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Abstract: Nudging and behavioural insights need to be taken into account in strategic action planning for suppression and reduction of pandemic effects. This paper focuses on a few selected areas of significant importance to getting SAR-CoV2 under control in both the non-pharmaceutical and the pharmaceutical phase, i.e. after the development of an effective vaccine.

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Nothing declared.

Author contributions

Both authors designed and conducted the review, discussed the results and contributed to the final manuscript.

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Extraordinary situations such as a pandemic require extraordinary measures, including strict, temporary restrictions of civil liberties. As a consequence of the worldwide spread of the new and lethal SARS-Cov2 virus, most European countries have introduced restrictive policy measures in the last few weeks. These include curfews and national lockdowns, which, e.g., ban non-essential outside activities in order to curb further infections and decrease the associated death rate. Since these restrictive political measures achieved first successes during the corona crisis and are (still) met with widespread acceptance in the population, behavioural approaches, including nudges, associated with a libertarian approach, appear somewhat peripheral. But that could change quickly in a prolonged crisis. Freezing the economy and imposing strict social distance rules is not a viable option for a period of several months, say 12 months or more, for economic reasons, because of the risk of psychological reactance (a behaviour of disregarding rules to restore a perceived loss of freedom) and other mental health and social issues, e.g. psychological problems related to isolation and domestic violence. Until a safe, widely available vaccine or an effective treatment for Sars-CoV2 is found, the only option is to adopt behavioural policies in a well-thought mix of hard and soft interventions. Even after a vaccine has been developed, there are compliance tasks within a general vaccination policy that can be significantly facilitated through supportive behavioural tools such as nudges. Indeed, we need a strategic programme of behavioural measures to deal with the pandemic in its different stages, for different target groups and in different contexts. So instead of asking IF nudges are an alternative policy option to bans and mandatory regulations, we should rather ask WHERE and WHEN the application of behavioural insights can improve existing policy measures to fight the current and future pandemics even more effectively and contribute to achieving societal resilience. The latter comes to the fore when taking into account the possibility of new waves of SARS-Cov2 infection (occurring after social distancing restrictions are relaxed or coming back seasonally like a flu) or the emergence of other new diseases with a strong behavioural component of control.

Nudging relies on the concept of bounded-rationality. As humans, we often have to make decisions based on incomplete information. We may either deliberately decide to focus on certain aspects because full information is not available or simply too costly to obtain (in terms of time and effort), or we do it intuitively because our capacity for deliberate thinking and attention span are limited. Heuristics, associations and previous experiences stored in our associative memory are easily accessible and serve as "rules of thumbs" that allow us to make fast and often accurate decisions in new situations, but may also cause cognitive biases (Kahneman and Tversky 1979). Luckily, these biases are predictable and can be used to "correct" our judgements and behaviours by means of nudging, also called choice architecture (Sunstein and Thaler 2008). Some predefined environment (physical, social, virtual) is always present and a smart choice architect can modify it in a way that a specific (e.g. health

preserving or virus proliferation suppressing) option automatically/intuitively appears as the best choice.

Nudges inducing behavioural change have been successfully applied in many domains like energy efficiency, pensioning/saving plans, organ donation agreements, health, to name only a few (Sunstein 2014). In the current coronavirus crisis, a couple of isolated and systematically disconnected applications have been observed so far, incl. cues reminding people of handwashing/disinfection (e.g. arrays on the floor), modifying physical arrangement and prompts (e.g. hand sanitizers standing in people's way) or markings in the supermarkets indicating the "safe distance" in ques (as compiled by Bahavia 2020). Unfortunately, all these attempts do not even come close to what could be achieved by means of behavioural insights if these were incorporated into a comprehensive behavioural strategy to support policy. Worse still, they can even give the impression of a negligible importance of behavioural sciences during a pandemic. Nothing could be more wrong.

In fact, there is ample scientific evidence that individual and social behaviour studies can be used to better understand and influence citizens' behaviour during a pandemic, see e.g. the recent compilation of relevant topics by Van Bavel et al. 2020. These important insights into human behaviour need to be taken into account in strategic action planning for suppression and reduction of pandemic effects, possibly also taking into account cultural circumstances. In this paper we focus on a few selected areas of significant importance to getting SAR-CoV2 under control over the long run.

The behavioural changes needed for disease control in the non-pharmaceutical intervention phase of pandemic are challenging to most of us, although they represent rather simple behaviours like:

1) Practicing social distancing,
2) Joining an infection-tracing app community,
3) Increased hand hygiene (frequency and length of washing hands) and
4) Avoiding touching the face and popularising a sneezing & coughing etiquette

In the pharmaceutical intervention phase of the pandemic, i.e. after the development of an effective and broadly available vaccine, the remaining behavioural challenge comprises:

5) Quick and complete implementation of the vaccination.

We argue that a skillful application of social behavioural knowledge, including nudges, can make these tasks easier for many (not all) people and thus increase compliance with existing rules and prohibitions and the voluntary engagement for behaviours that can hardly be regulated by the state, such as washing hands or are difficult to enforce e.g. due to privacy concerns as in case of contact tracing

1. Practicing social distancing

First, field and laboratory research confirm that most people are so-called "conditional co-operators", meaning that their contribution to the public good (in our case public health) increases with the contribution of others (Fischbacher et al. 2001, Frey and Mayer 2004, Heldt 2005). The possible economic explanations include e.g. conformity behaviour, social norms and values affecting own morale, fairness preferences and reciprocity (Gächter 2007). These mechanisms are used by "social" nudging interventions, e.g. nudges that indicate a high participation rate and, therefore, refer at a descriptive norm (what others do). This approach was proven to successfully encourage re-use of towels in hotels (Goldstein et al. 2008, increase up to 49,3%[1]) or tax compliance (Hallsworth et al. 2017, treatment effect up to 5,1%[2]). It also proved to be successful in terms of hand washing behaviour. People washed their hands more often in a public toilet if a sign was put up to draw attention to other people's hand washing behaviour (Judah et al. 2009). These findings have important implications also for increasing compliance during quarantine and designing effective social distancing regulations. They can ease the felt burden of compliance under mandatory regulation ("I am not the only one in this situation") possibly matched with punishment for non-compliance to deter free-riders and encourage and/or sustain voluntary compliance to social distancing mode during relaxation of regulations. The communication design could be possibly further enriched by emphasizing common identity ("we" as a nation, or "we" as a local community), fate (it concerns all of us) and reminding people of the ultimate purpose of these actions (preserving public health and social well-being).

2. Joining an infection-tracing app community

Tracing contacts of infected people is another crucial issue to break the chain of virus transmission. Currently, in many countries, health care sector employees manually trace down contacts of infected persons and provide them with information and advice on quarantine, SARS-CoV2 testing or medical treatments. Without doubt digital contact tracing could improve and accelerate this process, as has been observed e.g. in South Korea (Huang et al 2020). The key question is how to achieve a comparable broad use of an infection-tracing app on a voluntary basis in the Western world that represents an individualistic culture as opposed to a collectivistic one in East Asia. Educating people about the fact and purpose of collecting data as well as its effectiveness in suppressing the spread of virus is important and necessary[3], but it is rather unlikely to achieve universal application on its own. An increased usage could be achieved by the means of defaults. In particular, opt-out or active choice defaults can

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[1] Social nudges using local norms (referring to the guests who stayed in the same hotel room), as opposed to the global ones, turned out most effective.

[2] Social nudges enhanced by the minority framing ("Nine out of ten people in the UK pay their tax on time. You are currently in the very small minority of people who have not paid us yet") induce the highest compliance.

[3] Studies indicate that transparency and education lead to a better societal understanding of policy aims and can justify the use of different policy means like defaults (Reisch and Sunstein 2016).

significantly increase participation in the context of a public good (e.g. organ donation) as compared to opt-in default (Johnson and Goldstein 2003), which is often the voluntary standard option. The overall effect could be further enhanced by inclusion of a social nudge (e.g., percentage of supporters) implemented prior to the default, to harness the power of social pressure (Yan and Yates 2019), provided that a majority supports the measure in question. No empirical results are yet available on the effectiveness of defaults in this specific context. However, ongoing research investigating the current perception of the SARS-CoV2 outbreaks in society provides valuable information regarding effective intervention design. In the recent German COSMO study (Betsch 2020; Betsch et al. 2020), published on 27th of April 2020, about 49% would be willing or rather willing to install the infection-tracing app, while 22% would not download it by any means. Thus, taking into account the heterogeneous structure of society; citizens with strong preferences for or against the app and those with no or weak preferences towards an option (the so-called "passive decision-makers" - here a rather stable group of about 30%), the use of a default seems to be a viable solution to increase the app usage by especially by the "passive decision-makers". The default could be also combined with economic incentives/taxes to additionally influence the choice of people deciding actively (Goldin and Lawson, 2016), which would make a lot of sense in Germany, where the supporters of the app are currently falling behind in favour of the opponents (according to the previous measurement published 14.04.2020, 53% were in favour of the app, 18% against it) (Ibid)

3.   Improved hand hygiene

With regard to personal hygiene (washing hands) and preventive actions described in point 3 and 4 respectively, the state can barely enforce compliance. The common solution in such a case is information provision and education, which are valuable and needed, but often fall short, since most of our behaviours are controlled by automatic and/or intuitive processes (Kahneman 2002). Such combination of factors makes nudging a feasible policy choice.

Washing hands is a broadly acknowledged practice to effectively minimise the risk of respiratory and gastrointestinal infections.[4] Educational campaigns and information posters/leaflets/stickers about the importance, recommended duration and technique in use during seasonally recurring flu outbreaks play an important role, also during the SARS-CoV2 pandemic. However, behavioural research indicates that a "lean" design that explains the content quickly (without much text) and intuitively is most effective (The Behavioural Insights Team 2020). Equally, skilful use of framing (of text and images)[5], or priming (e.g. colour

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[4] A meta-analysis of handwashing interventions from 1960 to 2007 showed that washing hands can achieve a reduction of about 20% in respiratory track infections and of about 30% in gastrointestinal diseases (Aiello et al. 2008)

[5] Framing techniques bring selected aspect(s) of a given situation to the foreground literally (e.g. physical positioning in art sciences that influences its meaning) or figuratively (making particular features salient). In both cases, the intervention designer can influence the overall perception of an issue and associated choice preferences (Kahneman 2002).

priming)[6] may intuitively make people alert and better motivate people to wash their hands more frequently. In such cases, however, the merit of nudging and behavioural interventions goes far beyond triggering or reinforcing the initial motivation. Behavioural approaches can in fact very effectively support the process of habit formation following the motivation to engage and the initiation of the target behaviour. Taking into account the broad and frequent dissemination of educational campaigns about handwashing, the high efficiency of this practice in getting rid of germs incl. coronavirus and the relative simplicity, one can reasonably assume that the main challenge to establishing a habit of frequently washing hands is NOT the lack of an initial motivation to start a new behaviour, but rather lack of continuity of repetition over time. This typically impedes the formation of new habits, but can be corrected by different types of nudges through all habit formation stages outlined below.

In short, in order to establish a (handwashing) habit, three necessary conditions must be fulfilled (Lally and Gardner 2013; Lally et al 2011; Lally et al. 2013; Orbell and Verplanken 2010): 1) identification of the context that connects the desired to-be-performed behaviour to a specific situation, e.g. always when coming back from outside, entering home, work office etc.) 2) encouraging repetitions of the desired behaviour, e.g. a) by means prompts and reminders that catch our attention and do not allow to forget about the behaviour to-be-performed like arrows on the flow directing us to the water tap with soap dispenser, stop/alert stickers highlighting the contamination risk when entering with unwashed hands; b) physical arrangement or cues that makes handwashing particular easy – hand sanitizers located next to/in front of entry[7] c) by pleasant and enjoyable experiences – applying favourite scent in the bathroom, buying a soap with favourite scent/colour. With regard to the length of handwashing sufficiently long repetitions could be encouraged by listening to (sound triggered by movement of switching on light) / singing favourite song, reading aloud a beloved poem attached to the wall or counting to 20 in a foreign language (for practicing purpose) 3) satisfying outcome that is salient to a person. Satisfaction with outcome can be achieved by fulfilling the initial goal of a person. e.g. having clean hands and getting rid of germs, ease of performance, e.g. decreasing time and effort needed to wash/sanitise hands in a given place, fun and pleasure during performance (see point 2c above) and fulfilling higher-order goals, e.g. preserving NHS by avoiding own infection, helping to save lives of high-risk people by avoiding chain of infections caused by social contacts with others. Providing feedback on the

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[6] Priming can influence our choices by (unconscious) referring to a factor (information, association, feeling) that an individual was previously exposed to. Colour priming is a particularly effective way to influence our intuitive choice because we experience it from the early childhood, e.g. red is commonly associated with risk, danger and mistakes as teachers use red pen to correct pupils' homework, red traffic light signals danger of an accident and advises to halt and most of the warning signs are in red too (Selinger and Whyte 2011).

[7] Prompts reminding of the risk of contamination due to unwashed hands (information + priming risk) and hand sanitizers located just next to the entry (modifications of the physical arrangement – choice architecture) have proven to be a relatively cheap (printing a piece of paper with warning symbol and changing the location of hand sanitizers that are available anyway but finding them often requires some time and effort) and effective interventions in hospitals and medical facilities (e.g. the results of the "Together for Infection Prevention" test program conducted in intensive care units in selected hospitals in Germany, developed by German behavioural unit "Wirksam Regieren", URL: https://www.bundesregierung.de/breg-en/issues/wirksam-regieren-with-citizens-for-citizens/topics/patient-safety-in-hospitals-323332)

achievement of these goals can be very helpful and encourage further repetitions. A sufficient number of repetitions creates a kind of automatic association between the cue and the behaviour, which is highly efficient (no "waste" of time or cognitive resources) and persistent (the desired behaviour is repeated even after the initial motivation disappeared). The "first-best" solution to the hand hygiene problem is of paramount importance for public health care.

4. Avoid touching the face, sneezing and coughing etiquette

Stopping people touching their face with (unwashed) hands would also be very helpful in boosting individual prevention measures (decrease in risk of self-inoculation), though much more difficult as it is often a reflex (e.g. an automatic response to itchy eyes or nose) or a habit (also an automatic reaction evoked by a cue, occurring under stable circumstances and established as a result of a sufficiently large number of repetitions). This particular issue had been discussed by Hallsworth 2020, Behavioural Insights Team. While it is indeed hardly possible to get rid of scratch reflexes, the author recommends making people touch their face not with fingertips (hand, wrist etc.) or using a tissue. Educational and informational campaigns enhanced by behavioural insights (in order to make the content easy to understand and memorise, "intuitive") seem to be the only feasible intervention in this context. Positive effects with regard to lower self-inoculation rates could be also obtained by referring to the frequent hand hygiene. If reflexive face touching is barely avoidable, then we must wash hands even more frequently (Kwok et al. 2015).

A better case can be made for unconscious, habitual face touching often performed during cognitive effort like office work or listening to and trying to understand the lecture. Hallsworth 2020 suggests to ask others to notify you prior to touching you face by shouting face, creating physical barriers to face touching like glasses or self-sewed facemasks or conscious engagement in alternative behaviours that keep our hands occupied (drumming with fingers, keeping a small ball or pen in our hands etc.) All these behaviours are well-known measures known as habit substitution – a practice used by addiction psychologists and trauma therapists aiming to substitute a bad habit (could be a behaviour or recurring thoughts) with a good/less harmful one (Michalek et al. 2019). As in the previous case of handwashing, applying nudges and other behavioural interventions along the habit formation stages may significantly support that process in that it becomes easier, faster and more pleasant (in the end simply "natural") to practice a new behaviour. However, in the bad habit framework it is extremely important to break the automaticity, e.g. by elimination of the habit triggering cue which is, however, often difficult to identify[8], or by changing so far stable circumstances – e.g. modification of surrounding environments. Another way to tackle the "bad habit" of face touching (in particular providing a strong motivation to give it up) could be an attempt to make it socially and culturally inappropriate or even repulsive. First, such intervention, if successful, could be very effective - social pressure is known to be a very powerful trigger for behaviour

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[8] Habitual cues could be external, e.g. place, time, people around, previous events or internal, e.g. emotional states. Habits could be also triggered by multiple cues, roughly the more complex behaviour, the more cues are involved (Duhigg 2014).

change. In the public health policy unwritten descriptive (what is done) and injunctive (what ought to be done) social norms often connected with the strong feelings of shame and embarrassment resulting from non-compliance have proven very successful. The reason is that the inner socially motivated regulation is often felt as much more restrictive than imposed mandates. Additionally, "shame nudging" works very well also in the areas that can be hardly regulated by external regulation. Examples include increase in voluntary smoking cessation through allowing smoking only in designated (peripheral) smoking places that socially isolate smokers, or improved tuberculosis drug adherence as a part of the Directly Observed Treatment (DOT) where the patients are asked to take pills in the physical presence of a health care worker either by coming to a hospital or allowing medical service to enter their home – both creating a social pressure to continue the treatment and not to waste the time and effort of the medical personal (Eyal 2014). Similar social nudging attempts could be applied in public spaces not only with regard to face touching (as it is in the case of nose-picking), but also sneezing and coughing on the elbow or wearing a face mask in case of any airborne infection[9]. Second, intervention addressing face touching should address the cultural component of broad acceptance for this behaviour and even some positive associations related to touching the kin (especially in the Western cultures).[10] Such efforts have been taken with regard to smoking in countries with a broad acceptance for smoking habit. Public campaigns and ads reported not only on the main (health) risks, but emphasized adverse aesthetic effects: olfactory - bad breath, cigar odour in clothing and visual: yellow teeth, nicotine grey skin and smoker's wrinkles around mouth) and were successful in creating negative perception of smokers (Ohme 2000). In the context of our discussion, social campaigns could try to create an association between a face touching habit and spreading germs, unhygienic behaviour and even adverse aesthetic consequences like acne and wrinkles (when people rest head/face in their palms) thus creating an association of a careless, scruffy or even an uneducated person.

5. Implementation of a vaccination policy

We have so far shown that behavioural insights can effectively enhance private and public prevention and preparedness in the non-pharmaceutical intervention phase of the pandemic. But we will most likely need them even after the coronavirus vaccine becomes broadly available in order to stop the pandemic quickly and make a large share (at least 80%) of population immune to the new virus. The example of flu vaccine indicates that mandatory vaccinations are difficult to impose, also in health care facilities despite the fact that health care workers have sufficient expert knowledge and even the moral duty to protect others (Dubong and Phung, 2015). In the case of the SARS-CoV2 vaccine, this effect can be expected to be amplified by the fact that it is a new vaccine that has just entered the market. Thus,

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[9] Such turn of events was observed in Japan after the SARS pandemic in 2003.
[10] Touching ones chin and mouth it is often associated with being smart, thoughtful and even philosophic (examples could be found in e.g. of arts – the sculpture Le Penseur or by observing the trained body language of politicians). In fact, it has been proven that Europeans (British people) touch chin and mouth much more often than Japanese (Hatta and Diamond 1984) which can be related to that culture of gestures.

making use of the positive experiences with nudges to increase flu vaccination or flu vaccination rates may be necessary to end the coronavirus health crisis quickly.

Without doubt, education and information about the importance of the vaccination and its effects should lie at the core of such an initiative, but this will not be sufficient. As in the case of the education about the technique of washing hands, itis important to make the information user-friendly by keeping it short, simple and understandable. Research indicates that emotional examples or stories (narratives) that allow us to make sense /create meaning for a given situation, are very effective in guiding human decision-making process regarding vaccination, especially if people lack the full information (Reyna 2012). The extreme rare cases of vaccine side-effects or failures presented by means of personal and emotion-loaded narratives are often used by the vaccination opponents find fertile ground for growth in the society. However, the same manoeuvre can be used to feature personal cases of people who could have avoided death or serious illnesses by getting vaccinated and thus avoiding a "risky gamble" (ibid). It additionally applies a loss frame (lost life, lost health) that has been proven to be effective in the vaccination context (low-frequency preventive behaviours), especially with regard to vaccine sceptics (Abhyankar et al. 2008, Gerend et al. 2008) For sure, there will be also strict opponents who cannot by convinced by any means of rational argumentation and scientific evidence. However, the share of unvaccinated due to inertia, forgetfulness, lack of time or knowledge or common cognitive biases[11] hampering action should and can be minimized. In this respect, behavioural insights can give us a hand.

Default appointments for flu vaccination with a transparent opt-out option sent via e-mail have proven to increase vaccination rate from 33% to 45% as compared to the standard e-mail information with an opt-in registration link (Chapman et al. 2010, Li and Chapman 2013). A negligible modification of the choice environment with a non-negligible effect. Also prompts asking for forming explicit implementation intentions were reported to bring similar positive effects. Vaccination rates among employers who received an informational leaflet with a request to specify their preferred flue vaccination time and date increased by about 8% percentage points as compared to the baseline case with plan information about the possibility of flu shot (time, date & location) (Milkman et al 2011). Social nudges providing an information on the percentage of flu vaccinated people in a local environment, like a heath care facility or company, could also been proven to be effective in this context. A mix of nudges and economic instruments, e.g. health care or tax benefits for those complying with vaccination recommendations, can be perceived as another viable option to increase vaccination rates.

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[11] The full list of cognitive biases frequently encountered during flu vaccination can be found in Dubong and Phung, 2015. Most prominent biases include: omission bias – judging inaction as less harmful than active choice, ambiguity bias – preference of known risks (flu complications) over unknown risk (possible side-effects) even if the latter occurs less frequently.

6. Conclusion

Summing up, behavioural interventions including nudging can help us to suppress and mitigate infection risks during the non-pharmaceutical intervention phase of a pandemic and even after an effective vaccination becomes broadly available. Taking into account that many of them can be implemented at a relatively low cost, also in the areas that are very difficult/ unethical to control by the government the key question should be how and when to add them to complement other preventive policy measures so that a well-thought (strategic) and an effective policy mix including both restrictive and economic measures can be created.[12]

Behavioural interventions, in particular nudges, are relatively new in a policy toolkit. As we have argued, they can be applied also during the SARS-CoV2 pandemic to create an effective policy response to uncontrolled virus outbreaks (see Table 1 for specific examples). In particular, our analysis based on theoretical, empirical and experimental studies revealed that "social" nudges and defaults would be suitable to address most behaviours that urgently need to be regulated to stop the pandemic. Those include also complex and non-trivial decisions. This could be possibly explained by the fact that a pandemic represents a situation that most people are not familiar with, so they often "copy" other's behaviour in a deliberate (because of lack of information, time, or cognitive capacity to find "the right" solution on one's own) or unconscious (evolutionary instinct allowing to survive) way, or look for some kind of (implicit) recommendation how to behave in an unknown situation (how strict are new social distancing rules to follow? Should I use an infection-tracking app? Should I get a coronavirus shot once available? Moreover, the reference to (observed and/or morally acknowledged) social rules and norms create social pressure or need for compliance that is known to be a very powerful trigger for change, not only under new circumstances. Another extremely valuable, but so far little discussed contribution of behavioural interventions is also creating an "enabling environment" for forming new health-preserving habits that mostly encompass very simple behaviours, i.e. increased hand hygiene, avoiding touching face etc. A range of behavioural interventions and nudges incl. choice architecture, framing, prompts etc. could make the habituation process much easier and pleasant and in end effect also more successful. Last but not least, many nudge interventions can become a part of a more comprehensive mix of instruments where nudges play a complementary role to pecuniary incentives (fines) or prohibitions and bans in order to boost their effect on observed behaviour, e.g. vivid warnings of penalties for breaches of pandemic regulations. These could be applied in all our examples, but very simple and private sphere behaviours (e.g. avoiding touching one's face or sneezing in the elbow) that need to be habituated for effective compliance must be treated differently. Looking beyond the current crisis, behaviourally-informed public health interventions applied in a strategic mix could improve long-term resilience of society, especially in view of in view of a second wave of the SARS-CoV2 virus or in preparation for new epidemics.

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[12] Evaluating effectiveness of interventions during pandemic is challenging, but not impossible, see Haushofer and Metcalf 2020.

Table 1: Strategic Use of Nudging and Behavioural Approaches in Public Health Policy for Epidemics

	Public health policy goal	Behavioural intervention or its component
Non-pharmaceutical intervention phase	1. Practicing social distancing / obeying quarantine regulations	**Social nudge**: information about % of complying people (could be combined with fines for free-riders)
	2. Increasing usage of infection-tracing app	**Default (opt-out**) for "passive" decision-makers **Social nudge**: information about % of people willing to install the app (could be combined with monetary or non-monetary benefits)
	3. Improving hand hygiene	Habit-enabling framework: **Prompts, reminders, cues** that make the performance of the behaviour easier, faster and more pleasant
	4. Avoiding touching own face Popularising sneezing & coughing etiquette	Habit-enabling framework: **Prompts, reminders, cues** that make the performance of the behaviour easier, faster and more pleasant **Social nudge & framing**: making the behaviour socially & culturally inappropriate be making commonly despised features salient
Pharmaceutical intervention phase	5. Increasing rate of vaccination	**Default (opt-out)** for "passive" decision-makers **Social nudge**: information about % of complying people (could be combined with economic incentives like health benefits or tax reliefs) **Planning prompts** (Reminder of vaccination dates)

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