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Monitoring behavioural insights related to COVID-19

The rapidly evolving coronavirus disease 2019 (COVID-19) pandemic is placing an overwhelming burden on health systems and authorities to respond with effective and appropriate interventions, policies, and messages. A critical element in reducing transmission of the virus is rapid and widespread behavioural change. Evidence shows that a perceived lack of consistency, competence, fairness, objectivity, empathy, or sincerity in crisis response in the public could lead to distrust and fear.¹ Conversely, when the public perceives measures as having these characteristics, as well as being easily understood and communicated through trusted and accessible channels, and when the necessary services are available, people are able to make informed choices, protect themselves, and comply with recommended practices.^{2,3}

Risk perceptions influence individual protective behaviours⁴ but paradoxically, how people perceive risk is not necessarily correlated with the actual risk. This was seen during the influenza pandemic in 2009–10,⁵ where uncertainty and perceived exaggeration were also associated with a reduced likelihood to implement the recommended behaviours.⁶ Models of crisis and risk communication thus suggest that understanding risk perceptions is critical for an effective and appropriate crisis response.⁷ At the same time, not enough is known about the complex interplay of changing epidemiology, media attention, pandemic control measures, risk perception, and public health behaviour.⁵

Behavioural insights for COVID-19 are, therefore, of critical importance. This includes knowledge about what drives behaviour and awareness of changes in these drivers.^{1,3} Other psychological challenges, such as misinformation, stigmatisation, or herd behaviour (such

as hoarding of food or toilet paper) can be monitored to help estimate their prevalence and to identify sources. National authorities and other stakeholders, such as the media, can gain valuable insights into information needs, contextualisation of certain phenomena (eg, stigmatisation), and which target groups need additional attention. A few countries have rapidly initiated studies to gain such insights, and more countries are urged to prioritise such efforts, not in lieu of, but as a necessary supporting mechanism for other response measures.

Faced with overwhelming response requirements and cost, countries need opportunities to gain such insights through tools that: (1) are evidence-based; (2) can be rapidly applied; (3) can be regularly applied; (4) are simple and flexible enough to adjust to the changing situation; and (5) are low cost and cost-effective, particularly for low-income and middle-income countries. WHO and international partners can share such tools allowing countries to do this. Shared tools offer the additional opportunity of preparing syntheses analysis across contexts, providing invaluable insights for the continued response effort as well as for the post-outbreak evaluation, sharing of lessons learnt, and the continued effort to better understand effective mechanisms of crisis response.

Weekly *COVID-19 Snapshot MONitoring (COSMO)* was initiated in Germany on March 3, 2020.⁸ Preliminary data and examples of the usefulness of such data are shown in the appendix. The initiating researchers and authorities and researchers are now sharing this as a blueprint for other countries. Together with the new Insights Unit at the WHO Regional Office for Europe, an adaptable study protocol, sample questionnaire, and data analysis script have been made available along with guidance on contextual adaptation and open access practices.

The suggested serial, cross-sectional study allows rapid and adaptive monitoring of focal variables over

time, assessment of the relations between them, and randomisation of answer options where suitable. Among others, included variables relate to demographics, protective behaviours, knowledge, perceptions, and trust. Changes in risk perceptions or knowledge can be assessed over time; data on acceptance of new response measures can be made rapidly available; and misinformation or possible stigma can be identified as they emerge. Immediate data analysis by means of an automated data analysis website provides fast access to the results. WHO materials contain commented code (free R Studio online software) for data analysis and a website for rapid data presentation. The Insights Unit and Health Emergencies Programme in the WHO Regional Office for Europe are offering support to countries for implementation. National teams using the tool are urged to work in partner coalitions to discuss insights gained and implications for outbreak response interventions, policies and messages. Making results rapidly available to journalists is also suggested to support high quality and responsible media reporting. Journalists need timely knowledge about developing audience behaviour and habits to rapidly tailor information sharing and to develop narrative tools that encourage behaviour changes according to evidence from risk communication research.

In sum, rapid data collection and sharing could support effective interaction between authorities, health workers, journalists, and the public to encourage appropriate behavioural change, to manage the crisis, and to protect the most important asset in a crisis: public trust.

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For WHO's emergency risk communication capacity-building package see <http://www.euro.who.int/en/health-topics/health-emergencies/pages/whos-work-in-emergencies/risk-communication-in-emergencies/national-health-emergency-risk-communication-training-package>

See Online for appendix

For the WHO tool for behavioural insights on COVID-19 see <http://www.euro.who.int/en/covid-19-BI>

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A risk-based approach is best for decision making on holding mass gathering events

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Memish and colleagues,¹ in their response to our Comment,² perceive conflict between the current best-practice risk management advice on physical distancing and the scientific evaluation of cancelling or continuing mass gathering events during the coronavirus disease 2019 (COVID-19) pandemic. Although we have already acknowledged the need to balance these two considerations in order to maintain public understanding and trust, we do not accept that conflict is inevitable as our approach requires all

mass gatherings to be considered in context, including the prevailing advice on physical distancing and movement restrictions. An open and transparent process to explicitly consider the risks of a mass gathering can, in fact, promote public confidence in the decision.

The validity of our approach is exemplified by the emergence of the novel Middle East respiratory syndrome coronavirus (MERS-CoV) in Saudi Arabia in 2012.³ MERS has a fatality rate 10–15 times greater than COVID-19, and has spread globally; it has significant epidemic potential (as illustrated by the MERS-CoV outbreak in South Korea⁴) and remains on the WHO Blueprint List of priority pathogens, yet we have never advocated cancelling the annual Hajj pilgrimage in the epicentre of MERS activity. This was because we adopted a risk-based approach and concluded that the risks were manageable in the context of the mitigation measures that Saudi Arabia had put in place; 7 years of safe and successful Hajj since MERS-CoV emerged suggests that the decision was correct. We have not yet seen what decisions might be made by the Saudi Government about the impending Hajj in 2020, in the context of COVID-19, but we urge that those decisions are made on the basis of an evidence-based risk assessment process such as the one we describe in our Comment.²

Any risk assessment and risk management framework for a mass gathering might inherently result in cancellation or postponement, as in the recent decision by the International Olympic Committee and Japanese Government to postpone the 2020 Olympic Games.⁵ In the current COVID-19 pandemic, it is inevitable in many countries that the outcome will be to cancel or postpone events, either because the risk is too great or because the capacity for mitigation measures is not available, or both. That is an appropriate and valid use of a risk assessment tool. The evidence base for mass gathering health is still evolving

and needs to be expanded, and risk assessment frameworks also need to be refined further. Preventing global spread of infectious diseases from mass gathering events and protecting global health security require public health decisions based on evidence and an agreed rational framework for decision making. A systematic process to assess the event encourages us to consider explicitly the reasoning behind the decision, what we expect the decision to achieve, and what evidence exists to support that reasoning. This, in turn, helps us evaluate whether the decision achieves what is expected and so informs future decisions. It also requires consideration of the negative impacts of a decision to cancel an event (jobs, mental health, the economy) and to look for ways to mitigate the adverse effects.

Crucially, we must look to the future. Whatever the course of the COVID-19 pandemic, countries, individually and collectively, will reach a point when they want to start removing restrictions and rebuild communities and economies. This will include decisions on re-starting mass gatherings. These decisions will need to be carefully reviewed and phased to ensure that the COVID-19 pandemic is not reignited; here, we advocate our risk-based approach as a sensible and rational way forward to consider those decisions.

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