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**Dialogue Summary:  
Strengthening National Health Systems' Capacity to Respond to Future Global Pandemics**

4 November 2013

#### McMaster Health Forum

For concerned citizens and influential thinkers and doers, the McMaster Health Forum strives to be a leading hub for improving health outcomes through collective problem solving. Operating at the regional/provincial level and at national levels, the Forum harnesses information, convenes stakeholders, and prepares action-oriented leaders to meet pressing health issues creatively. The Forum acts as an agent of change by empowering stakeholders to set agendas, take well-considered actions, and communicate the rationale for actions effectively.

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#### Conflict of interest

The authors declare that they have no professional or commercial interests relevant to the dialogue summary. The funder reviewed a draft dialogue summary, but the authors had final decision-making authority about what appeared in the dialogue summary.

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#### Dialogue

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## SUMMARY OF THE DIALOGUE

The deliberation about the problem focused on five sets of challenges to strengthening national health systems' capacity to respond to future global pandemics: 1) the difficulty of making accurate assumptions about future global pandemics; 2) the lack (or complete reach) of a favorable "cultural climate" to respond to future global pandemics; 3) the lack of a systems approach to deal proactively with the root causes of pandemics; 4) the lack of innovation in research, especially during a pandemic or a crisis; and 5) the lack of resources to address future global pandemics. Dialogue participants held different views about the most meaningful way to frame the dialogue: strengthening capacity domestically and/or internationally.

Dialogue participants generally supported three potential elements of a comprehensive approach to address the problem. They focused primarily on enhancing national health systems' surveillance capacity (element 1) and strengthening capacity to respond to the variability of pandemics (element 2), and to a lesser extent on strengthening the global pandemic governance system (element 3). Participants identified several areas in which significant progress has been made or is currently being made: 1) in enhancing surveillance capacity (e.g., developing strong surveillance systems; sharing data collection, analysis and assessment; and providing dedicated funding for key public-health functions); 2) in strengthening capacity to respond to the variability of pandemics (e.g., building relationships and trust through collaborative initiatives; developing adaptive decision-making structures and processes; and developing health risk-communication strategies); and 3) in strengthening the global pandemic governance system (e.g., strengthening information sharing at the WHO and bilateral levels). Participants also pointed out several areas for which there is a need to make greater progress, such as establishing collaborative interdisciplinary teams that can address human, animal and environmental health, better capturing the full potential of social media, and correcting failures of collaboration at the global level.

When the focus of deliberation turned to next steps for different constituencies, several dialogue participants articulated a sense of urgency to strengthen national health systems' capacity to respond to future global pandemics, and the need to pro-actively pursue particular courses of actions. Many dialogue participants committed to supporting the development of linkages across disciplines, sectors and jurisdictions, connecting and networking Canadian groups to current international efforts, and taking stock of the lessons learned 10 years after the SARS crisis and examining these lessons based on today's knowledge and experience. Dialogue participants also identified concrete steps that they could take depending on the nature of their organizations and/or roles, such as: mobilizing other forums to raise the prominence of the issue; increasing collaboration between funding agencies in Canada and internationally to support the capacity to conduct innovative research during a pandemic or a crisis; and designing an asset map of Canada's capacities to identify where we are, what's working (and not) and what the best use of resources could be.

## SUMMARIES OF THE FOUR DELIBERATIONS

### DELIBERATION ABOUT THE PROBLEM

The deliberation about the problem focused on five sets of challenges to strengthening national health systems' capacity to respond to future global pandemics. First, several dialogue participants discussed the difficulty of making accurate assumptions about future global pandemics. Several dialogue participants mentioned the need to have robust estimates of impact, for example, in order to manage risk perceptions. Otherwise, they noted, public confidence in health systems will erode. One participant described the challenge of managing perceptions regarding the risks associated with future global pandemics: "We are constantly battling perceptions, [such as] Armageddon and 'zombie apocalypse' scenarios that will never happen. The assumption is that if there were 50 million deaths with the 1918 flu pandemic, then there will be three times as many now."

A second key challenge was the lack (or incomplete reach) of a favorable "cultural climate" to respond to future global pandemics. Strong relationships and open communication across stakeholders, sectors and jurisdictions were seen as critical to a favourable cultural climate. One dialogue participant noted that "whether it is the next train wreck or pandemic, until we have that fundamental culture in place, we will be challenged. We need the basics in place." A few participants focused on the need to engage the public and providers at the front end of pandemic preparedness: "It's missing and it's foundational to the success." Other participants emphasized the need to provide useful information to all relevant stakeholders. As one individual put it, "it's ensuring that all the right people have the right information." Still others focused on key leaders. One participant argued that the situation was better in Canada than in other jurisdictions because of an ongoing conversation via the Pan-Canadian Public Health Network and other forums. A second participant pointed to the Global Health Security Initiative as another example of a forum that can strengthen cross-jurisdictional relations and promote information sharing to respond to future global pandemics. However, a third participant expressed concerns about the lack of 'interface' between human, animal and environmental health: "We have a long way to go to operationalize this." A fourth participant agreed and encouraged the use of the 'one health' concept, which the individual noted is failing to 'get traction.'

#### **Box 1: Background to the stakeholder dialogue**

The stakeholder dialogue was convened in order to support a full discussion of relevant considerations (including research evidence) about a high-priority issue in order to inform action. Key features of the dialogue were:

- 1) it addressed an issue currently being faced in Canada and in other countries in North America;
- 2) it focused on different features of the problem, including (where possible) how it affects particular groups;
- 3) it focused on three elements of a comprehensive approach (among many) for addressing the policy issue;
- 4) it was informed by a pre-circulated issue brief that mobilized both global and local research evidence about the problem, three elements of a comprehensive approach for addressing the problem, and key implementation considerations;
- 5) it was informed by a discussion about the full range of factors that can inform how to approach the problem and possible options for addressing it;
- 6) it brought together many parties who would be involved in or affected by future decisions related to the issue;
- 7) it ensured fair representation among policymakers, stakeholders and researchers;
- 8) it engaged a facilitator to assist with the deliberations;
- 9) it allowed for frank, off-the-record deliberations by following the Chatham House rule: "Participants are free to use the information received during the meeting, but neither the identity nor the affiliation of the speaker(s), nor that of any other participant, may be revealed"; and
- 10) it did not aim for consensus.

Participants' views and experiences and the tacit knowledge they brought to the issues at hand were key inputs to the dialogue. The dialogue was designed to spark insights – insights that can only come about when all of those who will be involved in or affected by future decisions about the issue can work through it together. The dialogue was also designed to generate action by those who participate in the dialogue, and by those who review the dialogue summary and the video interviews with dialogue participants.

A third challenge was the lack of a systems approach to deal proactively with the root causes of pandemics. A few dialogue participants noted that we have to be prepared for a variety of potential causes, including the growing threat of microbial resistance, issues pertaining to drug development and commercialization, as well as international and domestic regulations that may interact negatively with our capacity to respond to future global pandemics. One participant was concerned about our capacity to address such causes: “We don’t have the system to facilitate that.” A second participant argued that there is little effort invested in healthy public policies, health-in-all policies or whole-of-government approaches. This participant went further, suggesting that governmental structures are not up to what we ask of them: “We are not supporting a resilient system that is able to cope with surprises.” A third participant acknowledged this challenge, but argued that it was still important to plan for who should be brought together: “We can never plan for what is going to happen, but we can plan for who should be brought together provincially and federally.” A fourth participant agreed that the lack of a systems approach was a particular challenge in Canada: “We need to keep solving the problem of assigning roles. We get sick of it and we forget about it, but it comes back again.”

A fourth challenge was the lack of innovation in research, especially during a pandemic or a crisis. One participant noted that “the system is not in place to do research during those times. We need ... better stewardship, better surveillance and better linkages, especially with animal health.” This participant explained the difficulty of mobilizing existing research capacity on short notice, but pointed to some successes in this area that need to be expanded (e.g., pre-approved research teams, expedited research funding and rapid ethics review processes). The research community must be ready for “peace times and emergency times,” as another participant put it. To achieve this, the individual noted, coordination at the national and international levels appears necessary. The Public Health Agency of Canada/Canadian Institutes of Health Research (CIHR) Influenza Research Network was mentioned as an example of a support for such coordination at the national level in Canada. The CIHR-supported Strategy for Patient Oriented Research (SPOR) was noted as having the potential to play a role as well.

A fifth challenge was the lack of resources to address future global pandemics. A few dialogue participants mentioned the challenge of keeping the issue alive as a political priority, especially when many people consider pandemic preparedness as a “side-of-the-desk issue.” One participant mentioned that significant investments were made following the SARS crisis and these investments have resulted in greater capacity in Canada: “We are much better off collectively than 10 years ago with SARS.” A second participant acknowledged that there has been some robust institutional development in Canada post-SARS, with the creation or strengthening of many agencies (e.g., Public Health Agency of Canada, BC Centre for Disease Control, Public Health Ontario, and Institut national de santé publique du Québec). However, this participant expressed concern that federal-government commitments have been diminishing in recent years. Many participants agreed that dedicated and sustainable funding to prepare for future global pandemics was crucial, but currently lacking.

Some dialogue participants held different views about what should be the focus of the dialogue: strengthening capacity domestically or strengthening capacity internationally. One participant noted that this is not just a challenge for the dialogue, but for the country as a whole: “We are constantly struggling with our domestic versus our international responsibilities.” A second participant wondered if the focus should be on Canada’s capacities (and not on finding a set of capacities that are germane to all health systems). This participant argued that this could change the nature of the dialogue. For instance, focusing on Canada may channel attention to issues of governance and accountability in a federal system. Other participants believed that many capacities were universally relevant and that there was a need to focus on drawing lessons domestically that might then be transferrable internationally. One participant said: “You’ve got to start somewhere, but you have to draw in the others.” Another participant agreed: “There is much to be done in our areas of influence. Let’s work on what we can do, within the scope of our own levers. If there are lessons that are transferrable, so be it.”

Other participants expressed the need to look at the challenges to build capacity around the world, especially in a context where (as a participant indicated) less than 20% of countries have the capacity to respond to pandemics. One dialogue participant mentioned that there is no choice but to think globally: “We don’t know where the problem is going to come from.” A second participant agreed and illustrated the need to think globally with the example of the 2009 swine flu: “The last pandemic originated from North America. Within a week, we were seeing cases in Canada. We didn’t recognize it until it got severe. Hopefully, we have capacity to stop this from spreading. It could have been worse if it started in Africa.” A third participant pointed out that 20 years ago, both the World Health Organization (WHO) and the Centers for Disease Control and Prevention were committed to building international capacity to respond to global pandemics. Now, the individual noted, a lot more national organizations have developed capacity, whereas WHO has seen its budget (and hence its capacity) cut in recent years (although WHO could play a key role in facilitating connections among these national organizations).

Some dialogue participants also held different views about the need to focus the dialogue on preparing for global pandemics or preparing for the unexpected. One participant noted: “We often talk about preparing for emergencies, but it is often during crises that existing mechanisms break down.” Therefore, a few participants considered that it would be more relevant to prepare for a range of scenarios, especially crises that are unexpected. A second participant agreed, mentioning that our problems have been about preparing for surprises, as well as managing fear and risk perception, but not about “dead bodies piling up.”

## **DELIBERATION ABOUT POLICY AND PROGRAMMATIC OPTIONS**

Dialogue participants generally supported the three potential elements of a comprehensive approach to address the problem, although they focused more on enhancing national health systems’ surveillance ability (element 1) and strengthening capacity to respond to the variability of pandemics (element 2), than on strengthening the global pandemic governance system (element 3).

### **Option 1 - Enhance national health systems’ ability to detect pandemic risk factors, identify causal pathogens, characterize emerging diseases and monitor how they evolve**

The deliberation about the first element identified three areas in which significant progress has been made or is currently being made in enhancing surveillance ability. The first area of progress is developing strong surveillance systems. That said, some dialogue participants pointed out the need to keep pushing to ensure that such systems include all types of relevant data, and that the data are available in a timely fashion. One participant acknowledged that surveillance systems may have improved, but was concerned that it took 10 years post-SARS to achieve this: “It’s a bit of a worry that it took so long.” The second area of progress is in sharing data collection, analysis and assessment. Several participants pointed out the need to create or take advantage of the necessary enablers to facilitate these ongoing exchanges across jurisdictions. However, two participants emphasized the need to begin addressing the lack of information sharing by pharmaceutical companies. The third area of progress is providing dedicated funding for key public-health functions and, to a lesser extent, for collaborative inter-professional research. However, participants expressed the need to get over governments’ reluctance to making long-term commitments. A few participants also held different views about whether earmarked funds for public-health functions (as exist in Saskatchewan and New Zealand) or service-level agreements for such functions are worth pushing for.

A number of participants argued that we are moving towards making significant progress in addressing the legal barriers for sharing information. However, one dialogue participant mentioned the impact of the existing intellectual-property regime on information sharing. Reflecting on the recent experience with Tamiflu, this participant expressed concerns about the industry’s track record of limiting the information that it shares, and the consequences of this for governments’ abilities to make informed spending decisions.

Participants also pointed out two areas for which there is a need to make progress. First, there is a need for establishing collaborative interdisciplinary teams that can address human health, animal health (including wildlife, not just agriculture) and environmental health. A few participants also emphasized the need to ensure that professional training programs are preparing future graduates to work this way. Second, there is a need for enhancing bottom-up approaches for monitoring and mitigating risks, particularly in human health (where useful information can be fed back to those providing data) and in animal health. One participant noted that human health is heavily ‘rooted’ within government as an area of public responsibility, in contrast with animal health, which is often seen as an area of private responsibility (for agriculture) or of no one’s direct responsibility (for wildlife). This individual suggested that this may explain some of the barriers to achieving greater interdisciplinary collaboration.

## **Option 2 - Strengthen the capacity of national policymakers and stakeholders and the public to more adequately respond to the variability of pandemics**

The deliberation about the second element identified four areas in which significant progress has been made or is currently being made to strengthen capacity to respond to the variability of pandemics. The first and most-discussed area of progress relates to past and ongoing efforts to build relationships and trust through collaborative initiatives that generate results (e.g., food-borne outbreaks) or lessons (e.g., after-action reviews). Some participants also pointed out that these efforts need to be extended to strengthen the human-animal-environmental health interface. However, participants held different views about whether legislation needs to drive these efforts. On one hand, some participants believed that there was a need to use various policy tools to nurture these relationships and build trust: “I often hear that it’s about culture, trust and collaboration. They don’t fall out from the sky. It’s the money and the institutions allowing that to happen. Culture and trust is a given. What we need to know is how to do that. There is a sweep of policy tools that could help talking across sectors, but figuring out how to do that is tricky.” On the other hand, some participants argued that strong relations and trust cannot be built in such a way: “Meaningful consultation and engagement cannot be legislated.”

The three other areas of progress included: 1) developing adaptive decision-making structures and processes (with some participants emphasizing the need to keep using - and normalizing - them and to ensure points of articulation with structures and processes in acute and primary care); 2) developing health-risk communication strategies (with some participants expressing the need to continue to refine these strategies, to use them early and often, and to also use them to better communicate success stories and lessons learned); and 3) establishing well-recognized authorities as trusted sources of information (although some participants argued for extending our engagement of sources beyond ‘official’ authorities to include front line and ‘informal’ authorities, and others argued for also engaging those with dissenting views regarding pandemic risks).

Participants also highlighted two areas in which there is a need to make progress. First, there is a need to work with (or more closely with) social-media experts to capture the full potential of social media. One participant said: “Public health is its own worst enemy. We need to do better. It’s not part of our ethos of getting the message across.” A second participant highlighted the need for the public-health community to fill the current void in social media: “If we don’t dominate the space, someone else will and it only takes seconds.” A third participant highlighted four potential purposes for social media: 1) to articulate what public health is actually doing and the importance of investment; 2) to respond to fear and panic among the public; 3) to provide real-time updates to support everyday activities on the ground; and 4) to create synergy between disciplines. However, some participants were cautious about the use of social media. One said: “The combination of uncertainty and speed is a toxic mix. Social media is not for amateurs. The tool is a terrific one, but you need to carefully use it.” Others pointed out the need to recognize that not everyone uses social

media: “Bringing balance is also about not creating information vulnerabilities. [For instance], elders may not access information that way.”

Second, participants also pointed out the need to address the lack of pharmaceutical company investment in drugs that are appropriate to the settings where they will be used.

### **Option 3 - Strengthen the global pandemic governance system**

The deliberation about the third element focused on governance structures that can adapt to the specific circumstances of a global pandemic and that can support the development of a response that is sensitive to key scientific, political and ethical considerations. Participants identified two areas in which progress has been made or is currently being made to strengthen the global pandemic governance system. First, some noted that some progress has been made at the WHO level in strengthening information sharing between select countries. Second, a few participants pointed out that some progress has been made at the bilateral level (for example between two countries' governments, public health agencies or academic and training institutions).

Many participants talked about ‘weak’ global governance and identified three areas in which there is a need to make progress. First, some participants pointed out the need to correct failures of collaboration at the global level, possibly through mechanisms such as an international treaty on research and a more “open-source environment” for research about pandemics. Second, a few participants suggested organizing the global pandemic governance system by region or on some other ‘matching’ basis. One participant argued that public health agencies could play the role of ‘brokers’ in these regions. Another participant noted that the Pan American Health Organization performs just such a role for the Americas. A third participant suggested nurturing tri-partite collaborations among high-, middle- and low-income countries. A fourth participant agreed: “There are dozens and dozens of collaborations in academia, bilateral and multilateral joint programs. We can’t collaborate with every single group, we need to be more specific. The challenge is to strategically coordinate and match countries.” Third, participants highlighted the need to rely not only on formal collaborations and partnerships, but also to nurture more informal ones. One participant referred to the 2004 Indian Ocean earthquake and tsunami, where informal mechanisms worked very rapidly and effectively: “Someone picked up the phone and asked how we could help.”

Participants held different views about the use of enforcement mechanisms, including financial incentives, to support the global pandemic governance system. One dialogue participant mentioned that the World Health Organization was ‘weak’ since it cannot bind nations and has no dispute-resolution mechanism, in contrast to the World Trade Organization, which has binding agreements. A second participant referred to the International Health Regulations, which require risk disclosure by all 194 member states, but admitted that there was no enforcement mechanism. A third participant argued that “penalties are not a timely mechanism.” A fourth participant noted that if we assume that public health should trump trade, a key question remained: “Where is the threshold [for penalties and enforcement of penalties]?”

### **Considering the full array of options**

Dialogue participants generally supported the three potential elements of a comprehensive approach to address the problem, although as noted they gave greater attention to elements 1 and 2. The only additional sub-element raised (as also noted) was drug discovery, development and delivery as it relates to pandemics.

## **DELIBERATION ABOUT IMPLEMENTATION CONSIDERATIONS**

Dialogue participants discussed two barriers to implementing the key elements of a comprehensive approach to strengthening national health systems' capacity to respond to future global pandemics. First, pandemic preparedness is at the sidelines of peoples' lives, not the centre. As one participant noted, "it's hard to look globally if we haven't done our homework nationally." Second, silos continue to create problems at the level of disciplines and jurisdictions. One participant noted that there had been some effort to break down silos, but that these were often limited in scope. For instance, some programs of the Canadian Food Inspection Agency's Office of Biohazard Containment and Safety were recently merged with the Public Health Agency of Canada's Pathogen Regulation Directorate (PRD) were recently merged. However, these programs still do not address wildlife or pets.

Participants discussed three potential windows of opportunity to pursue the "unfinished agenda" of pandemic preparedness: 1) ongoing conversations and initiatives; 2) visibility of certain pandemic-relevant issues on government agendas; and 3) mechanisms to support the sharing of lessons between countries. First, many participants were optimistic about our capacity to build momentum through ongoing conversations and initiatives. For instance, participants mentioned recent international meetings of major research funders that could pave the way to greater international research collaborations for pandemic preparedness. Others highlighted as opportunities the recent development of a pan-American pandemic plan, current conversations that could lead to a multilateral agreement on information sharing, and the work of the Pan-Canadian Public Health Network. Second, certain pandemic-relevant issues are currently high on many government agendas, which in the view of some participants, provides a 'way in' for other related issues. For example, antimicrobial resistance was identified as a major health security challenge at the G8 science ministers' meeting in 2013. This was seen as an opportunity for "advocacy" and "get[ting] political traction." Third, a few participants highlighted that mechanisms such as the Global Health Research Initiative can help to translate lessons learned from low- and middle-income countries to Canada.

## **DELIBERATION ABOUT NEXT STEPS FOR DIFFERENT CONSTITUENCIES**

When the focus of deliberation turned to next steps for different constituencies, several dialogue participants articulated a sense of urgency to strengthen national health systems' capacity to respond to future global pandemics. One participant expressed concerns about all the challenges we are currently facing and the need to be prepared: "A lot of people would be gob-smacked that so many of those issues are not functioning the way they should be.... Ultimately, when we have these surprises, we want the rubber to hit the road. We don't want the process to be derailed because of cynicism." A second participant highlighted the need to proactively pursue different courses of action and to build on the current momentum: "We should move forward with concurrent action whenever there is a shared vision – let's not wait around for legislation and act on what we can now."

Many dialogue participants committed to: 1) supporting the development of linkages across disciplines, sectors and jurisdictions; 2) connecting and networking Canadian groups to current international efforts; and 3) taking stock of the lessons learned 10 years after the SARS crisis and examining these lessons based on today's knowledge and experience.

Dialogue participants also identified concrete steps that they could take depending on the nature of their organizations and/or roles, such as:

1. encouraging federal and provincial agencies to engage with professional organizations to work through points of articulation with structures and processes in acute and primary care;
2. mobilizing other forums to raise the visibility of the issue with government officials, and with people outside of government but closely associated with those officials (with examples of such forums including

the Canadian Coalition for Public Health in the 21<sup>st</sup> Century, the Health Action Lobby, the World Health Assembly, including the civil society meetings that precede it, and the World Federation of Public Health Associations);

3. engaging and supporting credible sources, such as medical officers of health at the local level, to become more vocal public voices to raise the visibility of the issue within their spheres of influence, and working with (or more closely with) social-media experts to capture the full potential of social media;
4. getting students to explore new legal frameworks and write innovative model legislation (for example, informed by behavioural economics) that can strengthen capacity to respond to future global pandemics;
5. increasing collaboration between funding agencies in Canada (both among the three funding councils at the national level and with provincial funding agencies) to support the capacity to conduct innovative research during a pandemic or a crisis and in turn encouraging a coalition of these funding agencies to lead an effort to build an international 'club' of committed funders to do the same;
6. funding 'best brains' exchanges (through the Canadian Institutes of Health Research) to bring leading researchers together with senior civil servants from across key government departments and from across Canadian jurisdictions to explore intersectoral issues relevant to pandemic preparedness;
7. supporting the bid that Canada put forward to host the 2018 One Health international meeting as a way to spur the reflection and actions needed to present a convincing case of Canada's potential for leadership in this area; and
8. designing an asset map of Canada's capacities to identify where we are, what's working (and not) and what the best use of resources could be.



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