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Zurich**<sup>UZH</sup>

Institute of Biomedical Ethics  
and History of Medicine

Swiss TPH



Swiss Tropical and Public Health Institute  
Schweizerisches Tropen- und Public Health-Institut

# PubliCo is supported by:



Collegium  
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# TOC

<b>The need</b>	The infodemic in the context of the COVID-19 crisis, how it impacts people and societies; the need for better ways to inform people and to understand their needs.
<b>Strategy</b>	The long way from “it would be nice to have” to “that’s how we’re gonna do it”.
<b>Pilot results</b>	How the system is performing and what kind of data we are collecting.
<b>What are we learning</b>	Strengths, challenges and opportunities towards better risk and crisis communication.
<b>References</b>	Stuff we wrote and stuff we read.



# How to people feel during a public health crisis?

I am more at home. I don't meet with friends in person. I actually think the epidemic is quite interesting not necessarily positive but i don't find it that worse either.

Data from PubliCo pilot, 1



# How to people feel during a public health crisis?

As young adult I'm just sick of this whole situation. Obviously I don't like being forced staying at home but our government always switched from measurement to another. I think if we just stayed strictly at home for a period of time with no contact, maybe there haven't been a second wave. I wanna live my life going to concerts, meeting friends without feeling guilty and travel. I would totally accept a strict lockdown if there is a chance that I can live summer 2021 like every other summer. I just don't like this whole switching in measurements.

Data from PubliCo pilot, 2



# How do people feel during a public health crisis?

I lost my job, I lost my flat and soon I'll be living from the Welfare. Berset & Co. are stupid fuckers, blind on both eyes. It took them way too long to focus on children, way too long. It looks as if they have no agenda at all. I start understanding people who believe in a Corona conspiracy. Make Berset leave or I'm sure he will get killed.

Data from PubliCo pilot, 3



# The need

Understanding peoples' views, ideas and opinion to develop fair and effective measures





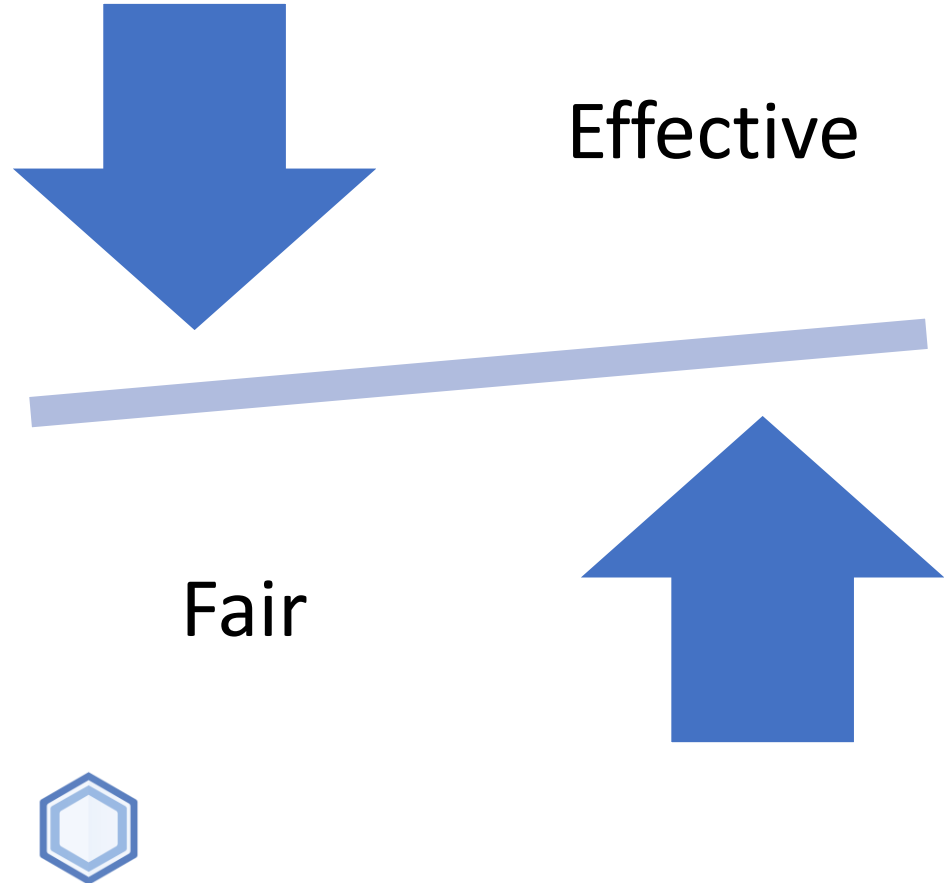
# Effectiveness and fairness

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The interplay between fairness and effectiveness is **crucial** in democratic societies, and it's a tough nut to crack.

We might know a lot about what theoretically is an effective measure, but the way a conceptual measure is implemented in a specific context **could dramatically change its functional parameters**.

We have good definitions of fairness (from social justice theories, distributive justice theories, procedural justice theories, ... ) but **we know little about which groups are doing worse in the current situation**.



# Providing and obtaining information

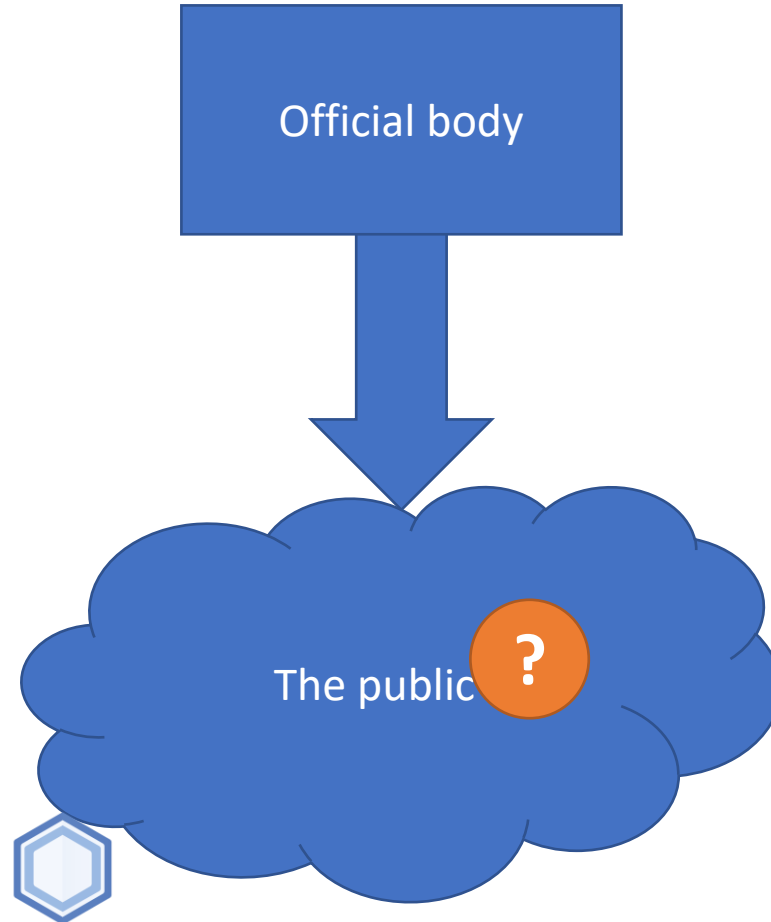
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## Information flow and policy making

Go beyond “one-way communication”. People may differ in their understanding of the situation and their readiness to comply with policies.

Selective opinion polls cannot fill this gap. One-time online or phone surveys (SRF 2020; tagesschau.de 2020; Betsch et al. 2020) encounter important limits in view of the rapidly evolving situation – they are **resource-intensive, limited in scope**, typically **design items in a top-down way**, struggle with **high non-response rates** and **provide snapshots** rather than continuous monitoring (Gould et al. 2009; Kaplan and Baron-Epel 2015).

Policy-makers might rely on a **suboptimal picture of reality** in order to make their choices that are expected to be timely and responsive. **Consensus has become fragile**.



# Providing and obtaining information

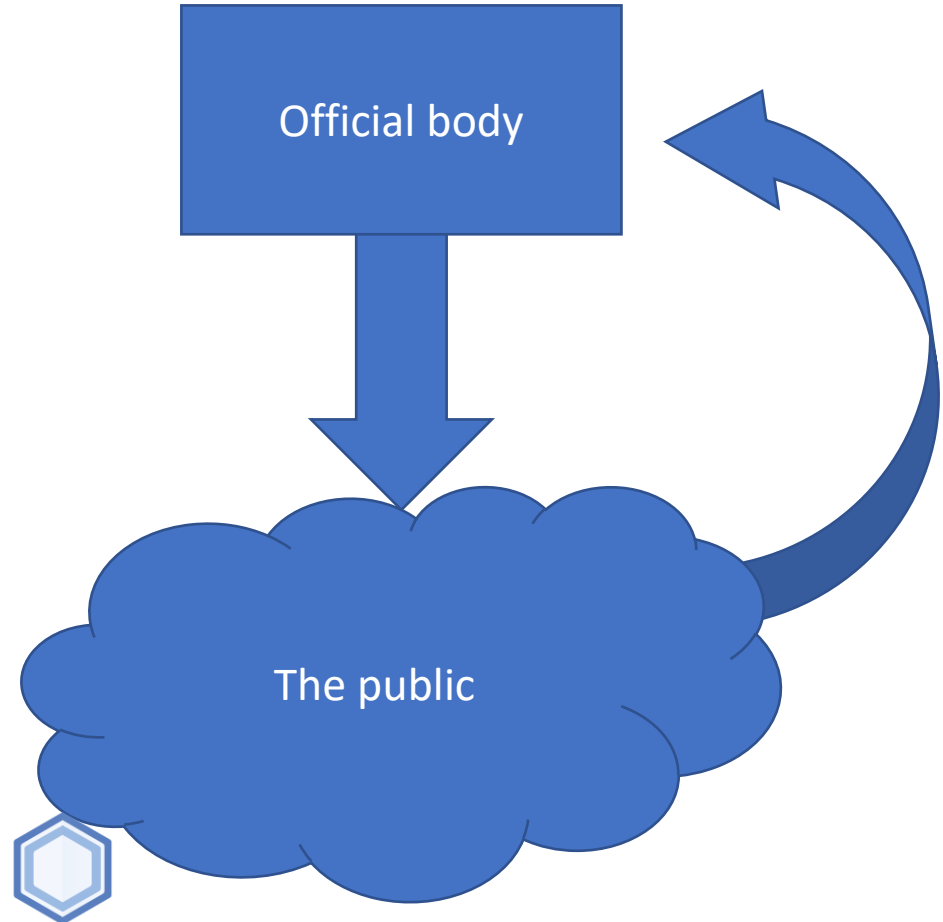
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## Let's close the loop

Understanding **how mitigation measures are received** by the population allows for an estimation of how effective they are going to be and **may thus influence not only communication strategies but also policy choices** (Plough et al. 2011; van der Weerd et al. 2011).

It will also help us understand **to what extent policy decisions match with citizens' moral values** and preferences regarding, e.g., the allocation of scarce medical resources, contact tracing, or obligatory mask wearing (Kaplan and Baron-Epel 2015).

Since using a “one size fits all” approach as mitigation measures in the context of epidemics has noticeable limitations, **local and subgroup data are critically needed** to deploy **more efficient strategies** (SteelFisher et al. 2012).

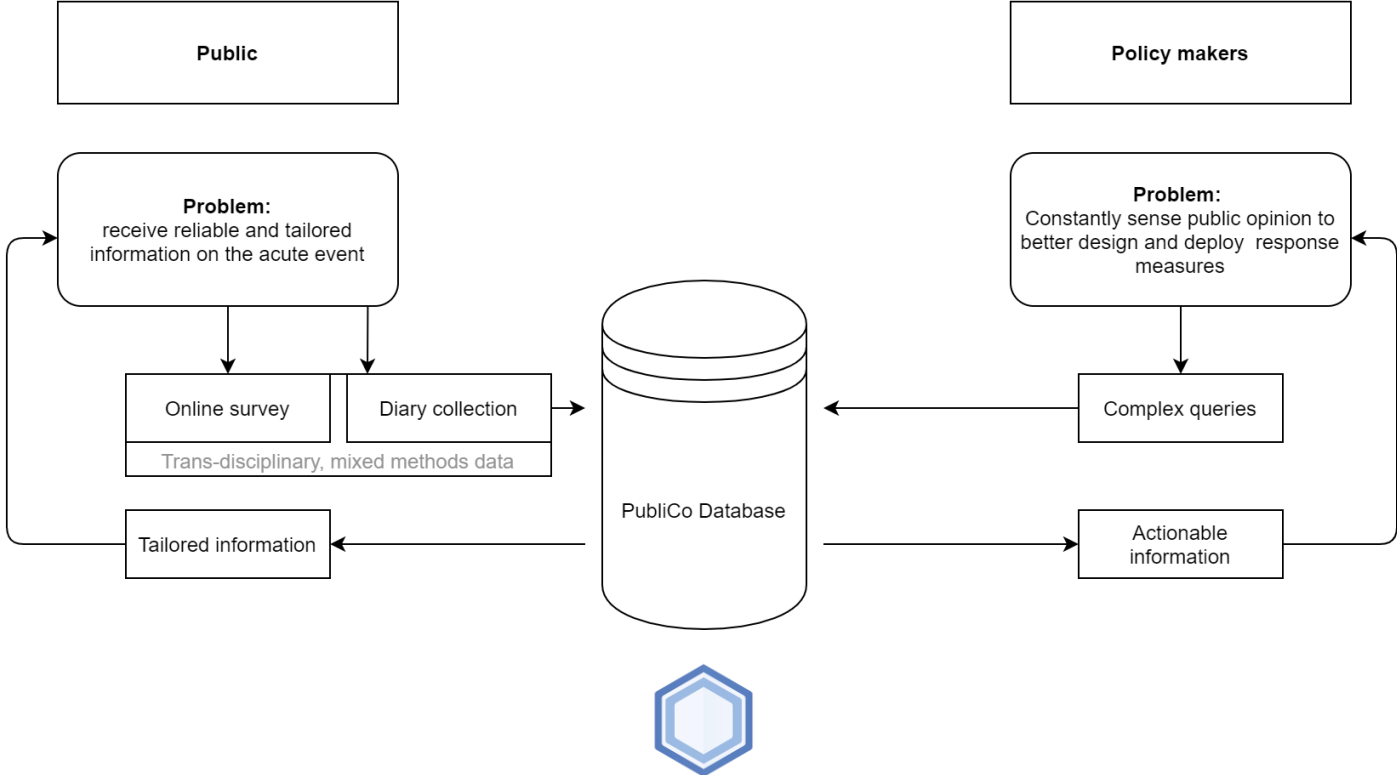


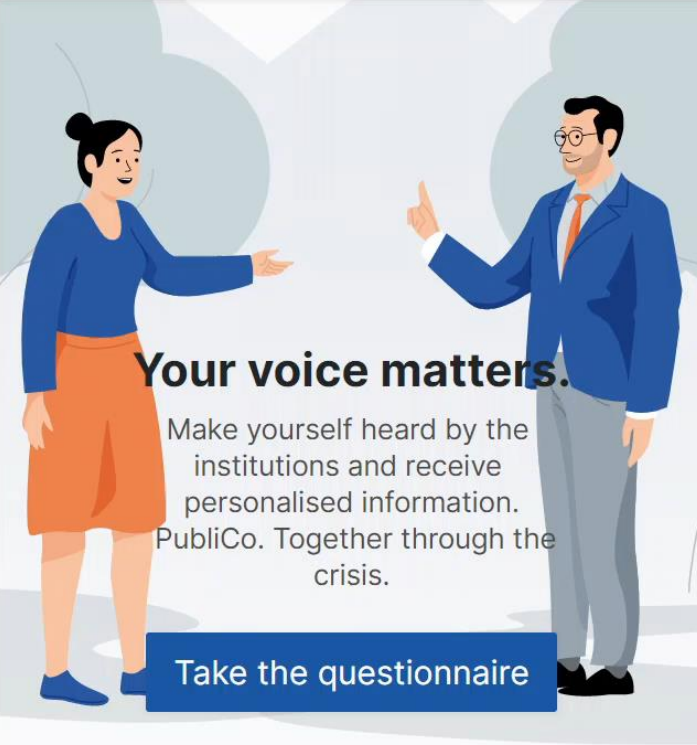


# Strategy



# Our first idea

Data flow in PubliCo






**Your voice matters.**

Make yourself heard by the institutions and receive personalised information. PubliCo. Together through the crisis.

[Take the questionnaire](#)

[Go to the diaries](#)



```
<!DOCTYPE html>
<html lang="en">
  <head>...</head>
  <body data-new-gr-c-s-check-loaded="14.1010.0" data-gr-ext-installed> == $0
    <noscript>You need to enable JavaScript to run this app.
    </noscript>
    <div id="root">...</div>
    <script>...</script>
    <script src="/static/js/2.0d3f0c6d.chunk.js"></script>
    <script src="/static/js/main.1db965b6.chunk.js"></script>
  </body>
</html>
```

html body

Styles Computed Layout Event Listeners DOM Breakpoints &gt;&gt;

Filter

:hov .cls + &lt; &gt;

Console What's New x

Highlights from the Chrome 90 update

### New CSS Flexbox debugging tools

Debug and inspect CSS Flexbox with the new CSS Flexbox debugging tools.

### New Core Web Vitals overlay

Visualize page performance with the new Core Web Vitals overlay.

## Tech stack

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- React (JS Frontend)
- SurveyJS
- Typescript
- Django (Backend)
- MariaDB
- Docker
- CicleCI
- NGINX (web server)
- All the data is stored in a university-owned server



# Key ethical features

- **We are transparent, free and open:**
  - Every step of the process is public and accessible, from the protocol to the data.
- **We guarantee anonymity:**
  - No cookies, no behavioural tracking, no personal or digital identifiers.
- **We do listen:**
  - What are people looking for? What information do they find?
  - Is our approach relevant? Citizen science validation.
- **We try to understand:**
  - Include qualitative components (my message to policy makers, diaries, free text fields).
  - Encourage people to speak their mind rather than just measuring scores.
  - Allow users to use the data and generate own hypotheses.
- **We give something back:**
  - Collect AND provide information (individual feedback and aggregated data).



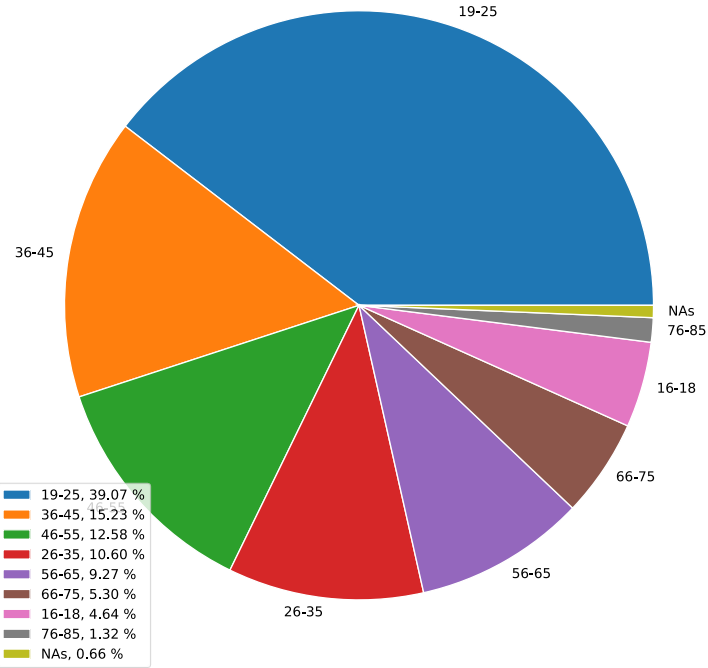


# Pilot results

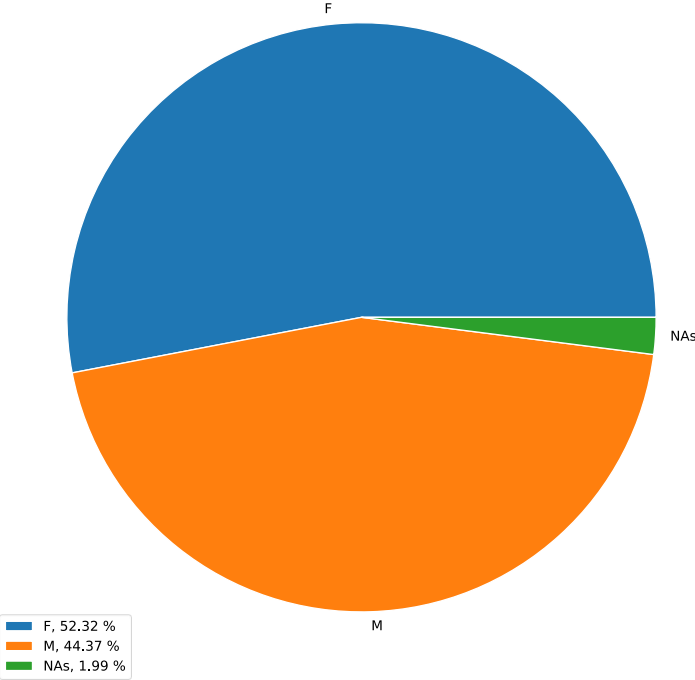


# Demographics

Age group

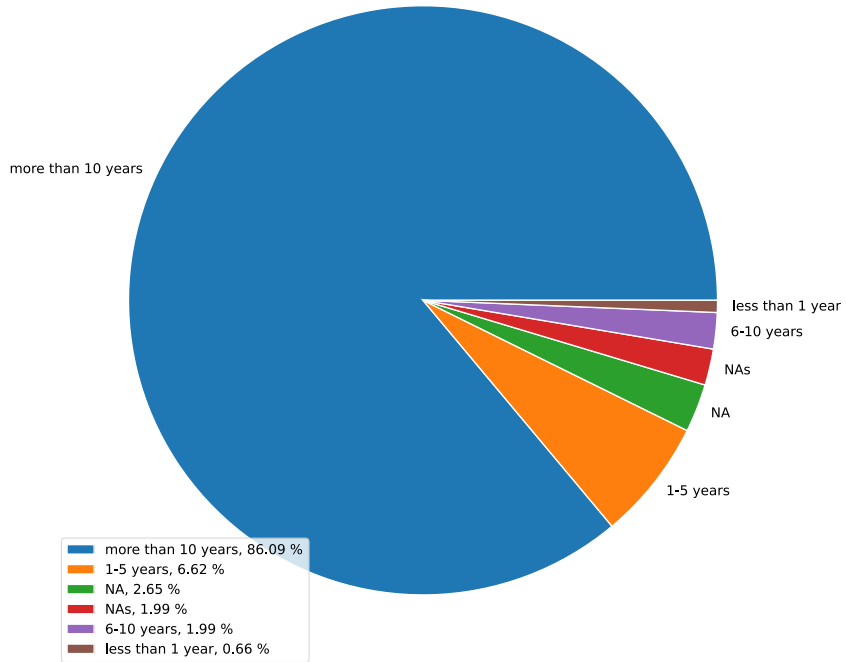


Gender

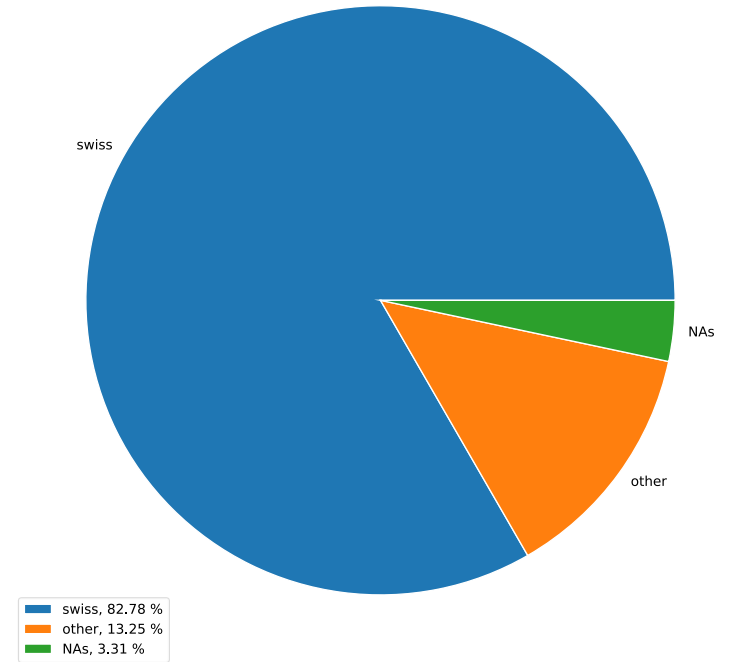


# Demographics

## Time in CH



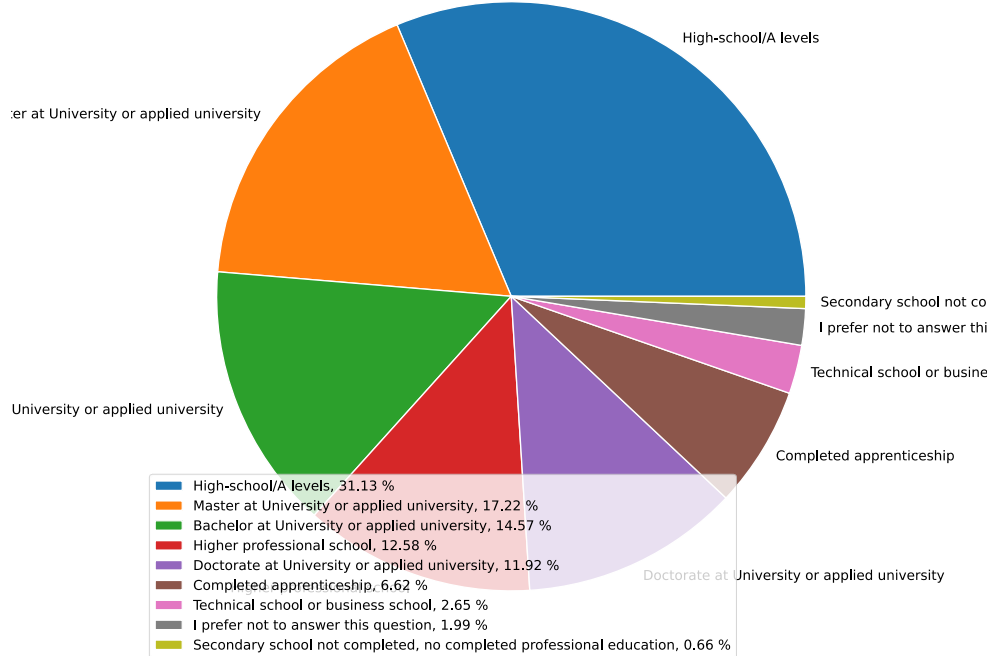
## Nationality



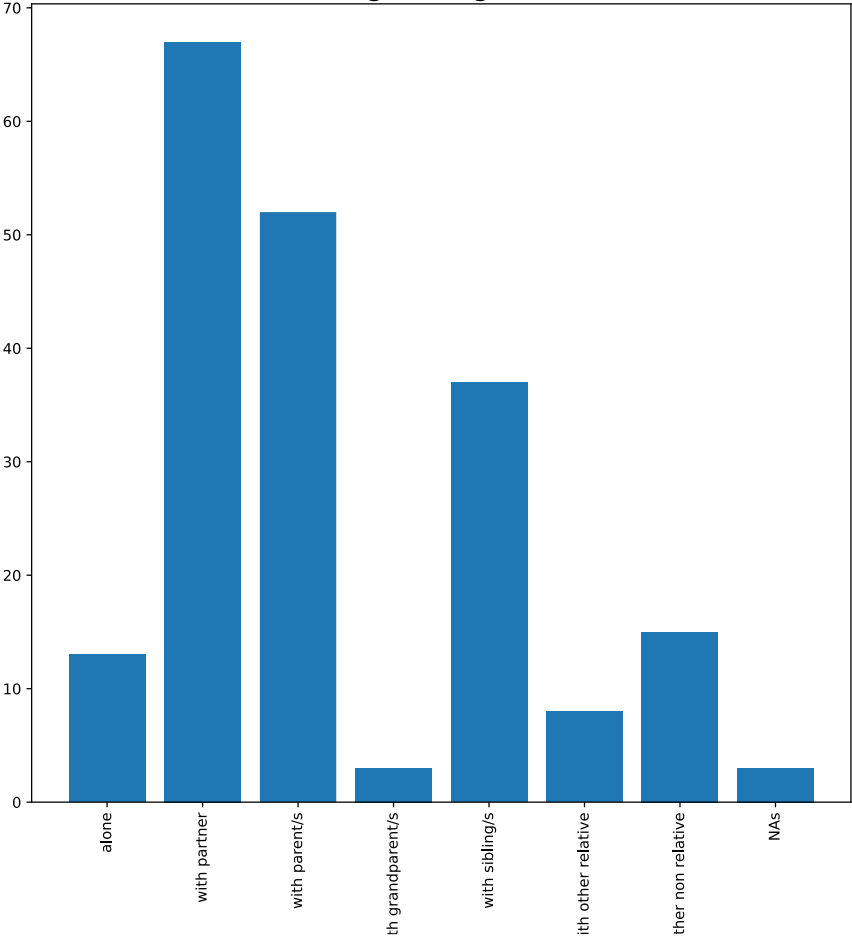
Other means: Deutsch, Italian, Kurdish, Italy, German, german, Portugal, US, French, Dutch, brazilian, swiss, german, Deutsch, Ethiopian, deutsch, Spanish, Deutsch, Turkish, Deutsch, Deutsch, German, Nigeria

# Demographics

Education level

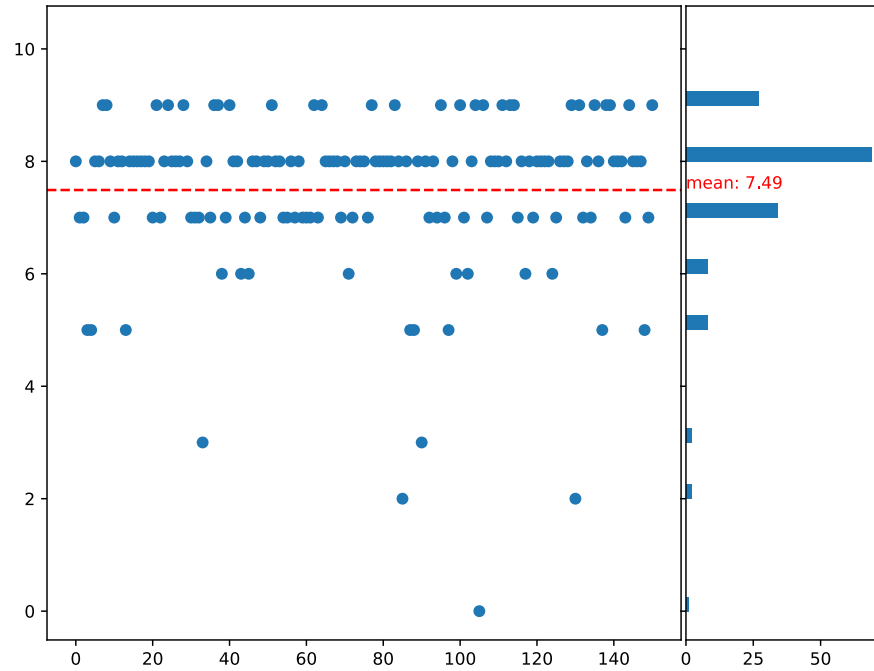


Living arrangement

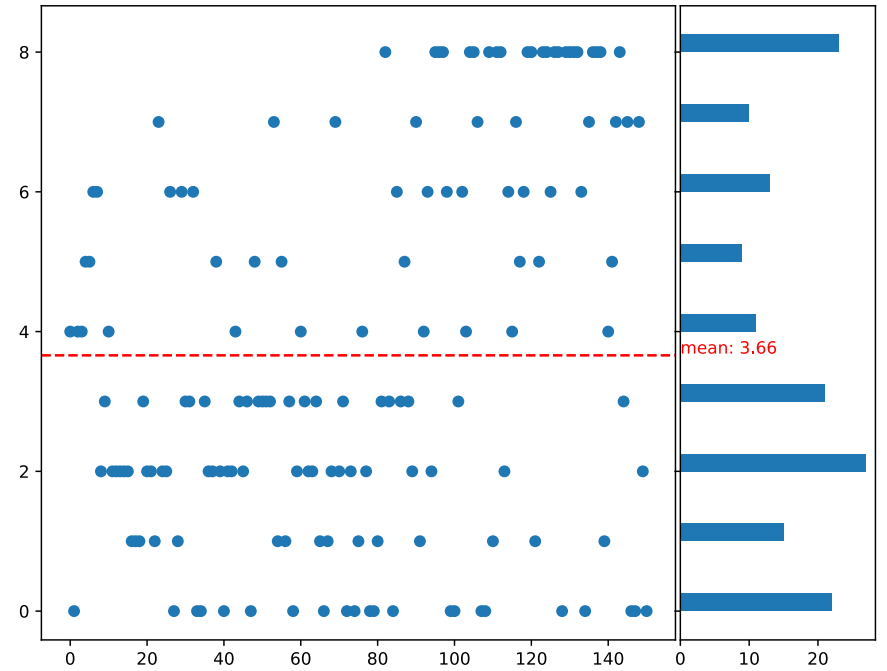


# Demographics

Cognitive understanding/ main symptoms



Moral orientation / reactance



On the X axis: progressive number of the respondent. On the Y axis: score of the respondent.

# What we are learning



# Strenghts

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- **Transparent processes** and access to data (including intermediate data) fosters **trust**.
- **Inclusive approaches** from the very beginning let us design **better instruments**, and let people perceive themselves as **co-actors in research** rather than as subjects of research.
- **Anonimity** guaranteed by transparency, clear data policies, and data hosted on reputable institutions' machines put people in the condition to **freely express their opinions** even when they are very critical.
- **Qualitative data and co-generation of interpretations** can deeply **enrich the analysis** (magnitude AND meaning of phenomena)



# Opportunities

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- Provide **personalized information** that is needed, relevant, precise, and clear – based on **empirical evidence**.
- Provide information that is **simple to understand** and useful to **elicit specific behaviours**.
- Provide information that is **non judgemental** – especially on morally loaded topics – in order to **elicit specific reflections**.
- Complement information with **links to official sources** that might be difficult to find for lay users.
- **Provide resources** when relevant, e.g. contacts to associations or organizations for psychological health.





# Challenges

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- Targeted information vs. creating «information bubbles».
- Any role for censorship (e.g. anonymized diary entries presenting conspiracy theories)?
- Information vs. nudging/implicit blaming & shaming.
- Cultural: public trust that citizens' voices are taken seriously.
- Political: Potential abuse in non-democratic societies (surveillance, identification of citizens with «deviant» opinions, predictive modelling as a first step towards controlling).
- Contextualization of the analysis: free access to data means that data can be freely misinterpreted.
- Risk of propagating own bias when preparing the information feedback: what seems simple or obvious to who writes the text could be perceived in a completely different way by the users.



## Feedback on survey V2

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<https://publico.community/survey/18>

- Are the questions appropriate?
- Is the wording clear?
- Is there anything you'd like to add?
- Is there anything you'd like to remove?

Email your considerations at [giovanni.spitale@ibme.uzh.ch](mailto:giovanni.spitale@ibme.uzh.ch)



# References



# References

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- Giovanni Spitale, Sonja Merten, Kristen Jafflin, Bettina Schwind, Andrea Kaiser-Grolimund, & Nikola Biller-Andorno. (2020, November 30). [Protocol] PubliCo. A new risk and crisis communication platform to bridge the gap between policy makers and the public in the context of the COVID-19 crisis (Version 2.1.0). Zenodo. <http://doi.org/10.5281/zenodo.4551386>
- Jafflin K, Merten S, Spitale G, *et al.* PubliCo: Improving risk and crisis communication in the context of the COVID-19 crisis. Ad-hoc white paper for the Health Ethics & Governance Unit on Ethics & COVID-19, WHO. 2021.
- Giovanni Spitale. (2020). Lemmas and Named Entities analysis in major media outlets regarding Switzerland and Covid-19 [Data set]. Zenodo. <http://doi.org/10.5281/zenodo.4036071>
- Giovanni Spitale, Nikola Biller-Andorno, Kristen Jafflin, & Sonja Merten. (2020). Google Trends normalized hits for COVID-19 generated in Switzerland (Version 1) [Data set]. Zenodo. <http://doi.org/10.5281/zenodo.4550751>
- Giovanni Spitale. (2020, August 19). Factiva parser and NLP pipeline for news articles related to COVID-19 (Version 1.1.0). Zenodo. <http://doi.org/10.5281/zenodo.3991821>
- Lee ST, Basnyat I. From press release to news: mapping the framing of the 2009 H1N1 A influenza pandemic. *Health Commun* 2013;**28**:119–32. doi:10.1080/10410236.2012.658550
- Sandell T, Sebar B, Harris N. Framing risk: communication messages in the Australian and Swedish print media surrounding the 2009 H1N1 pandemic. *Scand J Public Health* 2013;**41**:860–5. doi:10.1177/1403494813498158
- Ning L, Niu J, Bi X, *et al.* The impacts of knowledge, risk perception, emotion and information on citizens' protective behaviors during the outbreak of COVID-19: a cross-sectional study in China. *BMC Public Health* 2020;**20**:1751. doi:10.1186/s12889-020-09892-y
- Lin L, Savoia E, Agboola F, *et al.* What have we learned about communication inequalities during the H1N1 pandemic: a systematic review of the literature. *BMC Public Health* 2014;**14**:484. doi:10.1186/1471-2458-14-484
- Citizen Science Center Zurich. CS Project Builder - PubliCo. Citiz. Sci. Cent. Zurich. 2020. <https://lab.citizenscience.ch/en/project/231> (accessed 27 Nov 2020).
- Hyers LL. *Diary Methods: Understanding Qualitative Research*. Oxford, New York: : Oxford University Press 2018.
- Constant N, Roberts L. Narratives as a mode of research evaluation in citizen science: understanding broader science communication impacts. *J Sci Commun* 2017;**16**:A03. doi:10.22323/2.16040203



# References

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- Semino E. “Not Soldiers but Fire-fighters” – Metaphors and Covid-19. *Health Commun* 2021;**36**:50–8. doi:10.1080/10410236.2020.1844989
- WHO. Novel Coronavirus(2019-nCoV) Situation Report - 13. 2020.<https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200202-sitrep-13-ncov-v3.pdf> (accessed 4 May 2020).
- WHO. Coronavirus disease (COVID-19) advice for the public: Myth busters. 2020.<https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public/myth-busters> (accessed 4 May 2020).
- Plough A, Bristow B, Fielding J, *et al.* Pandemics and health equity: lessons learned from the H1N1 response in Los Angeles County. *J Public Health Manag Pract JPHMP* 2011;**17**:20–7. doi:10.1097/PHH.0b013e3181ff2ad7
- van der Weerd W, Timmermans DR, Beaujean DJ, *et al.* Monitoring the level of government trust, risk perception and intention of the general public to adopt protective measures during the influenza A (H1N1) pandemic in The Netherlands. *BMC Public Health* 2011;**11**:575. doi:10.1186/1471-2458-11-575
- Kaplan G, Baron-Epel O. Personal needs versus national needs: public attitudes regarding health care priorities at the personal and national levels. *Isr J Health Policy Res* 2015;**4**. doi:10.1186/s13584-015-0010-2
- SteelFisher GK, Blendon RJ, Ward JRM, *et al.* Public response to the 2009 influenza A H1N1 pandemic: a polling study in five countries. *Lancet Infect Dis* 2012;**12**:845–50. doi:10.1016/S1473-3099(12)70206-2
- Milligan C, Bartlett R. Solicited Diary Methods. In: Liamputtong P, ed. *Handbook of Research Methods in Health Social Sciences*. Singapore: : Springer 2019. 1447–64. doi:10.1007/978-981-10-5251-4\_15
- Harvey L. Intimate reflections: private diaries in qualitative research. *Qual Res* 2011;**11**:664–82. doi:10.1177/1468794111415959
- Hyers L. *Diary Methods: Understanding Qualitative Research*. Oxford University Press 2018. <https://www.oxfordscholarship.com/view/10.1093/oso/9780190256692.001.0001/oso-9780190256692> (accessed 7 Jun 2020).
- NIH Office of Behavioral and Social Sciences Research. COVID-19 OBSSR Research Tools. 2020.[https://www.nlm.nih.gov/dr2/COVID-19\\_BSSR\\_Research\\_Tools.pdf](https://www.nlm.nih.gov/dr2/COVID-19_BSSR_Research_Tools.pdf) (accessed 10 Jun 2020).
- EU vs Disinformation. EU vs DISINFORMATION. EU Vs DISINFORMATION. 2020.<https://euvdisinfo.eu/> (accessed 10 Jun 2020).
- Smart P, Holmes S, Lettice F, *et al.* Open Science and Open Innovation in a socio-political context: knowledge production for societal impact in an age of post-truth populism. *RD Manag* 2019;**49**:279–97. doi:<https://doi.org/10.1111/radm.12377>



# THANKS FOR YOUR TIME!

[www.publico.community](http://www.publico.community)

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