Public Health COVID-19

Policy Brief

Ethical aspects of pandemic public policy-making under uncertainty

Key Messages

Pandemic public policy-making requires far-reaching decisions in the context of severe and dynamic lack of information. This policy brief breaks down the ethical challenge of pandemic public policy-making under conditions of uncertainty into understandable parts, and elaborates how these may be approached in practice.

- A pandemic usually implies uncertainty about the spread of the infection, about its impacts for people and society, and the effects of policy measures undertaken in response to the pandemic.
- A precautionary approach is required, but precautionary reasoning must consider practicality, non-arbitrariness, proportionality and justification.
- Pandemic public policy making under uncertainty should
  - avoid paralysis by limiting the space for precautionary reasoning;
  - balance both uncertain harms and uncertain benefits;
  - avoid false certainty bias;
  - decrease uncertainty, while minding the price of precaution;
  - take into consideration legitimacy but also public opinion and feelings;
  - set, disclose and communicate underlying ethical values and principles; monitor and re-evaluate decisions and consequences.

This paper is intended for those making and advising public policy decisions, including ethicists.

Date of publication: [06. Jan. 2021]
Version: [01] – latest version available at www.public-health-covid19.de

Purpose

Pandemic public policy-making requires far-reaching decisions in the context of a severe and dynamic lack of information. The challenges of this uncertainty add to that of the ethical complexity stressed in a former brief on the general ethical aspects of pandemic policy (Heilinger, Thompson, Wild 2020). This regards especially the ethical justification of evidence-based public health (Attena 2014). Ethics therefore provides crucial and concrete input during a pandemic on how public policy makers should balance the pros and cons of options in situations of uncertainty (Wild et al. 2020).

Resolving the ethical challenges posed by uncertainty leaves a wide room for reasonable disagreement, but may also trigger emotional reactions to proposed policies (Roeser 2018). Public reactions to the uncertainty of pandemic policy are therefore often linked to partisan power politics or specific group interests (business, culture). Examples of this can be seen in public debates in many countries on, e.g., travel restrictions, the level and range of physical distancing restrictions, the introduction of novel technology (tests, drugs) and the general use of individual protection devices (apps, facemasks). There is, however, no clear pattern to exactly how these reactions to uncertainty link to the content of policies. Uncertainty itself tends to trigger discontent whatever the policy is, as is illustrated by public reactions to varying Covid-19 policies in different European countries. Such discontent easily increases polarization of existing opinion divides and may, in the worst case, undermine reasoned policy debate.

This brief aims to

1. break down the ethical challenge of pandemic public policy-making under conditions of uncertainty into understandable parts;
2. provide recommendations that enable pandemic public policy-makers (and officers preparing their decision-making basis) to analyze the more precise nature of ethical dilemmas due to uncertainty, and how these may be resolved.

The problem: Pandemic public policy under uncertainty

Uncertainty comes in degrees. The more is unknown, and the more is required to know more and know better, the more far-reaching is the uncertainty. Uncertainty may be restricted to certain areas or be more far-reaching, and it may be more or less complex. Uncertainty may also, to varying degrees, be a set condition in a specific policy-making context, or something dynamic that may

Date of publication: [06. Jan. 2021]
Version: [01] – latest version available at www.public-health-covid19.de

change or be changed over time. Uncertainty always implies that policy may in the end fail to generate the intended effects, or retrospectively end up wasting resources or imposing burdens in response to something that was after all not so important. During the Covid-19 pandemic it was and is, for example, unclear to what extent the restriction of access to certain places would reduce transmission, and different countries have reacted differently to this uncertainty.

A pandemic gives rise to uncertainty in two broad areas:

- Uncertainty about how the *infection* will spread, and what will be the impact of this for people and society;
- Uncertainty about what effects *pandemic policy measures* will have on people and society.

These uncertainties apply to primary prevention, capacity building and planning to prepare for a pandemic, as well as to the assessment of proposed actions to manage an ongoing pandemic.

Two crucial distinctions

Uncertain and dangerous times not only challenge policy, they challenge human nature. They create tensions between what we desire from public policy and how we evaluate and react to this policy. Two distinctions in this regard are crucial to keep in mind:

- *Being safe vs. feeling safe*. While creating safety is a common idea of what pandemic policy should provide, what makes us feel safe may not make us safer. A feeling of safety due to some policy action may even make the danger we face more severe, since our behavior may become less guarded. At the same time, feelings of safety may often influence public reactions to policy much more than this policy's actual effect on safety. Such feelings are therefore crucial to consider also from a rational standpoint.
- *Prospective vs. retrospective evaluation*. Most evaluation of public policy takes place retrospectively, when we (think we) know the outcome. But policy-making under (pandemic) uncertainty lacks access to that perspective, and must be evaluated accordingly. A policy decision made in the face of uncertainty may very well be prospectively commendable and responsible, even if in retrospect it will be judged to be a failure. Similarly, even if reckless action ends up to be successful in terms of the final outcome, this does not make it any more responsible. At the same time, continuous retrospective evaluation may be used to enhance prospective evaluation of coming measures.

Date of publication: [06. Jan. 2021]
Version: [01] – latest version available at www.public-health-covid19.de

4. Ethical challenges of public policy-making under uncertainty

There are two main ethical challenges facing public policy-making under uncertainty:

- Deciding how more or less uncertain risks and benefits of options should be prospectively evaluated to produce a final policy decision (e.g. which type of modelling is appropriate);
- Deciding to what extent the policy should be postponed to decrease the uncertainty by improving available information, although this may bring additional risk and harm (e.g. to wait for study results).

Related to both challenges, a precautionary approach, sometimes called the precautionary principle, is often highlighted (Munthe 2016, 2020; Steel 2014). Precaution is meant to signify, first, the idea that policy should focus on preventing major harm and, second, that such policy may be justified even if there is a lack of evidence regarding the certainty of the harm. To apply this principle was especially necessary in the beginning of the pandemic, when hardly any data was available. At the same time, this uncertainty typically extends to the very policy contemplated as a precautionary response to a possible major harm.

There is a wide variety of answers to how precaution should be enacted, but four basic ethical requirements must be observed (Hansson 2013):

- *Practicality*: Precaution must enable some policy option;
- *Non-arbitrariness*: Considerations used to evaluate options apply to all options and decision-making situations;
- *Proportionality*: The downsides of precautionary action need to be proportional to the value of safety achieved;
- *Justification*: The balancing to show proportionality and the choice of what to consider in that balancing must be supported by a valid ethical principle.

5. Recommendations

We give the following recommendations in order to facilitate and guide challenging policy-making about the pandemic response under conditions of uncertainty:

- to avoid paralysis by limiting the space for precautionary reasoning
- to balance both uncertain harms and uncertain benefits
- to avoid false certainty bias

Date of publication: [06. Jan. 2021]
Version: [01] – latest version available at www.public-health-covid19.de

- to decrease uncertainty, while minding the price of precaution
- to take into consideration legitimacy but also public opinion and feelings
- to set, disclose and communicate underlying ethical values and principles
- to monitor and re-evaluate decisions and consequences

Avoiding paralysis: limit the space for precautionary reasoning

If requirements to avoid or prevent possible major negative consequences are too demanding, they may block *all* policy options. Limits must therefore be set to precautionary reasoning to ensure that precaution remains practically useful. Such limits may be set in terms of stakes, likelihoods and/or quality of evidence of considered scenarios and/or the character of considered options (such as the extent to which they are reversible). Non-arbitrariness requires that whatever such criteria are set, they are uniformly applied across options and decisions.

Balancing uncertain harms and benefits: precaution cuts both ways

While a common notion of precaution is to support preventive action in the face of uncertain scenarios, in order to be non-arbitrary and proportional, this logic must apply also to the precautionary measures themselves. Facing drastic threats, such as in an ongoing pandemic, this requires consideration of not only the worst imaginable outcomes if a certain action is *not* taken, but also the worst imaginable outcomes that may occur *if* this action is taken. These aspects are linked, since the possible consequences of an action that is intended to manage a pandemic are dependent on how this pandemic may otherwise unfold.

Avoiding false certainty bias

The previous recommendation means that strategies attempting to simplify public policy-making under uncertainty by omitting ethically crucial elements of this uncertainty should be avoided (e.g. to introduce rapid test kits without an appropriate risk-benefit analysis). In particular, this applies to two commonly employed strategies: (1) The so-called principle of insufficient reason (from economics), where all uncertain outcomes are assumed to be equally likely (e.g. rapid test kits equally may or may not produce false negative test results). Such assumptions may seriously bias the balancing of uncertain outcomes and overstate the quality of available knowledge. (2) The so-called extreme value approach in scientific prognosis making (such as epidemiological modelling of virus

Date of publication: [06. Jan. 2021]
Version: [01] – latest version available at www.public-health-covid19.de

transmission), where the worst possible outcome is assumed to be the actual or most likely one. While this latter strategy attempts to promote precautionary reasoning, it actually undermines the room for making ethically responsible judgements that also include the uncertain dangers of contemplated precautionary actions.

Acting to decrease uncertainty: the case for evidence and the price of precaution

A common way of handling far-reaching uncertainty in the face of drastic threats is to require a certain level of evidence before a decision on a proposed action is made, and to adjust the balancing of uncertain harms and benefits in the light of updated evidence. This creates an ethical reason to support research that may produce such evidence. However, delaying action and spending resources on research rather than management of a pandemic also creates an ethical challenge. This results from the spread of the disease requiring immediate action, and is increased further by the fact that securing evidence to evaluate complex public health actions is often time-consuming and difficult (Attena 2014, Smith & Upshur 2019). Additionally, the sheer haste of the need to gather evidence may create dilemmas in research ethics, for example regarding whether or not evidentiary or ethical requirements should be relaxed in the development, say, of vaccines or therapeutics. Precaution thus has a price that needs to be balanced against the reasons supporting precautionary action to decrease uncertainty. This balance must apply uniformly across proposed actions to avoid arbitrariness, and needs ethical support to be justified.

Legitimacy, public response and feelings of safety and threat

One aspect that makes the collection of evidence to support the effectiveness of pandemic public policy particularly challenging is that much of the effect of policies is channeled via human individual and collective behavior, influenced by personal opinions and responses (including emotional reactions) to pandemic public policy. Generally, any public policy action needs to secure sufficient social license to be effective. As people's responses to dangers and uncertainty are dependent on not only their cognitive assessment of expected outcomes, but just as much on emotional responses in terms of how safe or threatened they feel, this has to be taken into account when designing appropriate precautionary pandemic action. This also includes the communication about such action, and the reasons behind it. In addition, partisan interests may actively work to promote specific emotional reactions to public policy in a crisis for reasons other than public health concerns, but nevertheless affect the legitimacy and effectiveness of public policy options.

Date of publication: [06. Jan. 2021]
Version: [01] – latest version available at www.public-health-covid19.de

Setting and disclosing values and principles

Justification of public policy decisions in the face of pandemic uncertainty requires that the numerous trade-offs mentioned so far are made on the basis of a set of ethical principles and values, linking to the policy brief on general ethical aspects of pandemic policy (Heilinger, Thompson, Wild et al. 2020). There is room for reasonable disagreement on exactly what this justification should look like. Nevertheless, whatever principles, values and specific trade-offs are used, they need to be uniformly applied across different outcomes, options and decisions (to avoid arbitrariness), and clearly and effectively communicated to the public (in order to secure legitimacy).

Continuous monitoring, open re-evaluation and long-term perspective

The dynamic nature of pandemic uncertainty requires that the basis of justification of particular public policy decisions are continuously monitored, so that they can be re-evaluated as new evidence occurs. At the same time, frequent change of policy actions and strategies may create downsides such as regulatory uncertainty that undermines the economic basis of public health, or public doubt jeopardizing legitimacy and compliance. Chosen policies also need to be sustainable across a longer time-period. In addition, designing public policy to ensure such monitoring, re-evaluation and reversibility may itself create costs and undermine effectiveness. While public policy enacted in the face of pandemic uncertainty should be both adjustable and reversible, there is room from this perspective for reasonable disagreement on exactly what this implies in different social contexts.

Sources

Attena, F (2014). Complexity and indeterminism of evidence-based public health: an analytical framework. *Medicine, Health Care and Philosophy* 17.3: 459–465.

Hansson, SO (2013). *Ethics of Risk: Ethical Analysis in an Uncertain World*. London: Palgrave McMillan.

Heilinger, J, Thompson, A, Wild, V et al. (2020). Public Health Ethics and Covid-19 The ethical dimensions of public health decision-making during a pandemic. Report from AG Ethik. *Kompetenznetz Public Health zu COVID-19*, online: https://www.public-health-covid19.de/images/2020/Ergebnisse/Policy_Brief_Pandemic_Ethics_GeneralF.pdf

Munthe, C (2020). Precautionary principle. In: Lafollette, H (ed.) *International Encyclopedia of Ethics*, 2020 Update. Doi:https://doi.org/10.1002/9781444367072.wbiee550.pub2

Munthe, C (2016). Precautionary principle. In: Ten Have, H (ed.) *Encyclopedia of global bioethics*. Dordrecht: Springer International Publishing. Doi: https://doi.org/10.1007/978-3-319-05544-2_344-1

Roeser, S (2018). *Risk, Technology and Moral Emotions*. London: Routledge.

Smith, M, Upshur, R (2019). Pandemic Disease, Public Health, and Ethics. In: Mastroianni, AC, Kahn, JP, Kass, NE (eds.)*The Oxford Handbook of Public Health Ethics*. Oxford: Oxford University Press, doi: https://doi.org/10.1093/oxfordhb/9780190245191.013.69

Date of publication: [06. Jan. 2021]
Version: [01] – latest version available at www.public-health-covid19.de

Steel, Daniel (2014). *Philosophy and the precautionary principle*. Cambridge University Press.
Wild, V, Buyx, A, Hurst, S et al. (2020). Covid-19: Eine Ad hoc Public-Health-Ethikberatung. *Gesundheitswesen*, 82(6): 507–513.

Authors, peer reviewers and contact

Authors: Christian Munthe (University of Gothenburg), Jan-Christoph Heilinger (RWTH Aachen), Verina Wild (University of Augsburg).

No conflict of interest.

Peer reviewers: Nancy Berlinger (Hastings Center, Garrison, New York), Niël Conradie (RWTH Aachen), Niels Nijsingh (University of Augsburg), Dagmar Starke (Akademie für Öffentliches Gesundheitswesen in Düsseldorf).

Contact: Christian Munthe (christian.munthe@gu.se)

Please quote as: Munthe, Christian; Heilinger, Jan-Christoph; Wild, Verina: Policy Brief, Ethical aspects of pandemic public policy-making under uncertainty. 2020, Bremen: Competence Network Public Health COVID-19.

Disclaimer: This paper was prepared within the framework of the Competence Network Public Health on COVID-19. The sole responsibility for the contents of this paper lies with the authors.

The Competence Network Public Health on COVID-19 is an ad hoc association of more than 25 scientific societies and associations from the field of public health, bundle their methodological, epidemiological, statistical, social scientific and (population) medical expertise. Together we represent several thousand scientists from Germany, Austria and Switzerland.

Date of publication: [06. Jan. 2021]
Version: [01] – latest version available at www.public-health-covid19.de