WHO Global Response to COVID-19

Communicating Risk / Risky Communication

Rapid Results Report

Phase 1: December 31, 2019 to January 31, 2020

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WHO Global Response to COVID-19: Communicating Risk / Risky Communication Rapid Results Report Phase 1: December 31, 2019 to January 31, 2020

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Abstract - Résumé

English

The present study is an analysis of the communication and information shared by the World Health Organization (WHO) from December 31, 2019 (when the first pneumonia cases from unknown cause were detected in Wuhan, China) to January 31, 2020, the day after the WHO declared COVID-19 a Public Health Emergency of International Concern (PHEIC). All recommendations, statements, press conferences, tools, social media posts, and guidelines released by the WHO during this period were reviewed to identify the WHO information and communication strategy. In this first report in a series of reports, our objective is to examine the WHO strategy within the context of uncertainty, data shortages and insufficient cooperation. Those factors have greatly affected a coordinated global response towards the novel coronavirus. This report thus seeks to illuminate recent criticisms expressed by international actors against the WHO by looking specifically at problems, failures and limitations of the communication and information strategy of this international organization. We present key findings on the WHO's use of social media and other tools, as well as the findings of a Canadian survey suggesting that the WHO may have appeared too far removed as a source of information to be able to reduce stress, anxiety and misinformation.

Français

La présente étude est une analyse portant sur les communications et les informations partagées par l'Organisation mondiale de la santé (OMS) entre le 31 décembre 2019 (lorsque les premiers cas de la pneumonie de cause inconnue ont été détectées à Wuhan, en Chine) et le 31 janvier 2020, le jour suivant la déclaration de l'OMS établissant que la COVID-19 est une Urgence de santé publique de portée internationale (USPPI/PHEIC). Toutes les recommandations, déclarations, conférences de presse, outils, messages sur les médias sociaux et lignes directrices publiés par l'OMS durant cette période ont été passés en revue afin de mieux comprendre la stratégie d'information et de communication de l'OMS. Dans ce premier rapport d'une série dont plusieurs autres sont à venir, notre objectif est d'étudier la stratégie de l'OMS dans un contexte d'incertitude, d'insuffisance de données et de coopération insuffisante. L'ensemble de ces facteurs ont grandement affecté une réponse mondiale coordonnée à l'égard du nouveau coronavirus. Ce rapport cherche aussi à éclairer les récentes critiques par les acteurs internationaux à l'encontre de l'OMS en examinant spécifiquement les problèmes, les défaillances et les limites de la stratégie de communication d'information de cette organisation internationale. Nous présentons les principales conclusions sur l'utilisation par l'OMS des médias sociaux et d'autres outils, ainsi que les résultats d'une enquête canadienne suggérant que l'OMS a pu sembler trop éloignée comme source d'information pour être en mesure de réduire le stress, l'anxiété et la désinformation.

Acronyms

COVID-19 – The disease caused by novel coronavirus

DG – Director General

DON – Disease Outbreak News

EC – WHO Emergency Committee under the 2005 IHR

GAD – Generalized Anxiety Disorder

IHR – International Health Regulations, 2005

PHEIC – Public Health Emergency of International Concern

PTSD – Probable Post-Traumatic Stress

SR – WHO Situation Reports for COVID-19

WHO – World Health Organization

Content

1. Methods & objectives

We conducted an analysis of the communication and information shared by the World Health Organization (WHO) from December 31, 2019 (when the first pneumonia cases from unknown cause were detected in Wuhan, China) to January 31, 2020, the day after the WHO declared COVID-19 a Public Health Emergency of International Concern (PHEIC). All recommendations, statements, press conferences, tools, social media posts, guidelines, etc. released by the WHO during this period were reviewed to identify the WHO information and communication strategy.

Future reports will analyze subsequent periods of time of the ongoing WHO information and communication strategy. In this first report, our objective is to examine the WHO information and communication strategy during this sensitive period when uncertainty, data shortages and insufficient cooperation greatly affected a coordinated global response towards the novel coronavirus. This report thus seeks to illuminate recent criticisms expressed by international actors against the WHO by looking specifically at problems, failures and limitations of the communication and information strategy of this international organization.

By doing so, we detail the WHO information and communication strategy until the declaration of COVID-19 as a PHEIC and compared it with the criticism expressed recently against WHO action during this specific period of time (December 31, 2019 – January 31, 2020). In order to do this, we used publicly available information, recommendations, tools, press conferences, guidelines, social media postings and other documents produced and circulated by the WHO through their communication and information activities. We performed both a quantitative and qualitative analysis of this information.

We also rely on a survey conducted in Canada (pilot phase, to be conducted in other countries) where we examine how the Canadian population understood and reacted to the COVID-19 pandemic. This web-based survey was conducted from April 8-11, 2020, among a representative sample of 600 Canadian adults (n=300 in Québec and n=300 in the other provinces or territories across Canada). Two psychological outcomes were assessed: probable post-traumatic stress disorder (PTSD) and probable generalized anxiety disorder (GAD). Among others, we looked at the

level of confidence in authorities and sources regularly used to get information (including the WHO). Chi-square tests were used to examine differences between groups. All data were weighted for age, sex and provinces.

Data are available on request.

2. Key findings

WHO communication strategy findings:

- The WHO privileged social media communication over more formal and IHR based communication tools (the Disease Outbreak News – DONs).

- Different social media were used indiscriminately to communicate about cases in the early stage of the pandemic without apparent social media strategy (Twitter is used predominantly).

- Overall, several communication media were used without a clear and well-identified communication and information strategy by the WHO. From this multiplication of communications and media used, a confusion over the terms and concepts emerged as well as over what exactly the WHO was recommending and for whom.

- A lack of regularity in the use of social media was also identified (one post vs multiple posts vs one/several social media platforms).

- The WHO, in the Situation Report, wrongly identified the global risk assessment for 3 days in a row (SR 3, 4 & 5). This created confusion over the WHO risk assessment at a critical period of time.

- Criteria for risk communication are unclear and not disclosed publicly.

- It is difficult to distinguish WHO recommendations based on science and expertise versus political recommendations.

- Ambiguity arose around travelling advice.

- In the various and multiple WHO communication and information pieces analyzed, it is unclear who exactly was talking and expressing viewpoints for the international organization. The Director General also appeared to personify power at the WHO level, which also raised confusion as not everyone identified with the WHO Director General or felt politically linked with the WHO.

Canadian survey findings:

- Proximity and a sense of connection with the source of communication seems to play an important role in the psychosocial impacts of COVID-19. The closer the source of information and communication to the local populations, the lesser the psychosocial impacts appear to be. The WHO appears too far removed as a source of information to be able to reduce stress, anxiety and misinformation.

- Probable post-traumatic stress disorder (PTSD) and probable generalized anxiety disorder (GAD) were observed in 25.5% and 25.4% of the Canadian respondents, respectively.

- The WHO and the Canadian federal and provincial governments were cited as a regular source of information by 62.5%, 81.9% and 89.6% of the survey respondents, respectively.

- Probable PTSD and GAD were found to be statistically more frequent among respondents who reported using the WHO regularly or federal government as a source of information (macro level sources of information), while this was not the case for more local sources of information.

3. Context: Understanding the critical look at the WHO

Criticisms against the WHO during COVID-19

Since the first cases of COVID-19 were declared by the Chinese authorities in late December 2019, the WHO has been steadily acting and responding to the evolution of the outbreak. The actions of the international organization have, however, recently come under harsh scrutiny, leading to important criticisms, including, but not only, from the President of the United States, Donald Trump. During the early stages of the outbreak, President Trump praised the Chinese authorities for their discipline and work in containing the virus[1], as did the WHO[2]. He also expressed how the WHO has been working hard and smart to cope with the outbreak[3]. However, as the situation began to worsen in the United States early April 2020, President Trump and others began to express dissatisfaction with the WHO's global handling of the pandemic.

On April 6, 2020, several US politicians called for the resignation of Dr. Tedros Adhanom Ghebreyesus, the WHO Director-General[4] and since late January, an online petition has been circulating asking him to resign. This petition has been signed by almost 380,000 people and maintains that Dr. Ghebreyesus "solely believes" Chinese data[5]. In addition, on April 7, 2020, President Trump stated that the WHO "really blew it" by being China-centric. He also shared his rejection of the WHO recommendations by keeping US borders open, calling the international organization's recommendation to close borders a "flawed" one[6]. Furthermore, on the same day, President Trump continued to blame the WHO for the current situation in the US and threatened to withdraw US funding[7]. Following this, he continued to criticize the WHO's decisions until he announced, on April 14, 2020, his decision to halt WHO funding for 60 to 90 days while a review was being conducted to assess the WHO's role and management[8] regarding COVID-19.

The arguments made to justify the suspension of WHO funding can be explained by what they describe as the WHO's China-centered approach and its slow response to halt the spread of the virus[9]. These arguments are also made by other WHOs detractors. They argue for example that the WHO was slow to warn of the risk of human-to-human transmission of the virus, to declare the outbreak a PHEIC, and to send a team of international experts to examine the outbreak in China. In

Japan, the deputy prime minister and finance minister, Taro Aso, stated that some people were referring to the WHO as the “Chinese Health Organization”. For Aso, this attitude is attributed to the strong links between the WHO and Beijing[10]. Others argued that the WHO had failed to assess Chinese transparency by ignoring information from sources other than the Chinese authorities and by failing to obtain samples of the virus, being unable to obtain and share accurate information in a timely manner[11]. This argument is endorsed by Yanzhong Huang, a global health expert specializing on China at Seton Hall University who stated that the WHO could have been more forceful during the early stages when information was covered up[12]. In addition, President Trump has repeatedly emphasized his dissatisfaction with the WHO's advice in early February regarding travel restrictions[13]. Some also condemned the WHO's response to the Taiwanese authorities, accusing the organization of ignoring the Taiwanese management of the outbreak given its independence from China[14].

Following these criticisms and the withholding of WHO funding from the United States, several actors have come forward. The WHO Director-General regretted the decision of the United States to halt funding and called on political leaders not to politicize the virus[15]. Antonio Guterres, the United Nations Secretary-General, stated that it was not the right time to cut WHO funding or to evaluate the WHO's management of the pandemic[16]. The European Union’s foreign policy chief, Josep Borrell, deeply regretted Trump’s decision, which he called unjustified[17]. The Chairman of the African Union Commission, Moussa Faki Mahamat, also condemned the actions of the United States and reaffirmed the African Union's full support of the WHO[18]. Health experts such as Leslie Dach, former global Ebola coordinator for the United States health department[19] and Peter Piot, Director and Professor of Global Health, London School of Hygiene & Tropical Medicine (LSHTM) called President Trump's decision irresponsible [20], while Richard Horton, the editor-in-chief of the Lancet medical journal even qualified it as a crime against humanity[21]. The executive director of the Gates Foundation stated that he would "strongly oppose" cutting off WHO funding[22]. Boris Johnson’s spokesman for instance declared that the UK did not have plans to stop WHO funding. Moreover, when asked if China would fill the gap created by the U.S. funding suspension, China’s foreign ministry spokesman, Zhao Lijian, stated that "China will look into relevant issues according to the

needs of the situation"[23]. However, not everyone was critical of the decision. For example, those who objected to the WHO's treatment of Taiwan praised the U.S. president's decision to cut funding, as was the case with the Hong Kong democracy activist, Joshua Wong[24].

A (short) history of criticisms against the WHO

The WHO has a long history of being a target of criticism. Since the establishment of the 2005 International Health Regulations[25], the WHO has been particularly criticized for its decisions and actions during health emergencies. The arguments follow two different lines of criticism:

- Inequalities between low-middle income countries and wealthier countries exacerbated by WHO programs
- Undue influence of the private sector and a lack of transparency and accountability at the WHO level

This first line of criticism materialized during what is known as the Indonesian virus sample crisis in 2007[26], when Indonesia stopped sharing its influenza virus samples with the WHO, arguing that the WHO Global Influenza Program reproduces and reinforces inequalities between countries[27]. In an interview with the journal *Nature*, Indonesia health minister Siti Fadilah Supari argued that "[i]n the event of a pandemic, we also risk having no access to vaccines, or having to buy them at prices we cannot afford, despite the fact that the vaccines were developed using our samples"[28]. Thailand representative at the WHO echoed Indonesia's stance, adding that "[w]e are sending our virus (samples) to the rich countries to produce antivirals and vaccines. And when the pandemic occurs, they survive and we die"[29]. A *Time* article published in 2007 summarized well this first criticism: "Poor developing nations are often priced out of needed medicines, and they're likely to be the last in line for vaccine during a pandemic"[30].

The emphasis on global surveillance by the WHO also reinforces this perception. Sarah Davies mentioned for example the inadequacy of surveillance mechanisms "overtly aimed at protecting western states from particular infectious disease epidemics, where the investment has been primarily in real-time global disease surveillance, scenario planning, drug stockpiling and vaccine

development"[31]. This led some specialists to argue that "[…] policy makers in resource-constrained countries perceive that undue and disproportionate emphasis is placed on providing resources to respond to disease outbreaks that might spread internationally, as compared with resources marshalled within national boundaries to prevent outbreaks in the first place"[32]. As such, global health governance through WHO programs and mechanisms "[…] run the risk of neglecting the underlying structural deficiencies that produce the conditions from which epidemics emerge"[33].

The heavy dependence of WHO activities on national health infrastructure reinforces this perception of inequality, in particular with regards to the IHR. Lakoff argues for example that "IHR's reliance on national health systems did not necessarily imply strengthening governmental capacity to manage existing disease; rather, it sought to direct the development of outbreak detection systems according to the needs of global disease surveillance."[34]. In a similar perspective, some criticized the overload of data produced by the WHO activities, data which are not useful and/or are difficult to use for low-middle income countries: "[…] there is no attempt to make wealth of information collected under the auspices of GOARN [WHO Global Outbreak and Alert Response Network] work for local communities during the vast majority of the time when the locale is not subject to emergency control actions"[35].

The second line of criticism emerged following the H1N1 crisis (2009-10, the first PHEIC declared) and targeted what was presented as undue influence of the private sector lobbyism[36] on WHO activities. Among other things, the WHO was accused of excessive alert and over-evaluation of severity and risk during the outbreak, leading to excessive spending on vaccines and other medical supplies[37], which then limited access for low-middle-income countries[38]. This was presented as caused by the undue influence of the private sector on WHO activities[39], and in particular on the IHR Emergency Committee, which was, at that time, secret. A lack of transparency at the WHO level emerged clearly during this crisis as an important criticism against the WHO. These criticisms were so important that it forced the WHO to set up a mechanism to review[40] its actions during this pandemic[41], identifying many gaps in the WHO governance mechanisms in place[42]. Several scholars and practitioners also underlined this undue influence of the private sector on the WHO activities[43].

This criticism is compounded by the condemnation of the absence of accountability mechanisms at the WHO level and in global health governance more generally, leading to “blind optimism” by anxious governments[44]. At the political level, the Council of Europe was especially critical of the WHO’s handling of H1N1, leading to the publication of a report entitled *Faked Pandemics - A Threat for Health*[45]. The European Parliament also expressed important criticisms regarding the undue influence of the private sector, which was recognized by a Member of Parliament Mara Bizzotto[46]. Member of Parliament and epidemiologist Wolfgang Wodard said in a motion presented to the European Parliament that pharmaceutical companies directly influenced the decision-making process during emergencies: “To promote their patented drugs and vaccines against flu, pharmaceutical companies have influenced scientists and official agencies, responsible for public health standards, to alarm governments.”[47].

Problems with the WHO communication and media relations system, particularly during health emergencies and the use of the Disease Outbreak News, were underlined, including the multiplication of communication channels and lack of access to raw data during H1N1[48]. This includes confused and multiple definitions of the concept of "pandemic" used by the WHO as well as the absence of publicly available criteria for risk assessment. The focus on a narrowly defined conception of what constitutes a valid health risk is also presented as leading to the exclusion of certain diseases from global health priorities[49]. As such, the WHO was criticized for its slowness to declare a PHEIC during the Ebola outbreak in West Africa compared to its actions regarding influenza[50].

Overall, the WHO is accused of jeopardizing global health[51], making it “unequal and inequitable”[52], and subject to undue influence of the private sector.

4. Communicating risk during COVID-19

WHO communication and information sTrategy – Dec 31, 2019 - Jan 31, 2020

The timeline below (Figure 1) as well as Table 1 in Annex summarize all the communication, information, recommendations, tools, press conferences, social media postings and other documents produced and circulated by the WHO through their communication and information activities from December 31, 2019, to January 31, 2020.

Overall, the WHO used eight types of communication and information mechanisms during the first phase of the pandemic:

- Disease Outbreak News – DON (5)
- Situation Reports (11)
- Social media posts (Twitter, Facebook & Instagram – multiple, non-simultaneously – Twitter predominantly)
- WHO public statements, including the emergency committee (EC) (3)
- WHO recommendations: advice, risk assessment & technical focus (multiple, in different formats of information and communication)
- Press conferences (3)
- EPI-WIN – risk communication tool (4)
- Other: WHO tools, courses, procedures, myth busters, etc. (multiple)

The key elements of the WHO information and communication activity during the first phase (December 31, 2019 – January 31, 2020) are as follows:

- The WHO took four days to communicate publicly about the first cases of COVID-19 (pneumonia of unknown cause at that time). Cases reported to the WHO on December 31 and publicly disclosed on January 4. The first communication about those cases was made through social media (Twitter) on January 4. This was followed the day after by the first Disease Outbreak News (DON)[53].

- 5 DONs were produced (until January 21) until the WHO communication strategy switched to Situation Reports (published on the specific Coronavirus WHO webpage).

- 11 Situation Reports were published on a daily basis until January 31 (and up to now, continue to be published on a daily basis – they will be analyzed in subsequent reports). The Situation Reports include updates about the situation and cases, guidelines, recommendations as well as a global risk assessment evaluation (the SRs do not include the criteria for this risk assessment).

- The DONs and SRs were used to present the evolution of the outbreak, including the number of cases, deaths, countries affected, mode of transmission, potential human-to-human transmission, diagnostic protocols, risk assessment, etc.

- The first death was reported using social media (January 12) and not the DON. The source of the outbreak was also communicated via social media.

- Human-to-human transmission was acknowledged on January 22. Before that date, the WHO stated that human-to-human transmission was not occuring, based on the information available. The evidence of human-to-human transmission was acknowledged following a field trip to Wuhan, China.

- Risk assessment for China as well as regional and global risk assessments started on January 23 with the SR 3.

- Admission of errors by the WHO occurred in the Situation Reports, including a wrong risk assessment for global risk (for January 23, 24 & 25), identifying the risk as “moderate” when it was in fact “high” (the situation was corrected in the SR 6, January 26, and currently appears as such).

- The Emergency Committee was convened twice: January 22/23 and January 30. On the first two-day meeting, the PHEIC was not declared and the committee was divided almost 50/50.

- The PHEIC was declared on January 30, and appeared in the Situation Report 11 (January 31). The PHEIC declaration was announced through the Emergency Committee (EC) statement and Director General (DG) press conference. It was also shared using social media (Facebook, Twitter and Instagram).

- On January 22, the WHO started releasing the EPI-WIN reports (WHO Information Network for Epidemics), a risk communication tool available through their risk communication webpage. EPI-WIN was officially launched on January 31 after 4 reports were published.

- During this specific period of time (December 31, 2019 – January 31, 2020), the WHO always advised against any travel, traveller or trade restrictions (see Figure 1 bellow and the Annex).

- The WHO, however, added important guidelines and recommendations regarding specific measures for travel, especially at the end of the period analyzed here (see for example January 23 – for China specifically – January 24 and January 29), including entry/exit screening recommendations.

- Social media were used to share all types of information, including key elements of the DON and SR, quotes from the press releases, tips to limit contagion, travel information, etc.

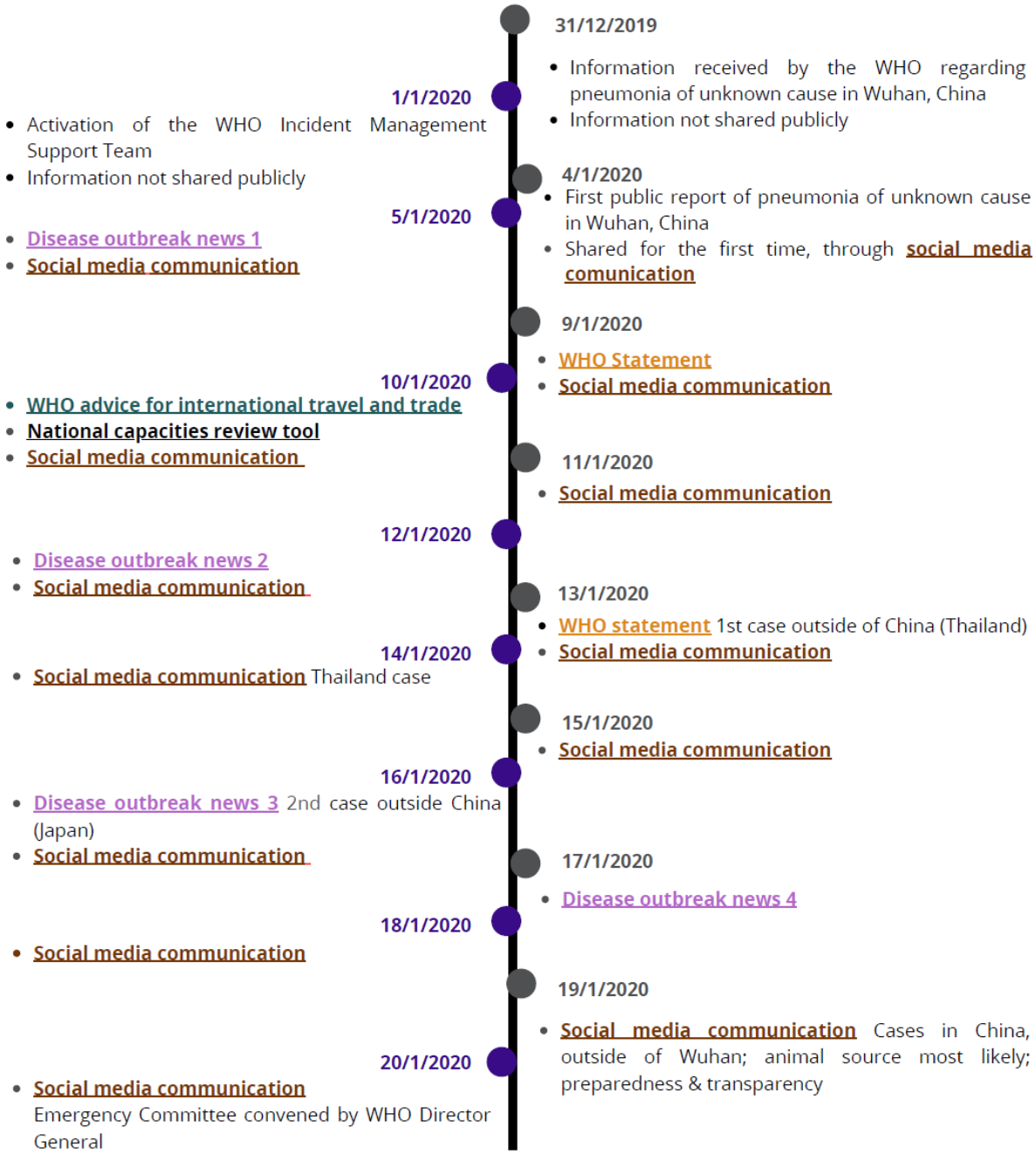
- The WHO also published information about tools, mechanisms, guidance, discovery and initiative as a form of PR strategy (different medium used).

- The WHO DG and officials used different forms of statement and press conferences to announce information and recommendations.

- All WHO communications and publications called for caution (using expressions such as: based on the current information, more information needed, to date, etc.).

- Overall, the WHO praised China for its management of the pandemic and its willingness to share information.

Figure 1 – Timeline of WHO information and communication regarding COVID-19, December 31, 2019 - January 31, 2020 (colour-coded by communication tools used)



21/1/2020

- Disease outbreak news 5 4th case outside China (Korea)
- Situation report 1
- Social media communication

22/1/2020

- WHO Field Visit to Wuhan, China; Evidence of human-to-human transmission in Wuhan, China
- Situation report 2
- Press briefing
- EPI-WIN 1
- Social media communication

23/1/2020

- Situation report 3 "outbreak is no longer due to exposures at the Huanan seafood market in Wuhan"
- WHO risk assessment: China Very High, Regional Level High, Global Level Moderate (changed for high on January 26, Situation Report 5)
- Press Briefing Emergency Committee meeting 1, day 1 – not a PHEIC; Emergency Committee members divided 50/50
- Statement on the meeting of the IHR Emergency Committee - specific recommendation to China
- Social media communication

24/1/2020

- Situation report 4
- Updated advice for international traffic;
- WHO risk assessment: China Very High, Regional Level High, Global Level Moderate (changed for high on January 26, Situation Report 6)
- EPI-WIN 2
- Social media communication

25/1/2020

- Situation report 5
- WHO risk assessment: China Very High, Regional Level High, Global Level Moderate (changed for high on January 26, Situation Report 6)
- Free online introductory course

26/1/2020

- Situation report 6 *Note: Error in situation reports published on 23, 24 and 25 January as originally published, which incorrectly summarized the risk for global level to be moderate;
- WHO risk assessment: China Very High, Regional Level High, Global Level High
- Social media communication

27/1/2019

- Situation report 7
- WHO risk assessment: China Very High, Regional Level High, Global Level Moderate
- EPI-WIN 3
- Social media communication

28/1/2020

- Situation report 8
- WHO risk assessment: China Very High, Regional Level High, Global Level High
- Social media communication
- Myth busters

29/1/2019

- Situation report 9
- Technical focus - Travel advice
- WHO risk assessment: China Very High, Regional Level High, Global Level High
- Social media communication Twitter travel recommendation

30/1/2020

- Situation report 10
- WHO risk assessment: China Very High, Regional Level High, Global Level High
- PHEIC declared no specific measures for travellers
- WHO DG press conference
- EPI-WIN 4
- Social media communication

31/1/2019

- Situation report 11 new information platform - WHO Information Network for Epidemics (EPI-WIN);
- WHO risk assessment: China Very High, Regional Level High, Global Level High
- Social media communication

Multi-level communication strategies in times of COVID-19: A Canadian case study of information and communication reception

The multiple levels of authorities (local, national, international) involved in the COVID-19 policy response also had an impact on the perception of the crisis and on the confidence in, compliance with and understanding of the situation by the population. In particular, the COVID-19 pandemic shows unique features that increase the sense of fear and bring additional stressors (e.g., mistrust, confusion, misinformation), which can lead to adverse psychological responses. This sense of fear is both taken into account, and reinforced, by information and communication strategies including the one developed by the WHO. We tested this hypothesis through a Canadian case study involving a web-based survey[54].

Our objective was to examine how the Canadian populations understood and reacted to the COVID-19 pandemic based on the different sources of information used. Our results show that overall probable post-traumatic stress disorder (PTSD) and probable generalized anxiety disorder (GAD) were observed in 25.5% and 25.4% of the Canadian respondents, respectively, no matter of the sources of information used. These proportions were significantly lower in Quebec than elsewhere in Canada[55], as shown below:

- Probable PTSD: Quebec 18.8% vs elsewhere in Canada 27.5% ($p<0.05$)
- Probable GAD: Quebec 14.2% vs elsewhere in Canada 28.8% ($p<0.05$)

Overall, 32.2% of respondents reported a high level of confidence in the authorities. A high level of confidence in the authorities was associated with a lower risk of PTSD or GAD. Interestingly, this situation was more frequently reported in Quebec than elsewhere in Canada, suggesting that the more favourable situation observed in Quebec (in terms of psychological response) may be partially explained by a greater trust in information received. In addition, the WHO and the Canadian federal and provincial governments were cited as regular sources of information about the coronavirus by 62.5%, 81.9% and 89.6% of the respondents, respectively.

Interestingly, probable PTSD and GAD were found to be statistically more frequent among respondents who reported using the WHO regularly or federal government as a source of information (macro level sources of information), while this was not the case for provincial government (micro level sources of information – see Table 1). In fact, those using information provided by their provincial/local governments on a regular basis were showing significantly fewer symptoms of GAD than others. Respondents in Quebec were also less likely to rely on the WHO or the federal government (and more likely to rely on their provincial government) as their regular source of information, which may also explain some of the psychological differences observed between Quebec and the rest of Canada.

Table 1. Psychological impacts according to sources regularly used to get information about COVID-19

Sources of information	**Probable PTSD (%)**		**Probable GAD (%)**	
	Source used	**Source not used**	**Source used**	**Source not used**
WHO	***29,6%***	***18,6%***	27,0%	18,5%
Federal government	***28,1%***	***13,4%***	26,8%	19,3%
Provincial government	26,3%	18,2%	***23,9%***	***38,7%***

Statistical differences ($p<0.05$) are in italic and bold characters[1]

5. Analysis & discussion

Unconventional information and communication channels

- The WHO privileged social media communication over more formal and IHR based communication tools. For example, social media were used before the DON and/or SR, showing that unofficial channels of communication and information were privileged in the early stages of the outbreak.

- On January 13, the WHO did not use the DON to communicate the first coronavirus case outside China. Rather, they made a statement about it, and then reported it on social media the day after. Again, unconventional information and communication methods were used over traditional channels (DON).

- Different social media were uses indiscriminately to communicate about the cases in the early stage of the pandemic without apparent social media strategy (Twitter is used predominantly: Instagram: 10 posts; Facebook: 21 posts; Twitter: 143 posts[56]).

Ambiguous communication strategy

- Overall, several communication media were used without a clear and well-identified communication and information strategy by the WHO.

- From this multiplication of communications and media used, a confusion over the terms and concepts used arose. For example, clear definitions lacked for terms such as entry/exit screening, risk assessment, travel recommendations, traveller recommendations, China vs Region vs Global, etc. This multiplication of communication generated misunderstandings and ambiguity around what exactly was being recommended by the WHO and for whom (for example, China versus the rest of the world).

- We also noted a lack of regularity in the use of social media: sometimes many posts were published, sometimes only one, sometimes on one social media platform, sometimes on all the social media platforms (Twitter, Facebook & Instagram). No clear pattern emerged from

our analysis during this phase, which might have resulted in unequal information access based on the medium used by the population and health professionals.

Risk assessment issues

- The SR wrongly identified the global risk assessment for 3 days in a row. In SR 3, 4 & 5, global risk was originally published as “moderate”, and then corrected in SR 6 stating this was an error and the risk is “high”. This error created confusion over the WHO risk assessment at a critical point in time. Based on the information currently available, it is not clear if this is an error of communication or a risk assessment error.

- Criteria for risk communication are unclear and not disclosed properly. For example, the criteria for the risk assessment published in the SR are not publicly disclosed (we contacted the WHO to obtain this information, no answer received).

- It is difficult to distinguish WHO recommendations based on science and expertise versus political recommendations (ex. China’s actions were praised on multiple occasions by the WHO – see table below – without scientific background and context).

- Ambiguity arose regarding travelling advice. For example, the WHO stated in the same SR (nb. 9) that there are no specific recommendations for travel, but included a specific section on travelling/traffic advice. Another example is found in SR 10, just before the declaration of the PHEIC, where the WHO mentioned no specific recommendation for travellers, an action that was incongruent with the rising concerns.

- In a similar perspective, no travel restrictions were included the day the WHO declared the PHEIC, a decision that likely created a great deal of uncertainty and misunderstandings. It is important to note that this might not be a problem in itself (i.e. the fact that no travel restrictions were recommended), but the alarming approach used to declare COVID-19 as a PHEIC clashes with the absence of travel restrictions, sowing even more confusion around WHO recommendations.

- The WHO also began deploying new communication mechanisms and tools long before making actual announcements about their use (ex. EPI-WIN, communicated on January 31, deployed on January 24).

Leadership issues

- In the various and multiple WHO communication and information actions analyzed, we noted a confusion emerged over who exactly is talking and expressing viewpoints for the international organization. For example, it was not always easy to distinguish the Director General Statement from a statement made by the Emergency Committee or from scientific and technical advice.

- The Director General also appears to personify power at the WHO level, using emotions and personal stories to raise awareness and reach the international community. Paradoxically, this personal touch may have had unintended consequences given the fact that not everyone identified with the WHO Director General or felt strong political links with the WHO (compared with national and local health authorities as shown by the survey conducted – see below).

Information and communication reception (Canadian survey)

- Proximity and a sense of connection with the source of communication and information about COVID-19 seem to play an important role in the psychosocial impacts of this crisis. Based on our survey results, the closer the source of the information and communication is to the population, the lesser the psychosocial impacts appear to be. In this context, the WHO may have appeared too distant as a reliable source of information and communication in the eyes of the local populations to help reduce stress, anxiety and misinformation. Probable PTSD and GAD were found to be statistically more frequent among those who reported using regularly the WHO or federal government sources of information.

6. Concluding remarks

Communicating risk is a challenge. It is also a risky business. This is especially true for international actors, like the WHO, which lack proximity to the populations and other groups in society (like medical professionals in this particular case). This challenge often carries a high price, in the form of confusion and misunderstood recommendations evident during the first month of the COVID-19 pandemic response, leading to sometimes harsh criticisms against the WHO.

However, it is crucial to state that although the authors of this study have identified potential problems and difficulties with the WHO information and communication strategy and management in the early stage of the COVID-19 outbreak, we firmly believe that the WHO is an essential actor and part of the solution.

We would like to suggest that more of the WHO, and a better WHO, is needed – and not the opposite. COVID-19 is a global challenge and will need to be solved globally, with the help of international actors like the WHO. The identified lessons are part of the global learning process in which the world is currently engaged. Our following reports will analyze subsequent phases of the WHO global pandemic management.

Annex – WHO communication and information database

Date	Details
31/12/2019	• Information received by the WHO regarding pneumonia of unknown cause in Wuhan, China • Information not shared publicly
1/1/2020	• Activation of the WHO Incident Management Support Team • Information not shared publicly
4/1/2020	• First public report of pneumonia of unknown cause in Wuhan, China • Information shared for the first time, through social media communication (Twitter - two posts)
5/1/2020	• Disease outbreak news 1 - explanation of what happened since December 31 in China; No evidence of human-to-human transmission; WHO against travel or trade restriction on China (based on the information available) • Information shared through social media communication (Twitter - multiple)
9/1/2020	• WHO Statement - cluster of pneumonia cases in Wuhan, China; Positive comments on China's response; No specific measure for travellers; WHO against travel or trade restriction on China (based on available information); • General information on coronavirus shared through social media communication (Twitter - multiple posts)
10/1/2020	• WHO advice for international travel and trade: "…preliminary investigation suggests that there is no significant human-to-human transmission, and no infections among health care workers have occurred", source not yet know, "International traffic: no restrictions recommended" • Publication of a National capacities review tool for a novel coronavirus • Information shared through social media communication (Twitter, Facebook & Instagram)
11/1/2020	• Social media communication (Twitter – multiple): guidance for country management, travel & trade, genetic sequence, etc.
12/1/2020	• Disease outbreak news 2 – details of the information to date; WHO against travel or trade restriction on China (based on the information available) • Social media communication (Twitter – multiple): WHO's reassured by China's action; source seafood market; no human-to-human transmission; first death in Wuhan (underlying medical conditions); no case outside of Wuhan; more information needed
13/1/2020	• WHO statement: 1 coronavirus case outside of China (in Thailand); "WHO DG Dr. Ghebreyesus will consult with Emergency Committee members and could call for a meeting of the committee on short notice" • Information shared through social media (Twitter & Instagram)
14/1/2020	• Social media communication (Twitter & Facebook): first case outside of China (Thailand); no human-to-human transmission, but more investigation needed
15/1/2020	• Social media communication : diagnostic protocol validated by the WHO
16/1/2020	• Disease outbreak news 3 – First case in Japan, second outside China; Additional cases in other countries are likely; No definitive conclusion overall, more information/study needed; Preparedness activities in all countries encouraged; WHO against travel or trade restriction (based on the information available) • Information shared through social media communication (Twitter)
17/1/2020	• Disease outbreak news 4 – Details about japan case, second of three exported cases; WHO against travel or trade restriction on Japan (based on the information available)
18/1/2020	• Social media communication (Twitter): tips to reduce risk
19/1/2020	• Social media communication (Twitter – multiple): Cases in China, outside of Wuhan; animal source most likely; WHO urges countries to continue preparedness and continue sharing of information; transparency

20/1/2020	• Social media communication (Twitter & Facebook): Emergency Committee convened by WHO Director General (will meet Jan 22); The Emergency Committee will ascertain whether the outbreak constitutes a PHEIC, and what recommendations should be made to manage it
21/1/2020	• Disease outbreak news 5 (last DON, transition to situation report) – fourth internationally exported case (Korea); Additional information needed; WHO against travel or trade restriction on Korea (based on the information available); No specific measure for travellers • Situation report 1 – updated cases/situation so far; Number or countries affected: 4; No risk assessment • Information shared through social media communication (Twitter) • Social media communication: List of proposed members and advisers to IHR EC shared on Twitter
22/1/2020	• Communication about WHO Field Visit to Wuhan, China (Jan 20-21); Evidence of human-to-human transmission in Wuhan, China • Situation report 2 – updated cases/situation so far; Number or countries affected: 4; No risk assessment • Press Briefing EC meeting 1, day 1 – more time needed to decide whether or not to declare a PHEIC, Emergency committee reconvened tomorrow (Jan 23); Emergency Committee members divided (50/50) • EPI-WIN 1: risk communication tool • Information shared through social media communication (Twitter & Facebook – multiple); Quality of China's action recognized and praised
23/1/2020	• Situation report 3 – updated cases/situation so far: "outbreak is no longer due to ongoing exposures at the Huanan seafood market in Wuhan"; more evidence of human-to-human transmission and across generation of cases (i.e. community transmission); Number of countries affected: 5; WHO risk assessment: China Very High, Regional Level High, Global Level Moderate (changed for high on January 26, Situation Report 5) • Press Briefing EC meeting 1, day 1 – too early to consider that this event is a PHEIC; Emergency Committee members divided 50/50 • Statement on the meeting of the IHR EC – Not a PHEIC, but disagreement; WHO DG followed Emergency Committee recommendation not to declare a PHEIC; EC will be reconvened in 10 days; More nuanced (non binary) system needed, intermediate level of alert needed; Specific recommendation to China: "Conduct exit screening at international airports and ports in the affected provinces, with the aims early detection of symptomatic travellers for further evaluation and treatment, while minimizing interference with international traffic. Encourage screening at domestic airports, railway stations, and long-distance bus stations as necessary"; Countries required to share information with WHO according to the IHR • Information shared through social media communication (Twitter, Facebook & Instagram– multiple)
24/1/2020	• Situation report 4 – Importance of risk communication; IHR EC information; New evidence that the 2019-nCoV can be transmitted from one individual to another; human transmission outside Vietnam; Transmission similar to SARS & MERS (through droplets, contact and fomites); Updated advice for international traffic: "WHO advises that measures to limit the risk of exportation or importation of the disease should be implemented, without unnecessary restrictions of international traffic"; recommendation of exit/entry screening; against the application of any restrictions of international traffic; Number of countries affected: 7; WHO risk assessment: China Very High, Regional Level High, Global Level Moderate (changed for high on January 26, Situation Report 6) • EPI-WIN 2: risk communication tool • Information shared through social media communication (Twitter & Instagram– multiple)
25/1/2020	• Situation report 5 – updated cases/situation so far: No specific measure for travellers; One case of human-to-human transmission in a family in China; Number of countries affected: 9; WHO risk assessment: China Very High, Regional Level High, Global Level Moderate (changed for high on January 26, Situation Report 6) • Launch of free online introductory course on the novel coronavirus: methods for detection, prevention, response and control

26/1/2020	• Situation report 6 – updated cases/situation so far: No specific measure for travellers; Multiple human-to-human transmissions; *Note: Error in situation reports published on January 23, 24 and 25 as originally published, which incorrectly summarized the risk for global level to be moderate; Number of countries affected: 10; WHO risk assessment: China Very High, Regional Level High, Global Level High • Information shared through social media (Twitter & Facebook– multiple)
27/1/2020	• Situation report 7 (new format) – updated cases/situation so far: No specific measure for travellers; incubation period of the virus range from 2-10 days; on standby to reconvene the Emergency Committee on very short notice as needed; Number of countries affected: 11; WHO risk assessment: China Very High, Regional Level High, Global Level High • EPI-WIN 3: risk communication tool • Information shared through social media communication (Twitter & Facebook– multiple)
28/1/2020	• Situation report 8 – updated cases/situation so far: launch of data platform; No specific measure for travellers; Number of countries affected: 14; WHO risk assessment: China Very High, Regional Level High, Global Level High • Information shared through social media communication (Facebook & Instagram– multiple) – focus on travel; • Publication of myth busters
29/1/2020	• Situation report 9 – updated cases/situation so far: Launch market network platform (private sector collaboration; Emergency committee reconvened January 30; No specific measures for travellers; "Technical focus - Travel advice: Exit screening is advised for areas with ongoing transmission; Entry screening uncertain, but may help at the communication level (risk communication); WHO against the application of any restrictions of international traffic; Number orfcountries affected: 15; WHO risk assessment: China Very High, Regional Level High, Global Level High • Information shared through social media communication (Facebook, Twitter & Instagram – multiple): Twitter travel recommendation targeting direct flights from affected area
30/1/2020	• Situation report 10 – updated cases/situation so far: EC meeting today; discussion on the name of the virus; Technical focus laboratory detection; Number of countries affected: 18; WHO risk assessment: China Very High, Regional Level High, Global Level High • PHEIC declared: no travel or trade restrictions; No specific measures for travellers; If countries take additional measures, they should contact the WHO (the WHO is against measures that will go against trade/travel); Reference to IHR • WHO DG press conference: PHEIC not a vote against China • EPI-WIN 4: risk communication tool • Information shared through social media communication (Facebook, Twitter & Instagram – multiple): PHEIC declared
31/1/2020	• Situation report 11 – updated cases/situation so far: PHEIC declared; new information platform - WHO Information Network for Epidemics (EPI-WIN); technical focus: research/innovation; Misinformation and myth busting; Transmission similar to SARS & MERS (through droplets, contact and fomites); No specific measures for travellers; Number of countries affected: 19; WHO risk assessment: China Very High, Regional Level High, Global Level High; Temporary Recommendations under the IHR: may appear in all countries, prepare containment, avoid stigma, provide support to low/middle income countries; obligations regarding measures that go against traffic and trade; the WHO against these measures • Information shared through social media communication (Facebook & Twitter – multiple)

Complete dataset available on request

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[54]This unique survey, leveraging on an interdisciplinary approach, was the first in a series of three surveys to be conducted in Canada and in other countries. This pilot phase was conducted from April 8-11, 2020, among a representative sample of 600 Canadian adults from two different political and sociocultural contexts. Findings emerging from this first survey are very instructive on the ways in which information is disseminated at the global, national and sub-national levels, as well as how it is received and understood by the public from various sociocultural contexts, affecting positively or negatively psychological responses to major health threats. The COVID-19 pandemic represents a unique opportunity to evaluate the psychosocial impacts according to various governance modes and communication strategies, providing important lessons that could be applied to the current crisis and to future health emergencies or disasters.

[55] This might be explained by the fact that such information may not be tailored to the local culture or context, which may create confusion, misunderstandings and distress, while more local and contextualized information may promote a sense of security and public trust. Such a "personalized" communication strategy seemed to be very effective in the province of Quebec, which displays many sociocultural differences from the rest of Canada in addition to the history of struggles and debates around nationalism and Quebec independence.

[56] Not including "tips" type posts; not including several posts referring to quotes during press conferences, which were considered as one post per feed of posts of the same style in the same date; not including Q&A type posts considered as one post per feed of posts of the same style in the same date).