perspective en santé de la population est fondamentalement concernée par la nature sociale des influences sur la santé. Les structures sociales définissant les expériences de santé transcendent les caractéristiques ou actions de tout individu, procurant à la santé de la population des avantages analytiques sur les approches individualistes de la santé et des politiques de santé.

# Toward a Lexicon of Population Health

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Population health has become an important direction for social and health policy in Canada, yet there remains considerable confusion about what 'population health' is. The background paper for the conference from which this special issue has emerged identifies at least four different 'population health frameworks' in its appendices.<sup>1</sup> We propose a lexicon for population health in the hope of clarifying issues to advance this important agenda. It distinguishes population health in its literal meaning from a population health perspective, population health research, a population health framework, and a population health approach to policy. A population health perspective involves more than just thinking in aggregate terms or identifying vulnerable or at-risk subpopulations. It provides analytical advantages over individualistic-oriented approaches to health for explaining overall health status attainment of populations and the extent of health inequalities within and between them. 'Doing' population health may mean something very different from 'doing' health promotion or health education. A population health perspective is fundamentally concerned with the social structural nature of health influences, and, although it is embodied in the health outcomes experienced by specific individuals, the domains

of influence that shape health experiences transcend the characteristics or circumstances of any one individual.

### Perspective, Research, Framework, Approach: A lexicon of population health

The expression "population health" can refer to many kinds of activity, as the definition adopted by the Federal/Provincial/Territorial Advisory Committee on Population Health illustrates:

Population health refers to the health of a population as measured by health status indicators and as influenced by social, economic and physical environments, personal health practices, individual capacity and coping skills, human biology, early childhood development, and health services.

As an approach, population health focuses on the interrelated conditions and factors that influence the health of populations over the life course, identifies systematic variations in their patterns of occurrence, and applies the resulting knowledge to develop and implement policies and actions to improve the health and well-being of those populations.<sup>2</sup>

Three distinct types of activity are implied within this description: the generation of empirical research; integration of this research into an understanding of social processes that would account for the systematic nature of observations about population health status – a theoretical framework; and the application of this knowledge through public policy in the service of the common weal. Within health research, however, others limit the use of

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the phrase to refer to ‘the health of a population in the aggregate’ without any necessary policy connections or distinction between research and theoretical framework.<sup>3-6</sup>

Recent critiques of population health<sup>7-11</sup> raise concerns about the analysis presented in the defining papers on population health,<sup>12,13</sup> and/or about its purpose, intent and uptake as a conception for public policy. In light of the multiple meanings and activities subsumed by the phrase “population health”, and a desire to clarify some of the confusion that permeates the discourse, it may be useful to distinguish between a population health *perspective*, population health *research*, a population health *framework*, and a population health *approach* to public policy.

The phrase “population health *perspective*” could be used to refer to the population health discourse in its most general sense. The term *perspective* would then act as an umbrella term for the other three. The distinction between research and framework has always been somewhat ambiguous in the academic lexicon. In the central source document for population health in Canada, *Why Are Some People Healthy and Others Not?*,<sup>13</sup> for example, the book’s stated purpose is to report and analyze a set of ‘anomalous findings’ from the research literature. The editors are careful to make very modest claims. They present the book as an analysis of a series of large-scale observations about human and quasi-human (primate) populations. Somewhat paradoxically, the editors argue that the collective set of observations signals a ‘paradigm shift’ in health research and policy even though the analysis presented is acknowledged to be incomplete.

Though compelling, the analysis is a complex one. The persistent and consistent gradients in health status found between social groups in virtually all industrialized countries of the world, largely independent of any particular disease process, are associated primarily with social-structural influences – the availability and organization of work, one’s social networks, early childhood development and experience, the extent of economic disparities, the physical environment, and health care services. The contribution of health care or lifestyle fac-

tors by themselves is insufficient to account for health gradients, which appear to be most fundamentally shaped by the interaction of social-structural inequalities and individual response.

The CIAR book presents and discusses a wide range of research findings, which stimulates the observation that something must be going on which would account for the consistent and persistent social gradients. But the explanation of what that something is is not well developed in the book. The CIAR book was crucial to creating the conditions for developing such an explanation, even though the “framework” (presented as figure 2.5 in the book<sup>13</sup> and Figure 5 in Evans and Stoddart<sup>12</sup>) is not sufficiently supported by an integrated analysis of *how* the pieces of the model fit together in the context of a lived life.

Since the book’s publication, the analysis has continued to be developed by the CIAR and others through such publications as the *Dædalus* issue on health and wealth,<sup>14</sup> *Society and Health*,<sup>15</sup> *Health and Social Organization*,<sup>16</sup> and Wilkinson’s *Unhealthy Societies*.<sup>17</sup> Through the course of these publications a population health framework *has* emerged, as evidenced particularly in the last publication. Wilkinson’s book attempts to integrate empirical and social/theoretical dimensions of the analysis into a coherent explanation for the observed social gradients, drawing from the same body of evidence as the CIAR. His objective is to provide a framework. Specifically, he develops the twin dimensions of materiality and meaning: the material resources we possess (material circumstances *per se* – our bodies, incomes, shelters, etc.) and the ways we understand our being in the world (as he puts it, the social meanings attached to our material circumstances, how we feel about our material circumstances, and ultimately about ourselves). Wilkinson’s framework makes an important contribution to the ongoing analysis of population health.

A problem in understanding what is meant by “population health” arises from its evolutionary nature. The academic analysis continues to develop but it is difficult for the consuming public to keep up with nuances of its development. The core of the analysis (itself a fuzzy conception)

unfolds over time differentially across space and is influenced by many situational circumstances: understandings of key leaders in local communities and their abilities to influence local policy and popular opinion of what population health means; the position of those influential individuals within the overall spectrum of activities in the health sphere; entrenched power interests and their roles in perpetuating the status quo in any particular location; the cultural ethos of specific jurisdictions; physical distance; etc. One reason for distinguishing between *research* and *framework* is, in part at least, to try to deal with the evolutionary problem.

Collection of empirical observations (research) and integration of these into a coherent analysis (integrated framework) of population health can be distinguished from the application of this knowledge in service of public policy; i.e., a population health *approach* to policy. Many issues regarding popular beliefs, cultural expectations, ideological positions, power and authority permeate and mediate the translation process between knowledge and action. We believe that separating these three domains – research, framework and approach to policy – and developing a consistent vocabulary to describe them, will afford the opportunity to clarify some of the confusion surrounding population health.

#### Population health: What is its analytic advantage?

Another reason why we feel our lexicon may be useful concerns the analytic advantage provided by a population health perspective. To adopt a population health perspective implies an interest in the *social production of health* and the *structure of social relations* that pertain in specific settings at specific times. The town of Roseto, Pennsylvania, for example, had heart disease rates more than 40% lower than neighbouring towns for decades in the middle part of this century. The difference could not be attributed to factors like smoking, diet, exercise, etc. as these were similar in neighbouring towns. Rather, the town possessed a number of features of social organization that are believed to have protected it: an egalitarian social

ethos, norms which frowned upon ostentatious displays of wealth, an ethic of civic participation, and an overwhelming and universal confidence among its members that should tragic circumstances befall them, they would be 'looked after' by others in the community. Of course we must be careful not to overly romanticize Roseto, as there were certain unique circumstances that made some dimensions of its structure of social relations difficult to reproduce. It was a small community whose residents were descendants of a mass migration from Roseto, Italy, who may have had a vivid recognition of their shared history, culture and social connection. Nevertheless, when juxtaposed against other 'natural experiments' known to researchers, the structure of social relations as an 'explanation' for health inequalities becomes a compelling case.<sup>18-20</sup>

The unprecedented rise in life expectancy seen in the civilian population in Britain during both of the world wars (upwards of six years compared to roughly two years in all other decades of this century) has also been attributed to specific social factors. These include: the explicit policy of reducing middle class wages and raising working class wages and ensuring full employment. The effect of these policies was that the labour of traditionally disempowered groups like women and working class labourers was highly valued, both monetarily and morally.<sup>17</sup>

Population characteristics of geographical areas (of varying scales) can exert effects on individual health and health behaviours, independently of individual characteristics and attributes. There are 'emergent properties' of particular kinds of population attributes or 'contextual effects,' that have the capacity to independently influence health directly, and/or health risk behaviours, such as smoking.<sup>21</sup> Socio-economic attributes of populations (e.g., deprivation, income disparities, economic segregation) at varying geographical scales (neighbourhood/community, state/province, national) have been shown to be related to a wide variety of health outcomes.<sup>17,22-33</sup> Particularly interesting are those socio-economic indicators that are truly population attributes, like income distribution and economic segregation, which vividly

illustrate the notion of 'emergent properties'. Individuals do not have income distributions and segregation indices, only populations do.<sup>17</sup> One of the challenges of a population health perspective is to better understand how these population attributes are indicators of the structure of social relations that obtain in particular places, how these are related to health, and what the consequences are for public policy.

Sayer<sup>34</sup> claims that "patterns of events, be they regular or irregular, *are not self-explanatory, but must be explained by reference to what produces them*" (p. 122, emphasis added). Such a view of 'explanation' suggests that our concerns need to be directed to what produces inequality and the pathways and mechanisms by which it is related to the differential distribution of health (see also refs. 35, 36). Attention ought also to be directed to differences in the experience of ordinary, everyday life for people at different points in the social spectrum, and again the structures of social relations that produce those conditions. For example, living in a neighbourhood with limited housing opportunities, a low tax base but high social needs, few connections to sources of power and influence outside the neighbourhood, a lack of job opportunities, poor schools, etc., must be analyzed for the influence on the health of individuals living in those conditions, but also must be understood as the product of a specific structure of social relations.

## DISCUSSION

A population health framework situates the importance of social relations centre-stage. Social structure is recognized as a crucial factor in shaping health and well-being, which moves the focus of discussion away from obsession with individual biology and/or personal choice. In exposing the limitations of interventions aimed principally at this level, the framework throws into relief the importance of examining, improving and expanding our understanding of social relations in space-time. Many dimensions of social relations are simultaneously involved in shaping our health experience – global capitalism, gender, ethnicity, religion, identity, power, housing, telecommunications, etc. – topics that have

been traditionally treated as numerical variables, acknowledged as important without explication as to how or why they are so, or ignored altogether within health research.

The theoretical framework we identify in Wilkinson's work<sup>17</sup> need not be the only possible framework, but it is currently the only one that explicitly grapples with the entire weight of evidence assembled within the population health perspective. And it, too, deserves critical scrutiny.<sup>37</sup> There is an important qualitative difference between "anomalous findings" and an integrated framework, recognition of which might help to clarify understanding and lead to improved social welfare policy. As is often claimed, cross-sectoral collaboration between government ministries and departments is required, but to date, there are few widely known, successful examples of such efforts – responsibility for health still lies within ministries of health. In short, we lack an integrated population health policy framework. Of course population health prompts many more policy challenges as well. Among them is that a relative lack of public currency and understanding of a population health perspective provides precious little political motivation or public appetite for developing an integrated policy framework dedicated to promoting just and equitable social relations. We hope that this paper will be a useful contribution towards such an understanding.

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## REFERENCES

1. Frankish J, Veenstra G, Moulton G. Population Health in Canada: A Working Paper. Prepared for the National Conference on Shared Responsibility for Health and Social Impact

- Assessments by The Institute of Health Promotion Research, University of British Columbia, Vancouver, BC, April 1999.
2. Health Canada. Press release by the Federal, Provincial and Territorial Advisory Committee on Population Health, January 1997.
  3. Green LW. Refocusing health care systems to address both individual care and population health. *Clin Invest Med* 1994;17(2):133-41.
  4. Saunders LD, Wanke MI, Noseworthy TW, Shores SJ. Identification and Assessment of the Current Status of Population Health Research in Canada and Identified Countries. Report prepared for the Federal, Provincial and Territorial Advisory Committee on Population Health, Health Canada, 1996.
  5. Dean K (Ed.). *Population Health Research: Linking Theory and Methods*. London: Sage Publications, 1994.
  6. Anonymous. Population health looking upstream. *Lancet* 1993;343(8895):429-30.
  7. Hayes MV, Foster LT, Foster HD. *The Determinants of Population Health: A Critical Assessment*. Victoria: University of Victoria, Western Geographical Series No. 29, 1994.
  8. Labonte R. Population health and health promotion: What do they have to say to each other? *Can J Public Health* 1995;86(3):165-68.
  9. Coburn D, Poland B, Eakin J, et al. The CIAR vision of the determinants of health: A critique. *Can J Public Health* 1996;87(5):308-10.
  10. Poland B, Coburn D, Eakin J, et al. Wealth, equity and health care: A critique of a 'population health' perspective on the determinants of health. *Soc Sci Med* 1998;46(7):785-98.
  11. Love R, Jackson L, Edwards R, Pederson A. Gender and its Relationship with Other Determinants of Health. Paper presented at the Fifth Health Promotion Research Conference, Dalhousie University, Halifax, Nova Scotia, July 4-5, 1997.
  12. Evans RG, Stoddart GL. Producing health, consuming health care. *Soc Sci Med* 1990;31(12):1347-63.
  13. Evans RG, Barer ML, Marmor TR (Eds.). *Why Are Some People Healthy and Others Not?* New York: Aldine De Gruyter, 1994.
  14. *Daedalus, Journal of the American Academy of Arts and Sciences*, 1994;123(4). Theme issue: 'Health and Wealth'.
  15. Amick BC, Levine S, Tarlov AR, Walsh DC (Eds.). *Society and Health*. New York: Oxford University Press, 1995.
  16. Blane D, Brunner E, Wilkinson R (Eds.). *Health and Social Organization*. London: Routledge, 1996.
  17. Wilkinson RG. *Unhealthy Societies: The Afflictions of Inequality*. New York: Routledge, 1996.
  18. Egolf B, Lasker J, Wolf S, Potvin L. The Roseto effect: A 50-year comparison of mortality rates. *Am J Public Health* 1992;82(8):1089-92.
  19. Lasker JN, Egolf BP, Wolf S. Community social change and mortality. *Soc Sci Med* 1994;39(1):53-62.
  20. Wolf S, Bruhn JG. *The Power of Clan: The Influence of Human Relationships on Heart Disease*. New Brunswick, NJ: Transaction Publishers, 1993.
  21. Duncan C, Jones K, Moon G. Smoking and deprivation: Are there neighbourhood effects? *Soc Sci Med* 1999;48(4):497-505.
  22. Anderson RT, Sorlie P, Backlund E, et al. Mortality effects of community socioeconomic status. *Epidemiology* 1996;8:42-47.
  23. Brooks-Gunn J, Duncan GJ, Aber JL. *Neighborhood Poverty: Context and Consequences For Children*. New York: Russell Sage Foundation, 1998.
  24. Diez-Roux AV, Nieto FJ, Muntaner C, et al. Neighborhood environments and coronary heart disease: A multilevel analysis. *Am J Epidemiol* 1997;146(1):48-63.
  25. Duncan C, Jones K. Individuals and their ecologies: Analysing the geography of chronic illness within a multi-level modeling framework. *Health and Place* 1995;1(1):27-40.
  26. Haynes R, Bentham G, Lovett A, Eimermann J. Effect of labour market conditions on reporting of limiting long term illness and permanent sickness in England and Wales. *J Epidemiol Community Health* 1997;51:283-88.
  27. Kennedy BP, Kawachi I, Glass R, Prothrow-Stith D. Income distribution, socioeconomic status, and self-rated health in the United States: Multilevel analysis. *Br Med J* 1998;317:917-21.
  28. Lynch JW, Kaplan GA, Pamuk E, et al. Income inequality and mortality in metropolitan areas of the United States. *Am J Public Health* 1998;88(7):1074-80.
  29. Kaplan GA. People and places: Contrasting perspectives on the association between social class and health. *Int J Health Services* 1996;26(3):507-19.
  30. Phillimore P, Morris D. Discrepant legacies: Premature mortality in two industrial towns. *Soc Sci Med* 1991;33(2):139-52.
  31. Waitzman NJ, Smith KR. Separate but lethal: The effects of economic segregation on mortality in metropolitan America. *The Milbank Quarterly* 1998;76(3):341-73.
  32. Wilkinson RG. The epidemiological transition: From material scarcity to social disadvantage? *Daedalus* 1994;123(4):61-78.
  33. Yen IH, Kaplan G. Poverty area residence and changes in depression and perceived health status: Evidence from the Alameda County Study. *Int J Epidemiol* 1999;28:90-94.
  34. Sayer A. *Method in Social Science: A Realist Approach* 2nd ed. London: Routledge, 1992.
  35. Lynch J, Kaplan G. Understanding how inequality in the distribution of income affects health. *J Health Psych* 1997;2(3):297-314.
  36. Macintyre S. The Black Report and beyond: What are the issues? *Soc Sci Med* 1997;44(6):723-45.
  37. Muntaner C, Lynch JW. Income inequality and social cohesion versus class relations: A critique of Wilkinson's neo-Durkheimian research program. *Int J Health Services* 1998;29:59-81.