Assessing good practice in the online public sphere:

A descriptive evaluation of virtual deliberation in the COVID-19 era

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Abstract

The COVID-19 pandemic abruptly eliminated many of the traditional offline methods used for deliberation and forced a rapid pivot to an online environment. Practitioners are asking: If we were to design public deliberation in the future, what should it look like and how should it be executed? Given how recently public deliberation has transitioned online, it is not surprising to see a dearth of literature on its evaluation. This project aimed to fill this gap and addressed the following research question: How might COVID-19 and the shift to a digital space transform approaches to public deliberation in health policy? The quality of virtual deliberation for a set of 13 case studies was examined using a rubric developed from best practice principles in the literature. Three overarching patterns were found across the cases: i) a variety of tools used to facilitate online deliberation, ii) strong emphasis on including a diverse array of information sources, ensuring a clearly articulated method of recruitment, and promoting a respectful and trusting environment, and iii) less attention given to the design of equitable engagement opportunities as well as confidentiality, security, and content moderation. Findings from this case study review may assist health policymakers in making decisions about when and how to employ online deliberation in a post-pandemic context.

Supplementary Files

Supplementary files related to this publication can be found at ppe.mcmaster.ca/research/public-engagement.ca.

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Acknowledgements

1.0 Introduction

The Internet era has presented engagement practitioners with opportunities to develop and explore a new array of online tools for engagement. Practitioners now have a large and diverse set of digital platforms to choose from, categorized by the following functions:

Data Gathering and Feedback: platforms that invite citizens to contribute and respond to public projects. The most common subcategory of data gathering and feedback is the survey. Another emerging technology involves interactive voice response (IVR), a technology that allows humans to interact with a computer through their voices and dial-pad entries.

Crowdsourcing and Ideation: platforms that collect information, ideas, or votes on a prompt from a large, relatively open group of participants often at an earlier stage in the design process. Participants can contribute through a variety of mediums (text, image, video) and are usually able to give feedback or rate others' ideas to create a leaderboard.

Crowdfunding and Petitions: platforms that facilitate the raising of funds, votes or resources to support civic projects proposed by citizens. Common platforms include Kickstarter and Indiegogo.

Group Decision Making: platforms that are able to solicit and exchange ideas from participants, allow participants to debate and discuss conflicting perspectives, and eventually reach a consensus. Many of these tools embed interpersonal meeting technologies to allow participants to see each others' faces.

The introduction of these tools has raised many questions in both the public engagement practice and research community. Concerns that the power and social capital inequities that characterize some in-person engagement would be reproduced online have been realized, with groups of greater age, lower household income, and lower education level less able to participate online – a phenomenon now coined the "digital divide".[1,2,3,4] In the 2010s, as an emboldened citizenry became accustomed to digital platforms, a common criticism of online tools was not that citizens could not be reached, but that citizens did not trust that their opinions could have an influence on government policy.[5,6] Indeed, the 'cost of demoralization' refers to a loss of government legitimacy when citizen expectations about policy influence do not match reality.[7] These sentiments suggest that a novel technology on its own provides no guarantee of effectiveness; the technological platform must be supported by the policy makers behind it.[8] Additional research studies have identified reasons why elected officials should be wary of online engagement tools, citing lack of time and resources, the obligation to moderate online discussions, fear of losing control over discussion, and concerns about representativeness and professionalism of participants.[9] Questions about information management, privacy, and security have also been raised.[7] Yet practitioners also perceived benefits of using digital engagement platforms, including increasing the speed and immediacy of engagement, facilitating two-way communication, and magnifying the role of citizens as potential sources of public opinion and expertise.[10]

We explore these questions in this paper. Specifically, we focus on deliberation, a form of public engagement in which a small group of broadly representative citizens exchange and acknowledge different perspectives, seek common ground, and build a shared vision for society. We use the minimum definition of deliberation proposed by Blacksher and colleagues: 1) provision of balanced, factual info that improves participants' knowledge of the issue, 2) inclusion of diverse perspectives to counter the well-documented tendency of better educated and wealthier citizens to participate disproportionately in deliberative opportunities and to identify points of view and conflicting interests that might otherwise go untapped; and 3) opportunity to reflect on and discuss freely a wide spectrum of viewpoints and to challenge and test competing moral claims.[11] Due to its emphasis on reasoned discussion and pursuit of the public interest, deliberation has become increasingly popular for dealing with problems that involve complex trade-offs and have long-term implications.[12] This is evident in the health sector especially, where some of the most ethically challenging decisions are made. Indeed, during the "deliberative turn" of the last two decades,[13] the establishment of several high-profile citizen deliberation processes including those

that contributed to the Canadian Romanow Commission[14] and the UK's National Institute for Health and Clinical Excellence Citizens Council[15], indicate a growing appreciation for incorporating public values into health policy decision-making. While specific forms of deliberation vary, Citizens' Juries,[16] 21st Century Town Meeting[16], National Issues Forums[16] and Deliberative Polling[17] are among the most common.

Although there are some examples of deliberation being executed virtually, the norm has been for deliberation activities to be held in person due to the unique values-based discussion features of the model. The COVID-19 pandemic abruptly curtailed much of this in-person deliberation activity and forced a rapid pivot to an online environment. As such, questions regarding the opportunities, challenges, and wider implications of running deliberative processes online have been raised.[18] This project aims to address the following broad research question: How might COVID-19 and the shift to a digital space transform approaches to public deliberation in health policy? A set of cases of online deliberation will be analyzed using an evaluation rubric informed by a review of the literature.

The following secondary research questions will be addressed in this analysis: What tools are being used to facilitate online deliberation? What benefits of online deliberation are we harnessing well? What are the challenges of navigating online deliberation? The COVID-19 pandemic has transformed the public engagement space, and it is likely that these tranformations will outlast the pandemic. Findings from this analysis will assist engagement practitioners and policy makers in making decisions about when and how to employ online deliberation in a post-pandemic context.

2.0 Methods

Two separate search strategies were utilized to i) collect cases of online deliberation and ii) develop an evaluation rubric to assess the quality of the online deliberation described in the cases. Both published and grey literature were searched.

2.1 Search Strategy for Cases

The webpages of well-known public engagement organizations including BangtheTable, Public Agenda, Involve, CrowdLaw, International Association of Public Participation (IAP2), the Ada Lovelace Institute, Traverse, and Participedia were searched for cases of online deliberation that took place anytime between December 2019 and June 2021. One exception to this timeframe was made for Pol.is, a unique online deliberation platform with activities occurring earlier than the pandemic. Additional cases were identified from a survey of government-initiated public engagement in Canadian health policy. In total, 29 cases were retrieved from this initial search.

To be eligible for inclusion, cases must have included at least some portion of deliberation online. Online refers to activities available through electronic or computerized systems, involving a network connection between systems in different locations. Deliberations could be ongoing but there must have been enough publicly available information about the methodology (e.g., recruitment, length and number of sessions, technology used) accessible through an interim report to be included. Cases were largely restricted to those in the health sector. However, one non-health case related to motor injury insurance was included due to its rich description of the online deliberation experience and another non-health case was included due to its unique use of software (Pol.is). Cases were also restricted to those that reported their findings in English, with the exception of 2 cases accessible in French only that were translated by a member of the research team. After applying the inclusion and exclusion criteria to the 29 retrieved cases, 12 cases were included for detailed analysis. (Figure 1)

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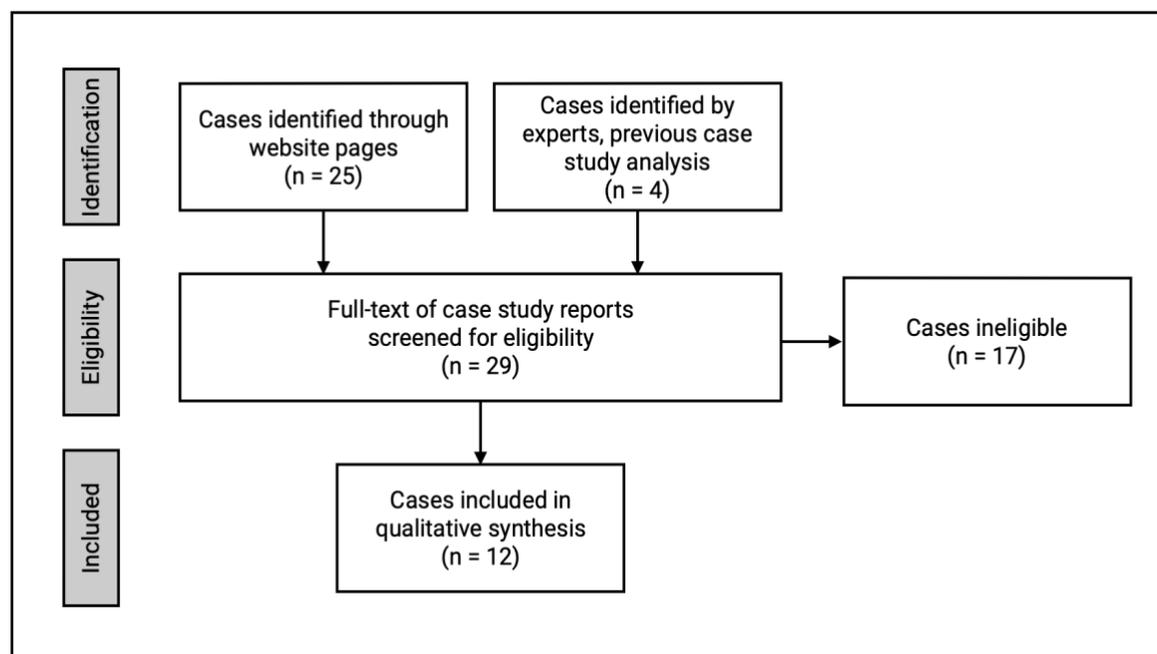
2.2 Search Strategy for Evaluation Rubric

MEDLINE, HealthStar, CINAHL, and the Social Science Citation Index databases were searched for articles published between 2000-2021 using two main search sequences. The first search strategy took the following general structure: public deliberat* AND "health policy" AND ("quality" OR eval* OR "assessment") and the second search strategy took the following general structure: "deliberation" AND "health policy" AND ("digital" OR "virtual" OR "online). The abstracts of the articles were scanned to eliminate duplicates and relevant articles were extracted. A range of interdisciplinary journals, including Social Science and Medicine, Health Policy, Health Expectations, Health Affairs, Health Services Research & Policy, and the Journal of Deliberative Democracy (formerly the Journal of Public Deliberation) were also searched using the above terms. Reference lists were scanned for additional relevant articles.

To be eligible, articles and reports must have employed an evaluation framework to assess deliberation or discussed the factors that either enhance or pose challenges to deliberation. Across all databases, the two search strategy sequences yielded 266 articles. The selective journal search yielded 110 articles. Following the removal of duplicates and screening, 18 articles remained. (Figure 2). The articles were used to identify and synthesize the assessment criteria to inform the development of an evaluation rubric (Table 1).

2.3 Interviews with Case Leads

After applying the evaluation rubric to the 12 case studies, some of the evaluation criteria had not been addressed in several of the cases due to incomplete information. To address this gap, we emailed the organizers of all 12 cases, inviting them to a 30 minute to 1-hour interview to learn more about their deliberative process. We are grateful to the organizers of the #Lockdown Debate, Bristol Citizens Assembly, Scottish Parliament Citizens' Panel on COVID-19, Oregon Citizens' Assembly on COVID-19 Recovery, and the Royal Automobile Club of Queensland (RACQ) Citizen Jury, who met with us.

Figure 2: Search Strategy for Evaluation Rubric
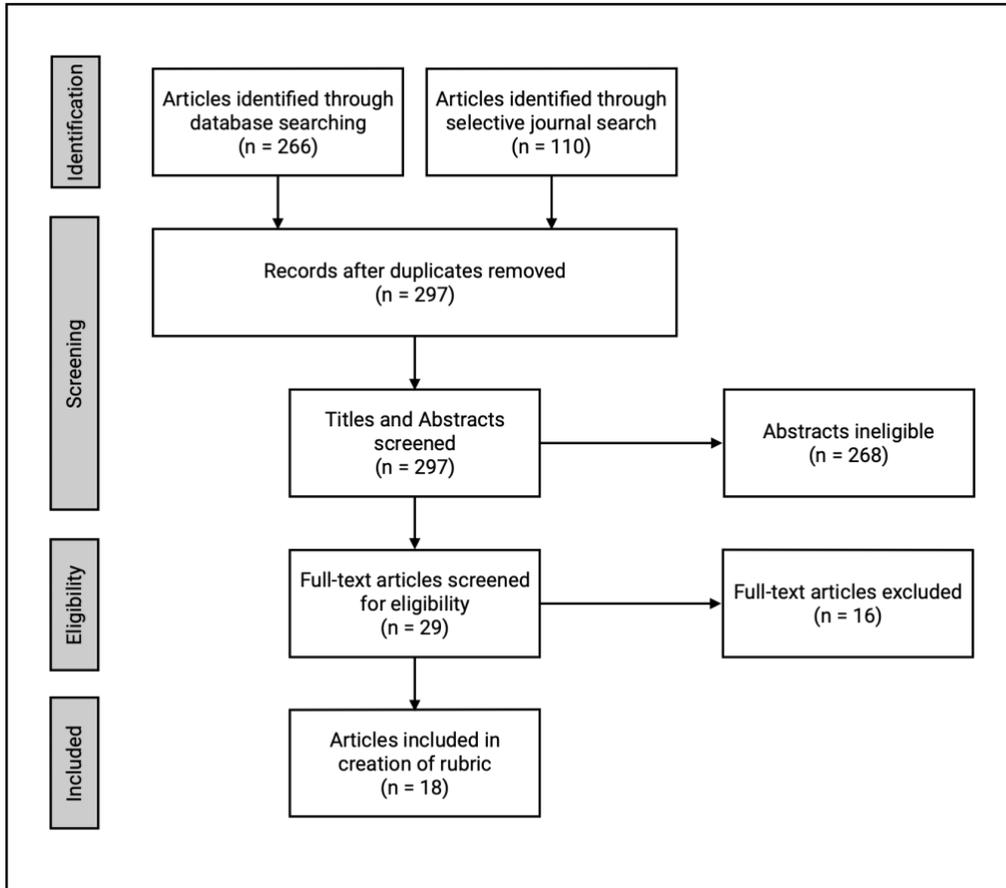
2.4 Data Analysis

The framework used to evaluate each of the cases (Table 1) is broadly based on a deliberation evaluation rubric established by Goold,[19] a highly cited scholar in the field. Goold's framework examines the formal structure of deliberation (how it is organized), the process of deliberation (how it occurs) and the produced outcomes. These three broad categories of Goold's evaluation rubric (structures, procedures, outcomes) directly align with Blacksher's minimum definition of deliberation: the provision of balanced, factual information; inclusion of diverse perspectives; and opportunities to reflect on and discuss freely a wide spectrum of viewpoints.[11] In terms of structure, elements include information and choices, materials, tasks, sampling and group composition.[20] Procedural elements include respectful treatment, civility and reason-giving.[19] The outcomes of deliberation are not necessarily recommendations to policymakers. Outcomes range from changes in participants' knowledge or opinions, participants' views of the group process, and trust in decision-makers.[21]

We modified Goold's framework to align it with the specific aims of our review, informed by frameworks used in other empirical studies.[22,23,20,24,25,26,27]. In contrast to other studies in the field, our review relied exclusively on the data reported in the final report or article rather than on the analysis of primary data (e.g., exit surveys, interviews, or meeting transcripts). As a result, each of the criteria within the rubric was applied using a more simplified binary yes/no function rather than a scale or score (e.g. was there evidence of equitable technology access, yes or no?). Additionally, Goold's framework did not have a online engagement focus, so it was further modified to incorporate elements relevant to assessing virtual engagement.[18,28,29,30]

Table 1: Analytical framework for evaluating online deliberations

Elements of Evaluation	Criteria	Example Measures
Structures	*Information and Choices* ● Information is credible, trustworthy, sufficient, accurate, accessible independent ● Participants feel they have choices in the resources/information that are made available to them	● Contextual information resources provided in a variety of formats (e.g., HTML, video, PDF) and depths (e.g., plain language video summaries alongside original text-based source material) to ensure all participants have easy access ● Subject matter experts are not too didactic which will cause participants to shy away from asking questions, can be invited to host live video Q&A sessions ● Select software that's a one-stop-shop where participants can access all materials ● Invite specialists with alternative points of view to write critical analyses, and/or include multiple/diverse evidence-based materials ● Information is easy to understand, participants learn more
	Accessibility, representativeness, sampling ● Principles of equity and diversity are addressed in the design stages	● Equitable technology access (e.g., high-speed broadband access, laptops) ● Equitable information access (e.g., support for literacy, education, multiple languages, visual or hearing aids) ● Clearly articulated recruitment approach (rationale provided with limitations considered) ● Recruit through a variety of offline and online channels to reduce selection bias ● Selection of software with straightforward user experience for beginners, choose platform the public already is familiar with
Processes	*Respectful treatment, civility, tolerance for others' viewpoints* ● Participants have a commitment to the goodwill of others, suspend assumptions and preconceptions ● Participants' trust one another	● Removal of hierarchy or status to promote open discussion, could take form of anonymity ● Confidentiality, security ● Content Moderation -> set clear set of acceptable behaviour and clear set of sanctions for breaching moderation rules (e.g., content removal, content editing, temporary suspension of access), post-hoc moderation to allow free-flowing dialogue, include both automated filtering and human systems, include back-up processes such as 'community flagging' ● Equality of participation amongst citizens ● Participants' perceptions of being treated with respect and ability to trust others
	Values-Based Reasoning ● Identify values underpinning positions on an issue ● Taking the perspective of what's best for society rather than just for individuals ● Challenging, questioning, justifying, debating	● Selection of software that utilizes various activities (e.g, ideation, polling), tools that can be activated in parallel and sequentially, asynchronous and synchronous capacities to encourage deeper deliberation, rationality, inclusiveness ● Shorter bursts of sessions to avoid zoom fatigue ● Conduct test run and ensure moderator knows software and can facilitate discussion ● Long enough time for citizens to deliberate and reflect ● Evidence of justification of opinion, openness to complexity, adoption of societal perspective
Outcomes	Does not need to be a guarantee of implementation but must have a "plausible promise" Consensus not necessarily the objective	Could be: ● Informing policy, individual or group decisions/recommendations ● Finding common ground among participants ● Changes in participant knowledge or opinion, participants learning new information ● Participant views of group decision process, trust in government, likelihood to participate in research

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3.0 Results

Of the 12 online deliberation cases included in the final review, half were conducted in the UK (6/12), with the remainder in the USA, France, Australia, and China. Ten of the 12 cases focused on COVID-19 topics; the other two addressed Motor Injury Insurance and Regulations for Uber. A variety of online tools and technologies were used across the cases, including: Zoom (8/12), Engagement HQ, Basecamp (2/12), YourPriorities, JamBoard, J'Enparle, Contribuez, Google Docs, Poll Everywhere, Microsoft Teams, and Pol.is. Details for each case are summarized in Table 2 (below); the full application of the evaluation framework across the 12 cases can be found in Appendix 1 (ppe.mcmaster.ca/research/public-engagement).

3.1 Structures

Overall, most of the cases met the *information and choices* criteria well, with adequate attention given to ensuring that credible, accurate, and accessible information is provided and that participants perceive they have a choice in the resources made available to them. In contrast, cases were mixed in their attentiveness to addressing *accessibility, representativeness, and sampling* criteria and considerations given to principles of equity and diversity.

Within the *information and choices* category, 11 of the cases provided evidence of information resources in a variety of formats and to varying depths. The majority of cases (7/12) used one-stop-shop platforms; of these, a range of software was used, including: Engagement HQ, BaseCamp, Your Priorities, an online internal platform called 'J'enparle', an online external platform called 'Contribuez' using open source software Decidem, and vTaiwan. These platforms were used in a variety of ways. Most hosted slides from expert presentations, recordings of relevant presentations, resources shared during meetings, and collaborative documents. Others, such as The Royal Automobile Club of Queensland (RACQ) Citizen Jury, included a transition guide to the virtual space, and the #LockdownDebate Rapid Online Deliberation used the one-stop-shop for asynchronous activities such as journaling, idea generation activities, and short surveys. All 12 cases met the criterion to "invite specialists with alternative points of view to write critical analyses and/or include multiple and conflicting evidence-based materials". Five cases did not meet the criterion "information is easy and clear to understand".

Within the *accessibility, representativeness, and sampling* category, the first criterion, "equitable technology access" was met by 6/12 cases, not met by 2/12 cases, and had no information available for 4/12 cases. The second criterion, "equitable information access" had more gaps. It was met by 2/12 cases, partially met by 3/12 cases, not met by 2/12 cases, and had no information in 5/12 cases. The UK Climate Assembly stands out in this category; in addition to covering the costs of childcare, the attendance of parents/guardians, hearing loops, and materials in large print, the facilitators also discussed the need to "design assembly sessions so that assembly members [don't] have to see screen-sharing", allowing them to dial-in rather than joining online.

The third criterion, "clearly articulated recruitment approach with rationale and consideration of limits" was met by all 12 cases; 9/12 of the cases used a random sampling recruitment method with the aim of being statistically representative of the demographics within their respective populations. One case used an open invitation to local online groups, another drew participants from a previous deliberation, and the last case study used simple self-selection. All cases provided a justification for their selections, which varied from a focus on underrepresented groups to ease of access.

Table 2: Characteristics of Online Deliberation Cases

Case Study & Organizations*	Sector & Topic	Date & Location	Participants	Deliberative Process	Technology	Outcomes
#Lockdown Debate Rapid Online Deliberation Traverse, Bang the Table, Ada-Lovelace, Involve	COVID-19 policies for moving out of lockdown	May-Jun 2020, 3.5 wks, 10 hrs total UK	Recruitment through open invitation to local online groups (e.g., mutual aid groups, local resident forums) from 1 rural 1 urban area (Camden and Kent), then selected based on demographic to ensure diversity. Total = 28 participants.	Each week had 1) synchronous - 90min Zoom with 2 experts speaking for 10 min followed by q's, 2) Asynchronous 30min Engagement HQ asynchronous activities of idea generation, journaling about lockdown experience & survey and 3) synchronous - 60min Zoom discussion in eight small groups of 8 people	Zoom, Engagement HQ for asynchronous	Not recommendations, citizens provide values + beliefs and help to cluster ideas + questions
Dialogue and Deliberative Workshops on COVID-19 and the NHS NHS	Imperial College Health Partners, Ipsos MORI	COVID-19 measures in preparation for second wave	Jun-Aug 2020, Dialogue stage = two 3hr workshops, Deliberation stage = four 3hr workshops UK	Dialogue stage → participants drawn from 100 Londoners that took part in the OneLondon Citizens' Summit to reflect London's diversity, 58 attended 1st workshop, 61 attended 2nd workshop; Deliberation stage → 59 participants selected from dialogue stage	Dialogue stage -> small-group discussions on lived experience, presentation on NHS response to COVID, roundtable of experts, presentation on access to health services, case studies Deliberative Stage -> small-group discussions, expert presentations, additional engagement with underrepresented groups	Online video conferencing, but specific platform not mentioned	Develop a set of expectations as guiding statements that are not binding but will assist NHS in future planning
Citizens' committee on vaccination against COVID-19 French CESE	Missions Publiques	COVID-19 policies on vaccine rollout	Jan 2021 - Present (interim report Feb), 5 weekends France	Random selection of 35 members to be demographically representative of France from list of volunteers	Each meeting involves expert presentations, small group discussions, hearings	Zoom, online consultation platform for general public input	Formulating recommendations to the executive & Vaccine Strategy Steering Committee
Bristol's Citizen Assembly City of Bristol	Involve, Sortition Foundation, input from Steering Group & Advisory Group	COVID-19 recovery plan	Jan-Mar 2021, 4 weekends of 3 sessions of 2.5hrs each UK	Sortition Foundation randomly sent 12,000 invites to Bristol Addresses, from 700 applicants 60 randomly selected stratified members to reflect diversity of population	Citizens' assembly -> 1 wknd) learn about deliberation, 9 speakers present overview of 3 q's; 2/3 wknd) split into three groups of 20 with each considering one of three topics (climate change, transport, health), 33 expert presentations total, 4 wknd) whole assembly discussion, subgroup vote and finalize recommendations	Zoom, Basecamp storage portal	Recommendations presented in Spring 2021 to the One City Economy Board and City Council's Cabinet
Scottish Parliament Citizens' Panel on COVID-19 Scottish Parliament	Sortition Foundation, input from Steering Group	COVID-19 restrictions and measures	Jan - Feb 2021, 4 meetings UK	Sortition Foundation randomly sent 1500 invites to Scottish residents, out of 350 expressing interest 20 randomly selected stratified to ensure representation	Citizens Jury -> 1 meet) intro, conversation guidelines; 2 meet): expert panel, World Cafe small group discussion with experts; 3 meet): small-group discussion, vote, World Cafe; 4 meet): deliberate recommendations, small group discussions, World Cafe, then plenary session and final recommendations	Zoom, Your Priorities online discussion, Jamboard white boards	Final report of recommendations + five participants sent to COVID-19 committee session of Scottish Parliament
Nantes Métropole Citizens' Convention Nantes Métropole region	Missions Publiques, "consultative mirror group" established to share info to public	COVID-19 policies	Nov 2020-Feb 2021, 4 sessions 2.5 hrs each France	80 randomly selected citizens to reflect the diversity of Nantes, taken from respondents to telephone survey on health crisis conducted from September 10-23, 2020	Citizen assembly model -> members define the subjects to be investigated, actors to meet, q's to be asked to the public. 1 meet) discuss lived experience 2 meet) expert presentations, 3 meet) experts in 'speed dating round' 4 meet) finalize draft of opinions	Zoom, Online consultation platform for the public to answer q's	Submit report to elected representatives of Nantes Métropole in Mar 2021, receive response from reps in Jun 2021

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Case Study & Organizations*	Sector & Topic	Date & Location	Participants	Deliberative Process	Technology	Outcomes
Citizens' Panel - Planning the West Midlands' Recovery West Midlands Combined Authority | BritainThinks, Engage Britain	COVID-19 policies	Jun-Jul 2020, 4 weekends mix of 30min-90min calls UK	36 members that represent a cross-section of the West Midlands, Professional market research recruiters selected 27 panellists from Constituent Authorities and 9 from Non-Constituent Authorities	Citizens panel in three phases: induction, informed priorities, and priorities & principles. Each meeting had a different combination of plenary sessions, small group discussions, experts. Participants pre-tasked to capture insights on life under lockdown, become informed on impacts of COVID in the region	Microsoft Teams, Expert vox-pop library	Emerging principles and priorities to guide West Midlands Combined Authority who reports to West Midlands' Metro-Mayor
Oregon Citizens' Assembly on COVID-19 Recovery Healthy Democracy, Oregon's Kitchen Table, Sortition Foundation	COVID-19 recovery	Jul-Aug 2020, seven 2hr sessions USA	36 randomly selected citizens recruited through either 1) random digit dialling process done by Sortition Foundation, 2) pool of citizens contacted in last 12 years by Healthy Democracy for CIRs (postcard sent to 700-800 households and amongst interested 20 randomly selected)	Participants selected main question, focus areas, subject matter experts, developed survey to support deliberation.. 1 meet) social hour, test platform. Other seven sessions had combination of plenary sessions, small-group deliberations, subject matter experts, voting	Zoom	Final report presented to legislators
Extraordinary online session of the Citizens' convention on Climate: Finding a way out of the COVID-19 crisis French CESE | Missions Publiques, Res Publica Conseil, Harris Interactive	COVID-19 (one session out of normal sessions on climate)	Oct 2019 - Present, 7 sessions + 1 special session (2 days) in April to discuss COVID France	150 randomly selected through sortition process from 300,000 phone numbers (85% mobile, 15% landline) done by polling company Harris Interactive, representative of the diversity of French society	Citizen Assembly -> learning (sessions 1-3), deliberation (session 4-6), decision-making (session 7); COVID-19 session consisted of small group discussions and larger plenary sessions	Unknown video conferencing software, J'Enparle for info sharing + collab, "Contribuez" for public input	1) communication to french society and leaders, 2) transmission of 50 of 150 proposed measures drafted by Convention to the executive
Climate Assembly UK on the COVID-19 Crisis UK House of Commons | Involve, Sortition Foundation, mySociety	COVID-19 (one session out of normal sessions on climate)	Jan - Mar 2020, 3 in-person weekends, last weekend = 3 virtual weekends 2 hrs each UK	110 randomly selected participants through civic lottery out of 30,000 letters sent to UK citizens, representative of UK population	Citizens Assembly -> COVID-19 session had a presentation by expert leads, small-group discussions	Zoom	Release interim report on June 23 containing results of 2 votes, full report released in 2020 to 6 committees
Royal Automobile Club of Queensland (RACQ) Citizen Jury RACQ | democracyCo	Motor Injury Insurance	March 2020, 4 days in-person weekends + last weekend into 2 days online Australia	40 randomly selected Queenslanders to be representative of population of Queensland	Citizens Jury -> Final online session had 70% of time in small-group discussions, 30% of time in plenary sessions, had experts guests could identify witnesses and bring them in for more in-depth issues	Zoom, Google Docs, Poll Everywhere, BaseCamp storage portal	10 recommendations in report to RACQ, Treasurer of Queensland and Motor Accident Insurance Commissioner
Uberx Private Car Passenger Deliberations vTaiwan	Uber Regulations	Jul 2015 - Aug 2015 4 weeks of public survey via Pol.is then 2-hr stakeholder meeting China	Open to the public, any person can self-select to contribute to deliberation	1) vTaiwan -> a mix of open-source tools for soliciting proposal, sharing information, and holding polls but key tech is Pol.is -> involves people asynchronously posting comments, upvoting & downvoting. Tech generates map clusters & people naturally cluster people then draft comments that will win votes from both sides of a divide, gradually eliminating the gaps; 2) Consensus Stakeholder meeting	vTaiwan tools: HackMD, Discourse Pol.is, documentation of meetings, livestream provider	Consensus items from pol. support in-person stakeholder meeting, sent to admin to ratify consensus items

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For the next criterion, "recruitment through a variety of offline and online channels", 3/12 cases did not meet this criterion and 1 case lacked information on it. For the final criterion, "selection of software with straightforward user experience/familiar platform", only 1 case did not meet this criterion and 2 cases had no information. The vast majority of cases used zoom for their video-conferencing software, for the following reasons: it didn't require participants to sign up for an account, some of the participants had the experience of using it previously, it was inexpensive, and the toll-free call add-on allowed participants that weren't able to view their devices to participate.

3.2 Processes

Broadly, the *respectful treatment, civility, and tolerance for others' viewpoints* category had many reported gaps across the different within group criteria; however, these gaps were all contained within the same 4-5 cases. The *values-based reasoning* category also had gaps, although fewer than for the first category.

Within the *respectful treatment, civility, and tolerance for others' viewpoints* category, there were many gaps in the reporting of case studies for the first three criteria, "removal of hierarchy or status", "confidentiality and security" and "content moderation" (7/12 for the first, 5/12 for the second, 6/12 for the third after interviews). Interviews with the organizers of several of the case were used to gather additional detail to address some of these information gaps. The last two criteria, "equality of participation amongst citizens" and "participants' perceptions of being treated with respect and their ability to trust others", lacked information for 4/12 and 2/12 cases respectively.

Within the *values-based reasoning* category, the first criteria, "selection of software that utilizes various activities that can be asynchronous/synchronous", only 3 out of the 6 cases that used various types of activities (e.g., ideation, polling) experimented with asynchronous activities. Asynchronous activities ranged from individual journaling, idea generation activities, and short surveys during the #Lockdown Debate to discussion boards where participants could reflect on information between sittings, pose questions, and identify priority issues during the Scottish Parliament Citizens' Panel on COVID-19. vTaiwan was unique in the use of an inherently asynchronous platform to integrate multiple activities, including the HackMD open document program, the Discourse forum discussion software, the Pol.is argument-mapping software, Github, Sli.do, Typeform, LimeSurvey (questionnaire systems), Slideshare and Gitbook for documenting in-person and online meetings, and Youtube or other live stream providers. Only 1 case did not provide any information for the 2nd criteria, "shorter bursts of sessions to avoid zoom fatigue." The third criteria, "conduct test run/ ensure moderator knows software" was met by 9/12 cases, with the remainder lacking any information. The length of online sessions ranged from 30 minutes to a maximum of 3 hours. For the last two criteria, "long-enough time for citizens to deliberate" and "evidence of justification of opinion, openness to complexity, and adoption of societal perspective", all 12 cases met these criteria.

3.3 Outcomes

Cases were designated as having met the *outcomes* criteria if they showed evidence of any of the following: informing policy (either through direct recommendations or by developing principles/values), finding common ground, changes in participant knowledge, or changes in participant views of government, group decision process, and likelihood to participate in research. All 12 cases met this criterion, with 8/12 cases creating group recommendations to inform policy, 3/12 cases developing principles or values that assisted with the policy decision making process, 3/12 documenting changes in participants' knowledge or opinion, and 2/12 showing evidence of changes in participants views of the group decision process and

likelihood to participate in research. For the 8/12 cases that produced recommendations to inform policy, several of these held substantial impact on the decision-making process; for example, in the Pol.is case study, the Hong Kong administration pledged to ratify all the pol.is consensus items into a new regulation.

4.0 Discussion

Our descriptive evaluation of 12 virtual deliberation case studies aims to answer the broad research question: *How might COVID-19 and the shift to a digital space transform approaches to public deliberation in health policy?* We identified several broad themes that provide insight into the uses, benefits, and drawbacks of online deliberation: i) varied tools used by engagement practitioners to facilitate online engagement, ii) strong emphasis on including a diverse range of information sources, clearly articulating a recruitment method with rationale and acknowledgement of limitations, and promoting a respectful and trusting environment, and iii) less attention given to the design of equitable engagement opportunities as well as confidentiality, security, and content moderation.

4.1 Virtual Deliberation Tools

Our findings reveal a wide variety of platforms used to support online deliberation activities. This suggests that there is no single ideal-type 'one-stop shop' platform. It may be that having a one-stop shop is helpful but not necessary for quality deliberation, or that the shift to online engagement was too rapid to establish such a platform. In contrast, nearly all cases utilized zoom for their video-conferencing software. The simplicity, accessibility, and widely accepted use of the Zoom video-conferencing software were cited reasons for its popularity. It is likely that any other public engagement software will need to integrate these factors into its design to remain competitive. Finally, although the virtual space presented many opportunities for participants to engage in both synchronous and asynchronous activities, very few cases took advantage of this. In our interviews, practitioners that did not implement asynchronous activities emphasized equity and accessibility. Recognizing that some participants may not have had the time or capacity to do work outside of the deliberative space, the facilitators opted for zero offline work. They also highlighted technological accessibility, in that it would take a large amount of training for participants to migrate onto an additional platform other than Zoom. In addition, the majority of organizers used the same tools and approaches to online deliberation as they would have used in person, with Zoom being the primary tool that enabled them to host meetings online. The varying perspectives on asynchronous online activities suggest that its use is still being debated. The perspectives shared through these cases should be considered when designing future online deliberations.

4.2 Which benefits of virtual engagement are we harnessing well?

Virtual engagement presents new opportunities to improve deliberation; for instance, one benefit that has been widely cited is the elimination of the transportation and accommodation costs to organizers and associated barriers for participants.[33] In this section, we looked at the criteria that were met by the majority of the cases, which helped to answer the question, "What benefits of virtual engagement are we harnessing well?" In summary, our selected cases placed a strong emphasis on including a diverse range of information sources, ensuring an appropriate method of recruitment, and promoting a respectful and trusting environment.

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Within the *structure - information and choices* category, the attentiveness given to providing multiple sources of information material and providing alternative points of view speaks to the high priority given to these core principles of deliberation, even when transitioning to online deliberation. Indeed, adherence to these criteria align with one of the elements of Blacksher et. al's minimum definition for public deliberation: (1) the provision of balanced, factual information that improves participants' knowledge of the issue.[11] Our results support the idea that it may be easier to meet this criterion in the online environment because there are no geographical limits to inviting specialists. While some cases defined specialists as including advocates, those with lived experience, and identified witnesses, nearly all cases defined specialists as subject matter experts. This suggests that subject matter expert opinion is viewed as a core feature of deliberation, even in the online sphere.

In terms of recruitment, all 12 cases articulated a recruitment approach with a rationale and consideration given to limitations of different approaches. While this provides no guarantee of ensuring that the principles of representativeness or diversity are met, it demonstrates attentiveness to the risks associated with the disproportionate representation of some voices over others – a risk highlighted in the second element of Blacksher et al.'s minimum definition of deliberation.[11] It is important to note that three cases reported difficulty recruiting participants through both offline and online channels, due to limited resources in involving anyone who wasn't already online or because of platform limitations in recruiting offline participation, as in the case of vTaiwan. These examples illustrate that while the online environment allows deliberation practitioners to overcome geographical barriers, there are still technological constraints in ensuring representativeness. Our results illustrate that deliberation practitioners are aware of these limits but have not yet addressed them.

Finally, within *processes*, the cases were generally assessed favourably in relation to "participants' perceptions of being treated with respect and ability to trust others"; for example, many interviewees noted establishing ground rules for participation at the start of the sessions. The adherence to this element speaks to its importance within deliberative processes and its alignment to the third element in Blacksher et al.'s minimum definition of deliberation[11]: the opportunity to reflect on and discuss freely a wide spectrum of viewpoints and to challenge and test competing moral claims.

4.3 Which areas of virtual engagement do we need to improve upon?

Virtual engagement also presents numerous challenges for practitioners; for instance, how to ensure all participants have access to strong wi-fi to participate in sessions. In this section, we looked at the criteria that were minimally met in many of the cases, which helps us answer the sub question, "*What areas of virtual engagement do we need to improve upon?*" In summary, our selected cases gave less attention to ensuring equitable engagement opportunities as well as anonymity, confidentiality, security, and content moderation.

Within *structures - accessibility, representativeness, and sampling*, there were notable gaps in the criteria describing "equitable technology access" and "equitable information access". These gaps should raise concerns for practitioners in the deliberation community, because they may contribute to a persisting "digital divide" - the well-researched phenomenon of unequal opportunities for engagement being replicated through online engagement.[1,31] Potential reasons for these criteria not being met include: i) the costs associated with ensuring equitable tech and information access, and ii) lack of agreement about how to address these issues given the recency of the transition to virtual deliberation. It is possible that practitioners may have made efforts in this area but didn't report them. It is also worth noting that during interviews, many of the organizers of the case studies requested clarification about the "equitable information access" criterion. Further research is required to assist practitioners in integrating these criteria into the planning of future deliberations.

Within *processes*, the first three criteria, which related to i) the removal of hierarchies through anonymous processes, ii) ensuring confidentiality and security, and iii) content moderation, also had notable gaps across many of the cases, with many of the health practitioners we interviewed expressing confusion or requiring clarification in these areas. The most likely reason for these gaps is the novelty of these concepts to deliberation practitioners; they were drawn from the broader digital engagement literature and engagement practitioners have only been introduced to them since their deliberation activities have moved online. Although the general concept of confidentiality is equally applicable to the offline space, there are additional requirements for maintaining confidentiality in the online environment; for example, a participant may be accessing the session from a shared living space, with other members of their household in the room.

4.4 Further Discussion

To our knowledge, this is the first attempt to assess the quality of deliberation across multiple cases in the online engagement space, using an adapted evaluation framework; previous efforts have only been applied to offline contexts or to single studies.[32] As the field evolves and more online deliberation technologies are introduced, we encourage further work in this area to develop more robust criteria for assessing virtual deliberation. Evaluating deliberation is an iterative process, and both practitioners and researchers should be attentive to shifts in the way they engage online and how we might improve future evaluation frameworks to adapt to these changing practices.

Strengths of this study include our incorporation of multiple sources from different fields and disciplines, including peer-reviewed literature, grey literature, as well as online interviews to comprehensively measure the quality of online deliberations. We used a systematic process for retrieving the cases and the literature that informed the evaluation rubric. Limitations of this study included a reliance on publicly accessible reporting of online deliberation. Follow-up interviews with several practitioners were required to address key information gaps, with some gaps still remaining. Additionally, all cases were largely limited to those written in English, and therefore, a representation bias exists towards cases from English-speaking countries. In using categorical coding ("yes/no/maybe") to assess cases against each criteria, there is a risk of positive coding bias (i.e., assessing the criterion as met rather than not met).

Online deliberation tools present innovative approaches for connecting people, creating community, amplifying diverse voices, and mobilizing civic engagement. But there are numerous factors that need to be considered to ensure that online engagements do not lose the essence and quality of in-person deliberation. Our assessment of 12 cases, although brief, has shown that practitioners are aware of the complications that need to be addressed in the online space. Each of the cases in this review tackled the online challenge in a unique way, depending on their context and goals. However, our assessment identified broad trends in the way some criteria were met versus others. In particular, we found a lack of attention to ensuring equitable technology access, equitable information access, confidentiality, security, and content moderation. These criteria are all elements that have unique requirements in a virtual space, so it may be understandable that they have been given minimal attention by practitioners who are just beginning to gain experience with virtual deliberation. Future research that supports practitioners to adequately meet all elements of high-quality criteria, while considering the unique context of each deliberation, would be helpful.

5.0 Conclusion

COVID-19 has transformed our relationship with digital technology. Practitioners are asking: as we look to the future of public deliberation, what should it look like and how can we execute it most effectively? Given how recently engagement has transitioned online, there is a dearth of literature pointing to what high-quality online deliberation looks like. Our review of recent cases reveals that digital deliberation, while not the antithesis of offline deliberation, requires additional skills and tools to support high-quality implementation. The end of the COVID-19 pandemic will not mark the end of virtual deliberation; rather, a mix of online and offline engagement will likely be the new norm. Practitioners should direct their attention to determining how best to modify existing deliberation approaches to ensure that they are implemented both effectively and equitably in the online public sphere.

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