Routledge
Taylor & Francis Group

Journal of Environmental Planning and Management

ISSN: 0964-0568 (Print) 1360-0559 (Online) Journal homepage: http://www.tandfonline.com/loi/cjep20

Partnerships and governance at the environment–health nexus in Ontario: lessons from five case examples

Zee Leung, Karen Morrison & Dean Midleton

To cite this article: Zee Leung, Karen Morrison & Dean Midleton (2015): Partnerships and governance at the environment–health nexus in Ontario: lessons from five case examples, Journal of Environmental Planning and Management, DOI: 10.1080/09640568.2015.1040488

To link to this article: http://dx.doi.org/10.1080/09640568.2015.1040488

Journal of Environmental Planning and Management, 2015
http://dx.doi.org/10.1080/09640568.2015.1040488

Partnerships and governance at the environment–health nexus in Ontario: lessons from five case examples

Zee Leung[a], Karen Morrison[b]* and Dean Midleton[c]

[a]*International Development Research Centre, Ecohealth, Ottawa, Canada;* [b]*Faculty of Environmental Studies, Health, Nursing and Environmental Studies Building, York University, Toronto, Canada;* [c]*Public Health Ontario, Toronto, Canada*

(*Received 17 April 2014; final version received 8 April 2015*)

The move towards partnerships and collaborative governance models has been advocated in global health discussions for many years now. A case example methodology was applied to this study. It was composed of a document review and semi-structured interviews with key informants from five environment and public health partnerships in the province of Ontario, Canada. These case examples highlight the merits and the challenges of diverse partnerships, and the importance of governance and leadership models, scaling up (and out) impact, and cross-cultural communications to these arrangements. Further work is required to articulate situations in which public health partnerships can be strengthened.

Keywords: environment; public health; partnerships; governance; public policy

1. Introduction

Integrative research approaches in public health have gained significant global interest recently. Under a variety of banners (including one health, ecohealth, and conservation medicine), a number of groups have championed these approaches as a new research paradigm which holds much promise for tackling complex health challenges. Despite widespread and growing support for this 'new' research paradigm, it is unclear what the real-world effects have been on the practice of public health in Canada. There is a need to identify, analyze and evaluate the application of integrative approaches to environmental and health concerns in Canadian public health initiatives.

Since 2011, the authors have been working with Public Health Ontario (PHO) to support investigations into the application of one health and ecohealth approaches in Canadian public health. This began with a 2011 qualitative study conducted at PHO which described examples of holistic and systems-based activities within the Ontario public health sector (Leung, Middleton, and Morrison 2012). In 2012, a follow-up study was conducted to provide more in-depth case-study research and analysis into current integrative public health activities.

This paper details the findings of this 2012 study which developed a comprehensive set of case examples from Ontario where an integrated approach was undertaken to address complex environment and health issues involving multiple sectors and disciplines. The case examples focus on the governance challenges experienced by

*Corresponding author. Email: kmorriso@yorku.ca

organizations seeking to integrate public health practice with key principles of environmental sustainability and social justice.

2. Background

2.1. Emerging global issues and changing governance regimes

In recent years, governments around the world have grappled with an array of challenges across many fronts including emerging infectious diseases such as SARS and H5N1 influenza to transboundary food safety issues such as chemical contaminants in food products, and even to problems such as climate change, which threaten the very sustainability of the global population. These are complex "wicked problems" (Rittel and Webber 1973, 160) which cross disciplines, sectors, and scales, and for which simple solutions are non-existent. They require new forms of governance that challenge existing orthodoxies surrounding "who has power, who makes decisions, how other players make their voices heard and how account is rendered" (Institute on Governance 2015).

Researchers and policy-makers have pushed for new ways to tackle these issues – approaches to governance that reshape and redefine the work of governments, civil society organizations, citizens, and private sector groups. Such strategies are premised on basic principles of collaboration, trust and the sharing of knowledge and power.

Through major public sector reforms, governments around the world began to embrace these principles and slowly moved towards more inclusive, collaborative and pluralistic forms of decentralized governance towards the end of the twentieth century. This has been extensively covered by Rhodes in his analysis of the massive governance changes in the United Kingdom in the early 1990s. This supposed "hollowing out of the state" (Rhodes 2007, 1248) describes a transition characterized by the shift of power and decision-making authority from a central government hub towards a plurality of actors found within but also beyond government (Newman 2001).

Newman goes further and links these changing governance structures to emerging global realities of "complex and intractable social problems" (Newman 2001, 59) and "complex and fragmented societies" (Newman 2001, 15). Shifts from centralized to decentralized governance, and from siloed practices to cross-sectoral partnerships, have thus emerged as a response by the state to increasingly complex societal problems. O'Flynn (2013, 15) considers boundary-crossing and "perpetual collaboration" to be the modus operandi of government in the twenty-first century.

Cross-sectoral partnerships provide governments with what Huxham (1996, 14) termed a "collaborative advantage" – the synergy created when different organizations work together to generate something greater than the sum of their parts. Huxham (1996) describes how the transformative capacity of collaborations can change traditional power relations between central government agencies and communities on the ground. In other words, open and collaborative governance approaches can empower those who traditionally may have been without power. Caution is needed, however, to prevent partnerships from further exploiting – through manipulation, coercion, etc. – its members. Attention must always be paid to the power relations inherent to the process (Arnstein 1969).

We are currently living in the era of 'partnership' (Mercer 2003) in which inter-organizational relationships that are outside of typical hierarchical or contractual forms of organization are flourishing (Gulati and Higgins 2003; Tomlinson 2005). The ability of partnerships to foster inter-agency progress in tackling wicked problems at the intersection of environment and health is the focus of this paper.

3. Background and key concepts

3.1. *Partnerships in global governance, sustainable development, public health and ecohealth*

The move towards partnerships and collaborative governance models has been advocated in global health discussions for many years now. In 2008, the World Health Organization pointed to failing health systems worldwide as a critical factor for continuing challenges to global population health. The WHO emphasized the need to overhaul these health systems in order to more effectively and more efficiently attain global health goals. Specifically, the WHO called for leaders to move away from a "command and control" approach towards a "negotiate and steer" style of leadership, and noted that health systems need to engage "all components of society including those not traditionally involved in health... including civil society, the private sector, communities and the business sector" (World Health Organization 2008, 1).

Partnerships have been especially important for global health actors working at the convergence of health, the natural environment and sustainable development. This has been reflected on the international stage with a number of multilateral global agreements – most notably with Agenda 21, the sustainable development action plan which emerged from the United Nations Conference on Environment and Development (UNCED) at Rio de Janeiro in 1992 (United Nations 2009). In this plan was the recognition that sustainable development could only be achieved through "cross-sectoral coordination and the integration of environmental concerns into all development processes" (Allen, Kilvington and Horn 2002, 8) and further, that this interdependent form of governance with its emphasis on collective action and collaboration, was "at the heart of sustainable human development and a prerequisite for effective responses to not only environmentally but also economic and social concerns" (Allen, Kilvington, and Horn 2002, 13).

Within the public health sphere, there are a number of pledges calling for greater collaboration and partnership. The Healthy Public Policy[1], Health For All[2], Healthy Cities and Healthy Communities initiatives are all predicated upon an understanding that in order to effect broader changes to the population's health, there needs to be an engagement of "agencies other than those traditionally responsible for health" (Gouman and Springett 1997, 311).

Partnerships are also a foundational concept for emerging research approaches. Ecosystem approaches to health (ecohealth) and one health – two approaches that try to address complex and wicked problems around health and the environment. According to the One Health Initiative website, one health focuses on issues at the intersection of human, animal and environmental health, and is "dedicated to improving the lives of all species – human and animal – through the integration of human medicine, veterinary medicine and environmental science" (http://www.onehealthinitiative.com/mission.php). Similarly, ecohealth is founded on the idea that "health and well-being are the result of complex and dynamic interactions between determinants, and between people, social and economic conditions, and ecosystems" (Charron 2012, 9).

Ecohealth, one health and other similar approaches advocate for a holistic and integrative understanding of health and well-being. These approaches are predicated upon a broader, inclusive perspective – one which moves away the traditional biomedical perspective of health towards a systems-based understanding where multiple actors, disciplines, cultures and ways of knowing all have integral roles for health and

well-being. Integrative health approaches are thus founded upon a philosophy of cooperation and collaboration.

3.2. The challenge of operationalizing partnerships

Despite the widespread support for partnerships and collaborations within global governance, global health, public health and ecohealth, there have been relatively few examples of successful programs and practices which have moved these approaches from theory to practice (see also Harvey 2010). A major difficulty has been the operationalization of these principles to effectively address complex wicked problems. Actors in all these areas still struggle with successfully bringing together individuals and organizations from different sectors and fields to work effectively towards a solution.

Similarly, within ecohealth and one health approaches, true cross-sectoral partnerships remain underdeveloped and relatively uncommon. As emphasized by a Public Health Agency of Canada report on One World One Health™ (a related integrative health approach), "major impediments to implementing One World One Health approaches continue to be a lack of collaboration within and across professional disciplines, conflicting policy goals, and a centralized rather than local approach" (Public Health Agency of Canada 2010, 4).

In this study, the policy space of interest was the fuzzy middle ground that exists at the nexus of environment and health. This is a challenging space, as it is characterized by a lack of clear institutional mandates, ambiguous roles and responsibilities and a large diversity of stakeholders. Actors within this policy space must regularly confront questions such as: What constitutes the environment?; Where does the natural environment end and the built environment begin? How does one define (and work with) the key stakeholders in such a nebulous space? In spite of these challenging questions, the critical theme of the environment as a determinant of health has been gaining traction in the health community, albeit very slowly. As will be described in this paper, new initiatives have recently emerged in Ontario which attempt to bridge the conceptual and operational silos that have traditionally made such inter- and transdisciplinary work difficult. For example, one group is looking to operationalize the idea of watersheds as settings for health through new collaborations with public health and academic partners. Another focuses on bringing a number of critical partners together to identify new and emerging threats to wildlife health and to consider the implications of these threats for society. Others struggle to integrate public health with food and development policies. These new partnerships have much to tell us about the opportunities and barriers to improved inter-sectoral collaboration in Ontario as it relates to the field of environment and health.

There is a need to better document the experiences of diverse partnerships involving public health actors from academia, the state, civil society and the private domain, and how they have helped to bring about effective integrative programs and policies. Research into the mechanics of these partnerships and collaborations can help to provide crucial insight into actualizing ecohealth principles in public health programs and policies. Further, these examples can help to answer important questions such as: How can health practitioners navigate the maze of issues inherent within partnerships? What tools or skills do they draw upon to defuse conflicts and tensions? What successful partnerships have they been involved in (or vice versa)? What are the defining features of a successful partnership? How can we foster these characteristics within public health partnerships?

4. Study context and methods

To address these questions, PHO, the Ontario Veterinary College and the National Collaborating Centre for Infectious Diseases (NCCID) partnered to support an investigation into cases from the public health domain which address complex, cross-cutting challenges at the environment−health nexus through the use of inter-sectoral partnerships. This collaborative effort was a follow-up to a qualitative study conducted at PHO which focused on case examples of holistic and systems-based activities within the Ontario public health sphere (Leung, Middleton, and Morrison 2012). That study observed that core ecohealth and one health principles influenced the public health work performed by study participants. Moreover, it identified a need for an understanding of governance structures which can enable public health professionals to better integrate public health practice with key principles of environmental sustainability and social justice.

Located in the central-east region of Canada, Ontario is the most populous province or territory in the country. The province's 13 million citizens mainly reside along the Great Lakes region in Southern Ontario. Public health responsibility formally resides among 36 public health units distributed across the province. The responsibilities and activities of these health units are developed around the Ontario Public Health Standards and Protocols (Ontario Ministry of Health and Long-Term Care Public Health Division 2008), a series of guidelines published by the provincial Ministry of Health and Long-Term Care. These guiding documents outline expectations for the province's health units in meeting the mandatory health programs and services described in the Health Protection and Promotion Act (Government of Ontario 2011).

A small-n case example methodology (Yin 2003) was applied to this study. It was composed of a document review, as well as semi-structured interviews with key informants. The five cases were either selected from a list of candidates who were previously known to the study investigators, or who were suggested by a working group on one health initiatives in Ontario coordinated by National Collaborating Centre for Infectious Diseases (Cheuk 2012). This working group composed of key informants from the academic, governmental and non-governmental sectors with relevant expertise and knowledge of one health activities across Canada. The partnership arrangements of interest to this study were those focused on bringing actors together to work in the specific area of environment and health. Representatives from these initiatives were contacted for recruitment into this study. These participants were individuals with a strong working knowledge of these initiatives and included directors, managers, program heads or other organizational leaders. No incentives were provided to the key informants. The semi-structured interviews were either conducted in person or over the phone. Each interview was digitally recorded and transcribed. Transcripts were sent to the study participants for review and editing. Case profiles of each organization were developed from the prepared transcripts. A cross-case comparison (Yin 2003) was then conducted using thematic coding to identify the major themes emerging from the cases. These themes are the subject of this paper.

Both the organizations selected as case examples and the individuals who participated in this study were kept anonymous. All data collected from the participants were stored under password-protected files at PHO. The study was approved by the Research Ethics Board of the University of Guelph (Protocol #12MR021) and by the Research Ethics Board of the University of Toronto (Protocol #27358).

Table 1. Summary of background information pertaining to case examples.

Case identifier	Type of lead partner	Key partners	Mandate/policy gap
A	Conservation authority	Government ministries, NGOs	Watersheds as social−ecological systems
B	Research collaborative and service provider	Universities, government ministries	Wildlife health
C	Research collaborative	Government ministries, NGOs, universities	Food security and healthy food systems
D	Public health unit	Government ministries, NGOs, universities	Built environment and public health in rural settings
E	Public health unit	Government ministries, NGOs, universities	Environment as a determinant of health

5. Study findings

The five case examples provide a diverse range of institutional experience upon which this study could draw. Background information about each case is summarized in Table 1.

The case examples represented a wide spectrum of the environment−health nexus (Figure 1), with the mandate of some of the organizations clearly closer to one axis than the other. All of the organizations were interested, however, in working in the space uniting environment and health concerns. Analysis of the five case examples identified the following key seven themes: policy gaps; leadership; governance arrangements; scaling up; diversity; monitoring and evaluation; and communication. These themes are elaborated on in the following paragraphs.

5.1. Policy gaps

In the cases examined in this study, partnerships were found to be particularly vital in providing operational guidance to address difficult multi-sectoral issues that lie within the purview of broad provincial mandates. Within these policy frameworks, there often exists a dichotomy with organizations given a broad mandate to address wide and far-reaching areas such as climate change, and yet failing to provide specific jurisdictional powers or guidelines to tackle such issues.

For example, within the Ontario Public Health Standards and Protocols are environmental health standards which empower local public health units to work under three broad fronts: food-borne diseases, water-borne or water-related illnesses, and "health hazards in the physical environment" (Ontario Ministry of Health and Long Term Care 2008, 46). On the one hand, such 'umbrella' policy statements are useful in empowering government to invest in new partnerships and in providing geographically dispersed health units which face their own set of diverse public health needs to create a

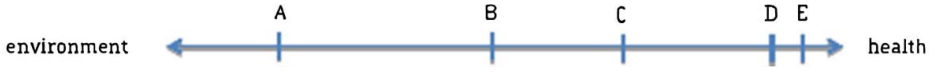

Figure 1. Relative emphasis of lead partner programming related to environment and health.

locally relevant policy framework. On the other hand, these overarching policy frameworks also offer little guidance for how broad mandates can be operationalized – particularly in areas where other government actors may also claim territory.

In both D and E, a provincial mandate to engage in some environmental issues supports these activities in general and allows for local decision-making on which to prioritize. Consequently, in domains where the mandates of health units overlap with those of other government bodies, health units have responded by forming partnerships and collaborative initiatives. In the case of E, the organization has addressed the relationship between public health and air quality by working with the Ministry of the Environment on a multi-stakeholder committee to develop local air quality regulations. Through this partnership, E advocates for public health issues while the Ministry of the Environment enacts environmental standards and enforces regulatory compliance by local industries.

There is flexibility and adaptability created by the Ontario Public Health Standards which has allowed E to proactively explore the underlying complexities of some complex population health issues and expand upon their environmental health mandate. For instance, the Ontario Public Health Standards only specifies that the document is not meant to "encompass the total potential scope of public health programming in Ontario" (Ontario Ministry of Health and Long-Term Care 2008, 1) and that boards of health should tailor their activities to "meet local needs" (Ontario Ministry of Health and Long-Term Care 2008, 12). Thus, in adapting their programming to their local context, E Health Unit has been able to focus on emerging areas such as the built environment and have partnered with key stakeholders such as the urban planning community to explore issues around land-use planning and its relation to health issues such as obesity and issues of mobility.

In the case of B, wildlife health was part of the jurisdiction of many government departments and ministries, but was the responsibility of none. Prior to their work in bringing together key stakeholders in wildlife health, there was a void in any pan-Canadian wildlife disease programming especially with regard to human and environmental health. This is in spite of the fact that the strong connections between human health, animal health (domestic or wild) and environmental health have long been understood by researchers, public health practitioners and government decision-makers.

As partnerships evolve, they may generate new offshoots that address other critical policy gaps. These new groups are able to leverage the trust and social capital established among the stakeholders while also bringing in new voices. For instance, C now oversees a new project that is a byproduct of previous collaborations with local food groups, a local community charity and a health unit. The strong linkages that existed between these partners created an inclusive and safe space where productive discussions could occur and where new ideas could be cultivated. It was from this space where these many shared conversations and ideas between partners culminated in the new initiative.

In another example provided by C, working relationships developed through a food systems partnership were leveraged to bring key actors from the private sector into a new partnership. Indeed, that particular relationship has been a key factor in helping the new initiative succeed. Although the number of primary partners engaged in the initial project was quite small, the group was able to expand and diversify its linkages through the networks and past works of each core partner.

Non- and quasi-governmental partners also benefit from a broad mandate. For instance, when A started their work on ecosystem services, their focus was strictly upon how the ecological relationships within watersheds – studying the relationship between a

particular ecosystem service and a particular fish species, for example. However, over time this thinking has matured to consider the relationship that people might have with the diverse services and natural components of the ecosystem. This includes economic analyses of the value of the natural capital of local ecosystems. It was realized by A that they could not succeed in effectively managing watersheds "without thinking about the people that are affected" within those ecosystems (Study participant) and linking watershed health with the health of the surrounding community. In other words, for A, this type of an approach necessitated an 'ecosystem approach' to the management of their watershed.

There is a clear role for partnerships within the public health sphere. As one study participant explained, "public health issues, in general, are complicated... and so the need for partnerships is critical."

Partnerships create an inclusive space where a diversity of actors can tackle complex health issues at multiple scales (see below). This diversity of partners expands an organization's capacity to address complex public health issues by allowing organizations to leverage their partners' expertise, histories and networks.

Most partnerships lack legal authority and have no formal jurisdiction within these complex spaces. And yet, counterintuitively, this is a key advantage of partnerships as it creates nimble and adaptive systems. Because of their informal status, partners are able to sidestep thorny jurisdictional questions and changing government priorities, thus retaining their focus on the complex issue at hand.

This is particularly evident with B's unique partnership structure, as it developed among universities firmly embedded in university structures. As such, B exists outside of the purview of any government agency or ministry and thus lacks any independent legislative authority for its mandate. Instead, B has found it valuable to leverage the authority and power of the government partner that it works with at any particular time. For instance, B works within the programs of the federal government on issues of foreign animal diseases. In return for the authority offered by this partner, B provides its extensive academic expertise in wildlife veterinary sciences.

Similarly through its involvement in a mobile food partnership, C capitalized upon their partners' experience around issues such as urban poverty and the built environment – areas which are less familiar to C. For instance, C benefited from one partner's history of working with the private sector to access key resources and expertise from this domain. This synergistic benefit was shared by other partners in this initiative – where members tapped into each other's networks and past working relationships to derive even greater benefits out of the collaboration.

Although a partnership with no concrete and sustained legislative authority places an onus on the partners to sustain their commitment to this work (as they are not mandated to maintain such partnerships), these flexible arrangements can be highly effective and nimble allowing them to survive a certain amount of change in the political wind.

5.2. Leadership

Another key theme which emerged from the case studies was the importance of effective leaderships in making public health partnerships work.

In the case of D, there was a strong need for their organization to demonstrate leadership in their rural context and to try to include issues of environmental sustainability into their programming. This was particularly evident in their work to become Leadership in Energy and Environmental Design (LEED) certified. Given that

LEED-certified buildings are much more common in urban settings but less so in rural areas, this effort was, among other things, symbolically important – demonstrating the capabilities of rural organizations to make important contributions to environmental sustainability.

In another example, leadership was also seen with two of the organizations studied collaborating with each other. A is actively developing a collaboration with E – a particularly unique partnership as it will be the first time that an organization from the public health sphere has been engaged with A. Along with E, this new partnership also involves a number of other groups including another conservation authority. This partnership also involves other government health bodies, academic researchers, and a coalition of groups working towards sustainable infrastructure. Although it is still in its early stages, this partnership is already beginning to create some offshoot benefits by building buzz among academics and other public health organizations, and may lay the foundations for future partnerships.

Leadership also manifests through being able to identify and capitalize upon strategic opportunities. For example, timing played a key factor in B's early success. The organization's known expertise in wildlife health and zoonotic disease proved highly valuable when West Nile Virus emerged in the 1990s. As the disease rose to the top of the government policy agenda, decision-makers began to look towards B for effectively responding to this issue. B's swift actions won it prominence and respect for its collaborative health monitoring and surveillance activities of zoonotic disease. Since then B has been able to demonstrate national leadership by developing a national-level strategy for wildlife health.

Strong leadership is particularly important in the field of environment and health. Leaders can advocate for greater action on environmental protection and restoration, and for changing our thinking about the importance of the natural environment and its strong links with our communities. As noted by A, however, there is a patchwork of such leaders at the municipal, provincial and federal level. In some areas of the environment, effective leadership can be found at the provincial level but not at the municipal level. In contrast, on the issue of climate change, municipal decision-makers are becoming quite active with developing climate change mitigation strategies whereas leadership at both the provincial and federal level is absent.

5.3. Governance

A clear understanding of governance is vital for any partnership. As remarked by the study participant, "governance will kill any partnership unless worked out in advance and made to work." A clear governance structure was found by the majority of the participants as a critical factor for successful partnerships.

The participants in this study have been involved in a range of different governance models. In B's case, their own organization played a central role in their partnership – acting as a sort of central hub connecting, coordinating and mediating a diverse group of different players. Through this model, B hopes to develop into a centre of wildlife health expertise in Canada. Although B acts as a central hub, it sees its role as active – working hard to engage their partners and demonstrating leadership in guiding the activities of these networks. As emphasized by B: "It's up to us to make the partnership work" (Study participant).

C prefers an alternative governance structure and focuses instead on the creation of platforms – the set of principles and missions which create a discursive space between

public health actors. C is a strong advocate of platforms as a structural remedy to build in 'peace-time'. By doing so, platforms can act to seed conversations by creating the conditions for diverse actors to connect, by generating ideas and by facilitating initial discussions, platforms can begin to cultivate the type of environment from which public health partnerships can organically develop on their own. In describing what these platforms might look like, the study participant pointed to food policy councils or food strategies as examples of platforms in the food systems arena. Participants saw the importance of developing strong connections between various public health actors during non-crisis situations as this could help the public health system in effectively mobilizing and responding to future public health issues.

In addition to formal governance models, a number of informal structures were discussed by the study participants. For instance, both C and E discussed the importance of a healthy and supportive partnership environment. Specifically, for C this was manifested as an inclusive, safe and reflexive space where partners could deliberate and debate ideas, problems and solutions. Casual, informal conversations and networks were also highlighted as important supports for partnerships. These informal connections could be fostered through simple strategies such as physically integrating different public health actors within the same work environment. This was demonstrated with D where personnel from an environmental government agency were housed within the health unit offices. Although this was not designed to be a formal partnership between these two organizations, it has led to knowledge sharing and consultation on various health initiatives, has strengthened relationships between the two organizations and may lead to new collaborative initiatives in the future.

Certainly the study participants have been involved in partnerships with a diversity of formal and informal governance models. In the case examples, the key informants frequently mentioned the need for a more systematic understanding of such partnership structures. To that end, D developed a framework for their rural partners which described and articulated their partnership activities. This framework categorizes collaborations under six levels: from activities internal to an organization, to networks, alliances, partnerships, coalitions and finally, to full collaborations. This hierarchy represents a gradient with the levels of inter-sectoral representation, connectivity between partners, and impact of the partnership, which increase as one moves up the levels. To meet the challenge of convincing policy-makers to invest time and money into cross-sectoral partnerships, several participants described the need for additional tools that can provide a greater understanding of the strengths and merits of different partnership types and the potential returns on these public health investments.

In addition to an effective governance model, a clear mandate and vision was also found to be important for effective partnerships. This can take the form of a mission statement, a platform, or a formal Terms of Reference document or Memorandum of Understanding. Clarity and transparency are critical features even from the very outset of a partnership. Key documents such as Terms of Reference agreements form the structural foundation of partnerships and must be developed in a clear and transparent manner. Doing so is essential to ensure the sustainability of a partnership. Partnerships that are structured upon ambiguous or vague work agreements can quickly break down amidst frustration, distrust and anger.

Indeed, previously partnerships experienced by A devolved because of a lack of trust among partners and an inability of partners to give up control. This absence of trust was seen at all levels of the partnership – from the technical staff to the senior managers overseeing the partnership. In addition to the distrust, partners were also skeptical about

the potential outcomes of the partnership. As a result, partners provided minimal efforts, resources and investments into the initiative, and the initiative failed to achieve the goals that it had initially set out to reach.

It is a particular benefit of diverse partnerships that they can overcome some of the distrust that may have built up between key groups over time. Engaging community groups with government actors is a common example, where there may be a legacy of distrust that needs to be overcome. In order to overcome these barriers, partners need to be able to take the time to clearly state their background and their positions and to develop an understanding of each other's perspectives. For A, this sort of 'social investment' is critical in allowing diverse groups to find some common ground and develop some productive outcomes from their partnership.

For instance, one important partnership for A has been with a local group of outdoors enthusiasts. This outdoors group is primarily concerned with healthy trout populations and thus works with A on environmental restoration projects along the river. Working with an outdoor enthusiasts group has given A invaluable access to community stakeholders such as rural landowners along the local river. These landowners previously might have refused to work with a conservation authority due to their distrust of government agencies. However, as a local community-based organization, this group was able to bridge the gap between A and local community members in the area. This partnership has successfully led to the long-term public securement of ecologically important lands obtained either through community donations or sales to A.

5.4. Scaling up successes

The complexity of environment and health issues is such that there is no one action or set of actions that can adequately address the issue. To that end, a critical value of partnerships that are guided by a common mission is that they can mobilize a wide range of actions, at multiple scales and with a diverse array of institutions, in order to help achieve common goals. For instance, perspectives about wildlife health and healthy wild animal populations are grounded in local communities and human society. For B, this translated into working with a complex number of factors at multiple scales and levels, including "prevention, early detection, decision-making, response planning, carrying out responses, evaluation, communication, education. . ." (Study participant).

D also recognized the importance of working at multiple scales and is working to further develop its multi-level governance strategy for the local region. Although D has already established strong public health strategies at upper government tiers, their programming at the lower tiers of their communities are not as well developed. For instance, D is currently advocating for the passage of a county smoke-free outdoor spaces bylaw to enhance both local air quality as well as contribute to a comprehensive anti-smoking strategy for children and youth. For this county-level bylaw to be passed, D is currently trying to build relationships at the municipal level and gain support at these lower tiers before changes at the county-level can occur. D is already finding success with developing these important lower-tier relationships. For example, over half of the municipal bodies comprising D's local region are in partnerships with D.

The respondents to this study noted that scaling up can be challenging, and thus partnerships need to be flexible and allow autonomy among each of its partners to adapt the work of the partnership to different scales and settings. For example, B often works in unique, rural locales which create additional challenges with the scaling up of programming. Consequently work developed by B needs to be heavily tailored to local

and cultural contexts. Thus, while having a common mandate and modus operandi of a partnership is important, the partnership must also be able to devolve control to the participating actors. This brings a creative tension to the process between top−down leadership and bottom−up flexibility but allows the groups to connect peripheral partners and to make full use of their extended networks.

5.5. Diversity of partners

The need to engage a heterogeneous suite of partners in environment and health programming was a common theme among the key informants. That said, however, the organizations were not able to provide many examples where that had been done. Most noted the relative ease with which they could interact with government agencies, non-profit organizations and academia. Challenges were found in finding ways to also engage with the private sector, First Nations communities or non-traditional stakeholders.

Within their own programming, D felt that their partnerships could be enhanced by including the more vulnerable and marginalized groups in their community. For example, they would like to have more representation by their First Nations community members with their public health partnerships. In addition, D would like to develop stronger relations with representatives from religious denominations in their community. These groups may be important partners for D due to their established connections with vulnerable and marginalized populations in their community.

B suggested, for example, that it would like to develop even more partnerships with organizations from the non-profit sector or the corporate sector. Traditionally, non-profit and private sector actors have not been as engaged within public health partnerships as have government or academic actors. However, the study participant notes that actors (especially from the business world) come with their own valuable experiences with partnerships and collaborations. These experiences may hold valuable insights for increasing the effectiveness and sustainability of public health partnerships.

Academics are considered to play a unique role in bringing diverse groups together. They have a privileged ‘outsider’ status that can help sidestep difficult issues related to jurisdiction and past histories among potential new partners. Much like the other study participants, C emphasized a need for greater resources to support the building of partnerships. Specifically, there needs to be greater mechanisms and incentive structures within academia to support researchers to better engage their communities or develop partnerships. Academics can play a critical role in building of brokering inter-agency or inter-sectoral partnerships. Academics have a degree of autonomy that is not commonly found in other sectors. This autonomy not only gives them the intellectual freedom to explore and research a range of topics but also allows them to connect an impressive diversity of stakeholders who cross disciplines, sectors, or even national and international jurisdictions. Academics can thus be a powerful catalyst for unique conversations that might not otherwise develop.

5.6. Monitoring and evaluation

The majority of interviewees explored the theme of monitoring and evaluation in two respects through a traditional focus on work plans and the development of indicators.

Both D and C identified the need for stronger metrics and forms of evaluation. Tools which can track the development of partnerships and can demonstrate how partnerships have helped organizations to reach their goals will be critical in institutionalizing the use

of partnerships in public health. They were interested in ways to measure the health of public health partnerships. They mentioned the need to develop indicators for how well a partnership is developing and if the relationships in a partnership are sustainable and healthy. Such indicators can help to provide a picture about the quantity and quality of relationships formed within a partnership, and by proxy may help to complete a picture about the overall resilience of that network. For example, the study participant recalled another colleague's informal suggestion that one could likely measure and interpret the number of people at Organization X who could call up and have a productive conversation with someone at Organization Y. Another indicator that could describe the state of relationships within a network may be the degree of engagement of different stakeholders within policy-making institutions and bodies.

Creating a realistic work plan with timely and measurable goals can also lead to the creation of an enthusiastic and positive partnership. Emphasizing the specific and achievable milestones within a work plan, can help partners to develop a sense of accomplishment when they reach each goal. These formal action items not only help to keep the partnership on track, but maintain a continuing sense of purpose and interest in the group work. Similarly, there should be frequent check-ins into monitoring how partnerships are reaching the goals which they have set out to accomplish. Developing a strategic map of various outcomes and deliverables can help partners to better appreciate the progress and achievements that the partnership has attained. Tools such as yearly outcome reports are another way that partnerships can monitor and evaluate their progress.

5.7. Communication

The different customs, theories and terminology among different sectors can make finding common ground very difficult. For example, E has found that the task of working with different types of actors becomes more challenging the further away these actors are from their traditional public health sphere. E has found that the easiest partnerships to develop are with other government bodies as they share the same reality and "commonality of the day-to-day existence" (Study participant). Despite the potential benefits of working with non-traditional partners, such as community groups or industry groups, the different perspectives of each partner becomes a hindrance to the overall partnership. As E noted, "NGOs are worried about their donor base, industries are worried about their profits. . . chambers of commerce are worried about their membership" (Study participant). Even other individuals from the public sector may be challenging to work with as they may lack the scientific and technical expertise and background that a health organization has.

Effective communication was an important theme in the context of B's partnerships. As noted by B, developing strong lines of communication between government bodies and actors outside of the government sphere can be particularly challenging. B has found that despite their own mission and organizational needs, they must respect and protect the jurisdiction and strict communications protocols of their partners in order to sustain their partnerships. For example, the reporting of a zoonotic disease outbreak must first work through the communications procedures of the partner whose mandate directly covers that health issue.

C's international work provided additional insights regarding communication in partnerships. For instance, C hosted an international event which brought stakeholders from diverse fields, sectors and cultures together to explore issues of environmental health and sustainable food systems in a post-disaster context. Through this event, C

noted that developing skills in inter-cultural communication is critical for building public health partnerships. Debates about the role of environmental risk communication and food safety were founded upon different contextual understandings of public health concepts and underscored the idea that applying a singular approach to discussing these complex issues creates cross-cultural communication barriers.

Part of C's successful communications and relationships with their partners has been due to their use of techniques of deliberation and reflexive thinking. These two skills helped C to tackle a major challenge that many inter-sectoral partnerships face – how to reconcile the divergent and often conflicting objectives and mandates found in partnerships with a diverse membership. For C, the process of deliberation was vital in helping them to mediate all of these potential conflicts. For partnerships where conflict may be likely to occur, it is vital to create inclusive and reflexive spaces where partners can debate each other's perspectives openly and respectfully. Rather than avoid uncomfortable and sensitive issues, partners should find a way to bring these points of contention to the surface to be dealt with in an open and respectful manner.

Taking the time to have discussions is critical in smoothing out any potential conflicts between diverse partners. This communication process allows for a common language and a shared understanding to develop between partners with very different entry points into a particular issue. This commonality can then be leveraged to foster strong relationships between partners. It also builds respect which leads to a positive working relationship. With their previous partnerships, D noted that strong methods of communication between partners' (in both formal and informal manners) conversations were a key success factor for these projects. For instance, members of successful partnerships would often have conversations with each other – within the partnership but also outside the partnership. Moreover, these conversations would often lead to further collaboration on other issues.

Strong trust relationships are key to effectively leveraging the resources of the group. As remarked by the study participant from B "all we have is the power of persuasion" and "getting things done with the resources that are available as best we can." C provided examples of long-term partnerships in which the partners knew the strengths and limitations of their relationship and how far they could push each other. Finally, if any disagreements in the partnership occurred, partners could debate the issue and delve into the roots of the problem without threatening the sustainability of the partnership.

6. Discussion and conclusion

Partnerships are well recognized to be vital to public health. This study reaffirms previous literature on the importance of partnerships across a range of fields and inter-organizational relationships, and on the ability of partnerships to create "collaborative advantage" (Huxham 1996, 14) – a concept describing the unique benefits seen when independent organizations come together in synergy. This study confirms that this is no less true within the public health sphere, particularly when examining public health actors attempting to address intractable and complex challenges such as: building healthy food systems; improving population health through built environment and environmental health initiatives; and strengthening the reciprocal relationships between human health and the health of wildlife and local watershed ecosystems. That inter-sectoral public health partnerships were seen by the study participants as critical for effectively and sustainably responding to these challenging public health issues, affirms Huxham's

(1996, 2) conclusions that such approaches are a "moral imperative" and are the "*only* way to tackle major societal problems."

For the case examples highlighted in this paper, the central goal of the collaborative exercise was on making these partnerships work and capitalizing upon this collaborative advantage. At the same time, they recognized that the partnership could not be a zero sum game – there were too many areas where either regulatory mandates or local circumstances could trump the ideal scenarios sought by participants.

This recognition is reflective of an oft-described issue which cuts across the rhetoric around the importance of organizational partnerships – that it is frequently very difficult to make collaborations successful and effective. Similar to what was described by Huxham and Vangen (2003, 5) as the need to have a "continuous process of nurturing", the groups explored in this study also noted the large investments in time and work required to set up and maintain their partnerships, particularly the energy needed to develop healthy, trustful and open inter-organizational relationships.

Efforts to build that trust and on-going communication were also aided by a pragmatic acceptance of incremental change. In 'moving the dial' and incrementally progressing towards wider systemic change, the value of partnerships in challenging social norms and mindsets cannot be underestimated. For example, this was seen with case D and their pursuit of LEED certification for their headquarters. Symbolically, this was significant as it sent a powerful signal to the wider community about the relationship between environmental sustainability and human health.

The cases documented in this study also emphasized the idea that public health partnerships allowed the study participants to better deal with the so-called "wicked problems" (Rittel and Webber 1973, 160), which thrive in the gaps and cracks created by the "fragmented and incomplete" (study participant) government response to environment and health issues. This finding confirms what has been documented in the organizational management literature: partnerships provide a mechanism for previously independent actors to respond to challenges which problematically sit between their respective organizational mandates and purviews (Huxham and Vangen 2003). Collaborative structures and mechanisms (such as the hub and spoke governance model exemplified by B, or a public health platform as proposed by C) were seen to be valuable ways to bridge resources, expertise and jurisdictional authorities which have been traditionally dispersed among a multiplicity of actors. In this way, public health partnerships increase the government's capacity to effectively deal with complex, wicked problems (Harvey 2010).

Overall, the cases profiled in this study identified seven salient domains (policy gaps, leadership, governance, scaling up success, partner diversity, monitoring and evaluation, and communications) as critical to understand and master when developing and operationalizing public health partnerships. These findings are also very much in line with other studies (e.g., Anholt, Stephen, and Copes 2012; Arnstein 1969; Israel *et al*. 2012; Mitchell and Shortell 2000; Schultz, Israel, and Lantz 2003) describing successful public health partnerships. These authors and others have found that elements of successful partnerships include concepts such as trust, transparency, strong leadership, effective communication, embracing diversity, sufficient time, having a shared and well-defined mission for the partnership, and finally being open to a diversity of governance forms as determined by the partners and the local context.

Mitchell and Shortell (2000) reflect upon competing concepts of individual versus collective rationality, and conclude that collective approaches that try to integrate multiple community actors may be more effective when confronted with complex health

goals. By contrast, health problems of a more targeted and defined nature may be more appropriately addressed by a strategy of individual rationality, in which a restricted group of stakeholders is involved. This finding supports the findings of Lundin (2007), who found that inter-agency cooperation was valuable for complex tasks, but was costly and unhelpful for simple tasks. It also strongly parallels the discourse on multidisciplinary, interdisciplinary and transdisciplinary approaches – key ideas within the ecohealth and one health domains. Indeed, a similar conclusion has been reached amongst ecohealth and one health practitioners, in which it is appropriate to match the degree of complexity of the research problematique with the degree of diversity of the stakeholders involved (Charron 2012; Zinsstagg *et al*. 2011). Thus a critical first step in addressing public health issues at the environment and health nexus is to systematically map the complexity of the issue at hand. This is important to understand which stakeholders are affected by an issue, how they relate to each other, the opportunities and risks they bring, and what kind of partnerships could be formed in order to effectively address the problem.

Understanding the strengths of different governance models and the broader political ecology of environment and health actors is an important area of future research into this domain. Mitchell and Shortell (2000) developed a proposed typology of community-based health partnerships and using this model, frame guiding questions for those interested in initiating a new collaborative venture. For example, "does your partnership size and composition match the demands of the problems you have chosen to address? Is the partnership too homogenous? Too diverse? How should this be adjusted to take into account changes over time in the set of community health problems?" (Mitchell and Shortell 2000, 273). The authors acknowledge that in order to address a broad problem set, a wide diversity of partners is needed. The importance of diversity within public health partnerships were recognized and frequently emphasized by the organizations interviewed in this study. These case examples highlight the merits and the challenges of diverse partnerships, and the importance of governance and leadership models, scaling up (and out) impact, and cross-cultural communications to these arrangements. This is a relatively unexplored area within the public health sphere with further work required to articulate specific situations in which this aspect of public health partnerships can be strengthened.

There are other partnership typologies currently in circulation, including ones focused on partnerships in international development (e.g. CARE 1997; Creech and Paas 2008, United Nations 2013), economics (e.g. Selin 1999; Smith and Wohlstetter, 2008) and education (e.g. De Castro and Karp 2008; Hora and Millar 2011). These typologies could be modified to address domestic partnership development, monitoring and evaluation. For example, many of the categories in Creech and Paas' (2008) work are relevant to Ontario.

In addition to work on articulating typologies for partnerships in the Ontario context, recent work by the United Nations Global Compact for Sustainable Development (United Nations 2013) is also relevant to the issue raised in this study. Their partnership handbook sets out seven building blocks of good partnerships. They include: choosing the partnership's composition; defining the roles of each partner; drafting a roadmap for the partnership; defining the partnership's scope; designing a governance structure for the partnership; deciding how to finance the partnership; deciding how to monitor and evaluate the partnership. This study supports the general principles of the UN document, but highlights the organic nature of partnerships at the environment–health nexus. In particular, this study highlights the difficulty of exerting control or oversight over diverse partnerships, and emphasizes the need for partner autonomy at multiple scales guided by

overarching goals and principles. In this way, there is more flexibility for actors to pursue change in their respective, often highly political, domains, although at the cost of summative approaches to monitoring and evaluation. That said, there is less need for third-party accountability, as partnerships that are not productive will soon dissipate.

The present study does not propose a new typological framework for understanding and operationalizing public health partnerships, although it does describe examples of specific models by which partnerships have been run. Both D and E are involved in an initiative based on the Constellation Model of Collaborative Social Change – a governance model in which actors organically come together in many small clusters of working groups (Surman and Surman 2008). This is different than the hub and spoke model employed by B, where stronger central leadership is needed to keep the partnership on track. There is a clear interest in more information about the different partnership models that have worked in the field of environment and health, as well as their strength and weaknesses. An on-going concern related to the development of new partnerships is time and resources required to sustain it.

With respect to the environment and health nexus, the major contribution of this study is the emphasis on multi-level action, robust but adaptive governance structures, and partner autonomy. This contribution aligns with an important research focus, within the healthy public policy and public health literature, on challenges in building and running integrated governance arrangements, specifically around the structural and operational dimensions of multi-level collaborative partnerships. For instance, a 2008 report by Gagnon and Kouri (2008) on two Canadian provincial integrated governance initiatives examined the merits and challenges of two different governance arrangements and their implications towards producing healthy public policies. Although arising from groups with distinctly different purviews and thrusts, findings from Gagnon and Kouri (2008) complement the insights arising from the present study in concluding that success in integrated governance arrangements is derived both from the structural design of the partnership, as well as the human dimension including key roles for how actors and organizations come together, how they recognize their shared history and needs, how they reconcile conflicts and competing interests, how they communicate and build relationships with each other, and how they navigate and adapt their arrangements to new challenges as they arise.

The ideas developed through this current study thus provide us with a firmer grasp of what may be necessary (for example, in terms of governance arrangements and policy opportunities) to address the wicked problems which inhabit the environment–health space, in real and tangible ways. In many respects, this is a recognition of the complex nature of most environment and health challenges that defy any easy or quick resolution. It is also indicative of the many competing jurisdictions that any one challenge may be linked to.

The regional (in this case, provincial) nature of this study adds a unique dimension to the literature on cross-sectoral, public health partnerships. Previous examples of similar public health activities were either drawn from the international stage (Veterinarians Without Borders 2010) or were in-depth studies of a particularly successful local initiative (Surman and Surman 2008). Regional studies allow for an exploration of the middle policy space – a domain where public health issues often impact diverse actors at multiple levels (from the municipal to provincial and inter-provincial scales) and similarly, where roles, responsibilities and mandates are found amongst a complicated, jumble of municipal, provincial and federal policies, regulations and practices. Regional studies can thus help to clarify how public health partnerships can operate in this middle space, and can demonstrate the critical role that regulations and mandates play in

allowing these types of initiatives to flourish. For example, in this study, the Ontario Public Health Standards' endorsement of 'collaboration' created the potential for public health to work with environmental partners – but only where the local public health units agree that this should be a priority.

This study offers a limited but deeper set of analyses on the lessons learned and experiences gained from five public health partnerships in Ontario. The case examples included in this study were able to catalyze a diverse range of collaborative interventions to try to address wicked and complex challenges in environment and health. While certainly unique and significant, these case examples are part of a larger movement of public health actors struggling to tackle similar challenges. And yet, despite the apparent appetite for cross-sectoral and collaborative initiatives, partnerships focused on the nexus of environment and health in Ontario still remain relatively undertheorized and underdeveloped. There is a clear opportunity to continue to document, map, learn from and improve existing practices, particularly related to involving a more diverse array of actors in the process and creating a space for reflection and evaluation of existing partnerships. A recurring comment from the study participants was about the need for greater leadership in this field; this point is also picked up widely in the literature (Allen Kilvington, and Horn 2002; Huxham and Vangen 2003; Leung, Middleton, and Morrison 2012; O'Flynn 2013). This study echoes that sentiment and calls for bold and active leaders, who can continue advancing our understanding about environment and population health and who can translate this knowledge into effective and sustainable change in the ideas and practices of public health actors.

Acknowledgements

Special acknowledgements must be given to all the study participants for generously donating their thoughtful insights and experiences for this study. We also acknowledge the contribution of the National Collaborating Centre on Infectious Disease to the project design.

Disclosure statement

The authors have no financial interest or benefit arising from the direct applications of this research.

Funding

Public Health Ontario [050973-ADVANCING ECOHEALTH/ONE HEALTH IN ONTARIO].

Notes

1. WHO Healthy Public Policy.
2. WHO Alma Ata Declaration – Health For All.

References

Allen, W., M. Kilvington, and C. Horn. 2002. *Using Participatory and Learning-Based Approaches for Environmental Management to Help Achieve Constructive Behaviour Change*. http://www.pacificwater.org/userfiles/file/IWRM/Toolboxes/STAKEHOLDER%20Engagement/participatory%20methods-landcare.pdf

Anholt, R.M., C. Stephen, and R. Copes. 2012. "Strategies for Collaboration in the Interdisciplinary Field of Emerging Zoonotic Diseases." *Zoonoses and Public Health* 59 (4): 229–240.

Arnstein, S.R. 1969. "A Ladder of Citizen Participation." *Journal of the American Institute of Planners* 35 (4): 216–224.

CARE. 1997. *Partnership Manual*. Atlanta: CARE USA Program Division. http://www.careclimatechange.org/files/toolkit/CARE_Partnership_Manual.pdf.

Charron, D.F. 2012. "Chapter 1: Ecohealth: Origins and Approach." In *Ecohealth Research in Practice: Innovative Applications of an Ecosystem Approach to Health*, edited by Charron, D. F, 1–32. New York: Springer.

Cheuk, Eve. 2012. *Strategies for Preventing and Mitigating Zoonotic Diseases in Canada through the One Health Approach*. Toronto ON: The Ontario Public Health Convention. April 2012.

Creech, H., and L. Paas. 2008. *Typologies for Partnerships for Sustainable Development and for Social and Environmental Enterprises: Exploring SEED Winners Through Two Lenses*. Winnipeg: International Institute for Sustainable Development. http://www.iisd.org/pdf/2008/seed_typologies.pdf.

De Castro, B.S., and M.M. Karp. 2008. *A Typology of Community College-Based Partnership Activities*. Community College Research Centre, Columbia University: New York, USA. http://ccrc.tc.columbia.edu/publications/typology-partnership-activities.html.

Gagnon, F., and D. Kouri. 2008. *Integrated Governance and Healthy Public Policy: Two Canadian Examples*. Quebec City: National Collaborating Centre for Healthy Public Policy. http://www.ncchpp.ca/docs/Integrated_governance_AN.pdf.

Gouman, M., and J. Springett. 1997. "From Projects to Policy: 'Healthy Cities' As a Mechanism for Policy Change for Health?." *Health Promotion International* 12 (4): 311–322.

Government of Ontario. 2011. *Health Protection and Promotion Act*. Toronto. http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_90h07_e.htm.

Gulati, R., and M. Higgins. 2003. "Which Ties Matter When?." *Strategic Management Journal* 24 (2): 127–144.

Harvey, H. 2010. *Building Bridges to Protect Health: Enhanced Partnerships Among Animal, Human and Ecosystem Health Sectors in New Zealand*. Auckland: Fulbright New Zealand.

Hora, M.T., and S.B. Millar. 2011. *A Guide to Building Educational Partnerships: Navigating Diverse Cultural Contexts to Turn Challenge Into Promise*. Sterling, VA: Stylus Publishing.

Huxham, C. 1996. "Collaboration and Collaborative Advantage." In *Creating Collaborative Advantage*, edited by Huxham, C, 1–18. London: Sage.

Huxham, C., and S. Vangen. 2003. "Nurturing Collaborative Relations: Building Trust in Interorganizational Collaboration." *Journal of Applied Behavioural Science* 39 (1): 5–31.

Institute on Governance. 2015. *Defining Governance*. http://iog.ca/defining-governance/.

Israel, B.A., P.M. Lantz, R.J. McGranaghan, D. Kerr, J.R. Guzman. 2012. "Documentation and Evaluation Of Community-Based Participatory Research Partnerships." Chapter 12. In *Methods for Community-Based Participatory Research for Health*, 2nd ed. edited by B. A. Israel, E. Eng, A. J. Schultz, and E. A. Parker, 369–397. New York: Jossey Bass.

Leung, Z., D. Middleton, and K. Morrison. 2012. "One Health and EcoHealth in Ontario: A Qualitative Study Exploring How Holistic and Integrative Approaches Are Shaping Public Health Practice in Ontario." *BMC Public Health* 12: 358. http://www.biomedcentral.com/1471-2458/12/358

Lundin, M. 2007. "When Does Cooperation Improve Public Policy Implementation?" *Policy Studies Journal* 35 (4): 629–652.

Mercer, C. 2003. "Performing Partnership: Civil Society and the Illusions of Good Governance in Tanzania." *Political Geography* 22 (7): 741–763.

Mitchell, S., and S. Shortell. 2000. "The Governance and Management of Effective Community Health Partnerships: A Typology for Research, Policy, and Practice." *Milbank Quarterly* 78 (2): 241–289.

Newman, J. 2001. *Modernising Governance: New Labour, Policy and Society*. London: Sage.

O'Flynn, J. 2013. "Crossing Boundaries: The Fundamental Questions in Public Management and Policy." Chapter 2. In *Crossing Boundaries in Public Management and Policy*, edited by O'Flynn, J., D. Blackman, and J. Halligan, 11–44. New York: Routledge Press.

Ontario Ministry of Health and Long-Term Care. 2008. *Ontario Public Health Standards*. Public Health Division. Toronto: Queen's Printer for Ontario.

Public Health Agency of Canada. 2010. *One World One Health Session Report*. Winnipeg: Public Health Agency of Canada. http://www.cwhc-rcsf.ca/docs/technical_reports/PHAC_CCWHC_Carleton_University_Session_23_03_2010_final-e.pdf

Rhodes, R.A.W. 2007. "Understanding Governance: Ten Years On." *Organization Studies* 28 (8): 1243–1264.
Rittel, H.W., and M. Webber. 1973. "Dilemmas in a General Theory of Planning." *Policy Sciences* 4: 155–169.
Schultz, A.J., B.A. Israel, and P. Lantz. 2003. "Instruments for Evaluating Dimensions of Group Dynamics Within Community-Based Participatory Research Partnerships." *Evaluation and program planning* 26 (3): 249–262.
Selin, S. 1999. "Developing a Typology of Sustainable Tourism Practices. 1999." *Journal of Sustainable Tourism* 7 (3&4): 260–273.
Smith, J., and P. Wohlstetter. 2008. "Understanding the Different Faces of Partnering: A Typology of Public-Private Partnerships." *School Leadership and Management* 26 (3): 249–268.
Surman, T., and M. Surman. 2008. "Listening to the Stars: The Constellation Model of Collaborative Social Change." *Social Space* 24–29. https://centres.smu.edu.sg/lien/files/2013/10/MarkSurmanFinalAug-2.pdf
Tomlinson, F. 2005. "Idealistic and Pragmatic Versions of the Discourse on Partnership." *Organization Studies* 26 (8): 1169–1188.
United Nations. 2009. *Agenda 21*. http://www.un.org/esa/dsd/agenda21.
United Nations. 2013. *UN-Business Partnerships: A Handbook*. New York: United Nations Global Compact Office.
Veterinarians without Borders[Vétérinaires sans Frontières]. 2010. *One Health for One World: A Compendium of Case Studies*. Guelph: Veterinarians without Borders [Vétérinaires sans Frontières].
World Health Organization. 2008. *A Summary of the 2008 World Health Report* "Primary Health Care: Now More Than Ever". Geneva: World Health Organization. http://www.who.int/whr/2008/summary.pdf
Yin, R.K. 2003. *Case Study Research: Design and Methods*. 3rd ed. Thousand Oaks, CA: Sage.
Zinsstag, J., E. Schelling, D. Waltner-Toews, and M. Tanner. 2011. "From 'One Medicine' to 'One Health' and Systemic Approaches to Health." *Preventive Veterinary Medicine* 101 (3–4): 148–156.