Leadership, governance and partnerships are essential One Health competencies

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ABSTRACT

One Health is held as an approach to solve health problems in this era of complexity and globalization, but inadequate attention has been paid to the competencies required to build successful teams and programs. Most of the discussion on developing One Health teams focuses on creating cross-disciplinary awareness and technical skills. There is, however, evidence that collaborative, multi-disciplinary teams need skills, processes and institutions that enable policy and operations to be co-managed and co-delivered across jurisdictions. We propose that competencies in leadership and human resources; governance and infrastructure; and partnership and stakeholder engagement are essential, but often overlooked One Health attributes. Competencies in these staple attributes of leadership and management need to be more prominent in training and One Health capacity development. Although One Health has been in existence for over a decade, there has been no systematic evaluation of the essential attributes of successful and sustainable One Health programs. As such, much of this paper borrows from experience in other sectors dealing with complex, cross and inter-sectoral problems. Our objective is to advocate for increased investment in One Health leadership, governance and partnership skills to balance the focus on creating cross-disciplinary awareness and technical proficiency in order to maintain One Health as a viable approach to health issues at the human-animal-environment interface.

Accelerating environmental and social challenges demand more effective collective action to manage risks spanning human, animal and environmental health. Much has been written about the need to cultivate the knowledge and skills to manage One Health problems. Even more has been written about developing inter- and multidisciplinary health teams. Most of this literature emphasizes cross-disciplinary technical proficiencies and awareness, with the assumption that this will foster collaboration. Less has been written on the competencies required to lead, operationalizing and sustain One Health programs. Many countries can cite their numbers of post-graduate trainees and comparative medicine programs, but few can point to their cross-disciplinary leadership and management training opportunities.

One Health will be advanced by co-developing scientific methods and measures, but organizational innovation is needed to foster and sustain cross-sectoral cooperation [1] "Collaboration needs to be understood not only as a professional endeavor, but also as a human process" [2]. In addition to technical skills, effective team members need to be skilled in group processes and team development [3]. One Health requires skills, processes and institutions that enable policy and operations to be co-managed and co-delivered across jurisdictions. One

Health needs to take place in a new shared space, where single agencies or individuals no longer act as independent entities. One Health practitioners need to mobilize information across disciplines and institutions to guide policy and program decisions and to foster coordinated actions. We propose that competencies in leadership and human resources; governance and infrastructure; and partnership and stakeholder engagement are essential, but often overlooked One Health attributes.

1. Leadership and human resources

"Leaders substantially influence collaborative processes and outcomes" [3]. One Health needs leaders able to manage a broad range of complex issues and integrate, negotiate and evaluate collaborative partnerships. "Issues of leadership and responsibility will need to be addressed in a way that fills collaboration gaps, reduces duplication and avoids exacerbating divisions and isolation" [4]. Several initiatives have been launched to address this gap such as the One Health Leadership Experience at the University of Saskatchewan and the One Health, One Caribbean, One Love Leadership program offered by the University of the West Indies.

One Health is both inter-professional and inter-organizational. One Health leaders, therefore, need to excel in leading networks of people across traditional boundaries where commands and information flow

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in all direction (known as horizontal leadership). While pathogen oriented "vertical" programs are easier to fund, horizontal initiatives are a surer pathway to sustaining collaborative efforts such as regional surveillance networks [5]. Horizontal leaders excel at strategic analysis, and have excellent relational and troubleshooting capacities. They have excellent solution finding techniques, are preoccupied with the organizational quality, and have an innate sense for organizing work in complex models [6]. They show constant flexibility and absolute transparency.

One Health workers need to have both a strong disciplinary background as well as training to work in multi-disciplinary settings. In some instances, there may be people formally tasked with One Health duties (such as the Director of the US Centres for Disease Control and Prevention One Health office). Often, One Health duties may be fulfilled by someone working without explicit recognition of this role in their job description. An effective way to prepare for such roles is to help people move across sectors and organizations to gain insights and experience beyond a single discipline or agency. Human resource development should; (i) support, encourage and sustain assignments that build One Health perspectives and attributes; (ii) assist personnel to develop and apply One Health perspectives and; (iii) recognize and reward individuals and teams that perform well in such roles.

2. Governance and infrastructure

Improved governance is key to strengthening One Health capacity [7]. Most countries need new forms of governance to prepare for the complex challenges and multi-actor responses needed to combat infectious and non-infectious disease [8]. One Health requires processes, rules and institutions that enable policy and practice to be co-managed and co-delivered. This, in turn, relies on good partnerships, institutional structures and a culture that supports One Health perspectives and goals. A One Health governance framework is about more than accountability: It must build shared understanding and trust along with an appreciation for different perspectives and needs.

Inequitable distribution of decision making power and resources is a major impediment to sustaining collaborative teams [3]. One Health policy, program design and delivery should preserve legislated authority of the individual partners while creating more effective and efficient solutions to health problems through collaboration. This requires leadership that motivates, enables and encourages, which is quite different from the exercise of authority through command and control in a hierarchical structure. One Health should bring together diverse people and orchestrate the use of their authorities in complementary ways to achieve a common purpose and a shared vision of goals and outcomes.

There are many coordination mechanisms that can support One Health goals such as working groups and inter-personal relationships that span government agencies and jurisdictions, private-public partnerships, networks, and/or community working groups. These can be based on informal relationships driven by a shared vision, or formal mechanisms such as memoranda of understanding. Once aligned on a common goal in the public interest, collaboration may be achieved by means as simple as a phone call that could advance joint interests or avoid costly errors. The control of animal and human rabies in Canada, for example, operated effectively for decades based on collaboration amongst veterinary, human health and wildlife officials from private and public sectors spanning federal, provincial and local levels, with no formal integrating structure. The Canadian Wildlife Health Cooperative (CWHC), as another example, influences public health, conservation and economic outcomes by promoting, sustaining, coordinating and integrating pre-existing infrastructure and expertise across sectors and regions. The CWHC does not have legislated authority. Rather, it provides a focal point through which fragmented authority and legislation coalesce into a coherent perspective.

A key role for One Health governance is to sustain relationships over the longer term. Productive, trusting and mutually rewarding

partnerships take time to build and require support. Legal frameworks, physical and virtual infrastructure, and the system of budgeting should support collaborative and coordinated policy, planning, research, and action. Ease of transferring funds between agencies or organizations to realize One Health goals is an important mechanism for success. Institutional cultures should foster transparent information sharing, surge capacity for issues needing collaboration, and effective communication for coordinated messaging. Sharing workload and facilities (for example one rather than two central laboratories to meet the public health needs of the veterinary services and the Ministry of Health) may be a means to not only increase the efficiency of delivery of One Health programs but also to build understanding and trust across programs.

3. Partner and stakeholder engagement

Partnerships and collaboration offer powerful opportunities for joint actions that provide sustainable benefits [9], but territorial behaviour amongst professional groups and agencies are difficult barriers to collaboration [10]. One Health requires partnerships with a diversity of collaborators and stakeholders because it crosses disciplinary, species and subject boundaries. The joint vision of the Food and Agriculture Organization, World Organization for Animal Health and World Health Organization for effective collaboration at the human-animal interface, for example, is predicated on strong partnerships [7]. The scope of partnerships will depend not just on the issues at hand but on the willingness, freedom and capacity of key players to share responsibilities and available support. Because One Health emphasizes finding practical solutions, partnerships should include decision makers, practitioners, and communities in the full range of activities, from setting priorities to implementing solution. This approach was followed when establishing the Sri Lanka Wildlife Health Centre [11]. The historical approach where various disciplinary experts work on different aspects of an issue in isolation, with little communication amongst information producers and those who will use and benefit from the information, is ill suited to One Health. Antimicrobial resistance is a good example where partnerships amongst academia, animal health, public health and environment agencies are as vitally important as collaborations with citizens and private sector players who are often in the best position to know what is required in terms of allocation of resources, benefits, and the management of risks and their impacts. The Government of Canada has recently launched a Federal Action Plan on Antimicrobial Resistance that engages provincial and federal jurisdictions, academia, public health and veterinary practitioners as well as the pharmaceutical, livestock production and feed industries. The development of national strategies to address chronic wasting disease in Canada similarly required collaboration amongst federal and provincial governments and was facilitated by knowledge and initiatives from academics, hunters and farmers.

Cross-cultural and cross-disciplinary capacities are needed to improve communication, consultation and partnerships required to design and implement One Health programs. An example would be a livestock identification and traceability system flexible enough to meet the needs of traditional pastoralists as well as more intensive livestock production systems. Existing structures should support consultation and engagement of partners and stakeholders in policy formulation, program design and delivery, and governance. The ability to manage constructive multi-stakeholder negotiations to resolve conflicting interests to the extent possible is a necessary competency. Early engagement of partners is key to effective horizontal management therefore teams need to consider when partners should be brought together to develop visions and goals. Technology can facilitate more equitable knowledge sharing amongst partners. For example, cellular phone messaging supported social network dissemination of best practices to promoted rural economies and reduce disease in shrimp farms [12].

Training in public engagement, communication, participatory methods or other relevant fields are required to engage the public,

stakeholders and partners, especially indigenous people. One Health training should include cross-cultural communications skills, team building and trust development. Shared leadership builds the trust needed for long term relationships that can survive beyond a single project. But perhaps most critical to effective partnering are true collaborative goal setting, transparent and explicit expectations of partners that matches their capacity, and clear guidelines on responsibilities, reporting and information sharing.

One Health requires institutions and processes that cultivate non-technical expertise in areas such as leadership, advocacy, partnership, knowledge translation, evidence based decision making and capacity development. In this paper we propose that, to be effective and sustainable, One Health not only needs people who know something about the fields of expertise they are bringing together, but also a cadre of people proficient in the leadership and organizational skills that are essential to functional multi-disciplinary collaborations.

Conflict of interest statement

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