

Note: I wrote this email to my immediate family in response to the dire COVID-19/coronavirus reports coming out of Italy around 11pm PT, March 9, 2020. I have aging parents with prior respiratory issues and felt it was imperative to stress to my 5 older siblings and their families that despite having high odds of surviving due to age, our feeling of invulnerability will put the others in our family at significant risk. What are minor lifestyle inconveniences now will improve the chances the sick and elderly, our sick and elderly, can get proper care when needed.

Feel free to copy and distribute the following as a template to your loved ones to encourage them to start taking this COVID-19/coronavirus issue more seriously. And if anyone is able to translate this into Vietnamese, my parents would very much appreciate reading it.

Huy Hong
@huy on Twitter

Subject: What to do now before COVID-19/coronavirus cases explode in the US

Hey Family,

Just want to send you a note on COVID-19/Coronavirus and to check up on what you're all doing in response. This is not meant to alarm, but more to prep everyone with what could and likely will happen given how negligent our government has been with responding to early indications of it spreading here in the US. I'll try to keep it concise:

Why I'm sending this now:

- There's extremely high probability that the true case number in the US is significantly higher than what's being reported due to our inability to test for the disease:
<https://www.theatlantic.com/health/archive/2020/03/coronavirus-testing-numbers/607714/>
- That means that the current 114 positive cases in California is inaccurate and we're gonna start seeing significantly higher numbers diagnosed now that independent labs are taking in samples (UW is taking samples as of today, other labs started ramping up a few days ago). For current case numbers, this is a great resource:
<https://docs.google.com/spreadsheets/u/1/d/e/2PACX-1vRwAqp96T9sYYq2-i7Tj0pvTf6XVHjDSMIKBdZHXiCGGdNC0ypEU9NbngS8mxea55JuCFuua1MUeOj5/pubhtml#>
- CA, NY, and WA have the highest case count right now. It's gonna keep going up exponentially in these areas as we're able to test more (I'm guessing 1.3 to 1.5x daily,

which is insane). There's anecdotal evidence on social media that already-hospitalized individuals with all the telltale signs of COVID-19 are not being tested. And we're talking intubated people with severe respiratory issues not getting tested because of poor test infrastructure (COVID-19 is a respiratory disease so trouble breathing is a big indicator).

- Italy is the best proxy for what could happen in the US if we continue to act like nothing is happening. 11 days ago, their infected case count was ~700 like the US is today. Their healthcare system is generally better setup than ours (Italy: ~4 doctors per 1000 people, US: ~2.6 via https://www.who.int/gho/health_workforce/physicians_density/en/). Due to not implementing social lockdown measures early, their hospitals are now extremely overwhelmed. Read these two tweet threads on how dire it is out there:
 - <https://twitter.com/silviast9/status/1236933818654896129>
 - <https://twitter.com/jasonvanschoor/status/1237142891077697538>
- The most important thing for us to learn from Italy is that if anyone around us gets infected (it's inevitable), ideally they get infected when hospitals can handle the case. Right now, Italy is having to choose who to medically serve given the patient's likelihood of surviving the disease. Essentially their hospitals/physicians aren't capable of providing the best possible treatment to people with weaker immune systems/older people purely because they're overloaded. This is a big reason why Italy's CFR (case fatality rate) is significantly higher than what was observed in China (~5% vs. ~2%) thus far.

So how does this affect us?

- Obviously we don't want anyone around us to get ill, but per experts it will happen given how far this disease has already spread. We want to defer anyone getting sick as far out as possible so that vaccines/medications can emerge AND the hospital infrastructure is able to appropriately handle our case.
- We can defer the progression of this disease within our own circles by sacrificing our daily lifestyle for a short period of time (hopefully weeks).
- Hopefully in a few months when all this settles down a bit, we're not sitting around frustrated and mourning because we didn't do the most basic things to prepare.

Here's what I suggest you all do (in order of importance):

- Teach yourself how to not touch your face with your hands. The disease is transferred via droplets that come into contact with your mouth, eyes, or nose. So if someone is coughing or sneezing nearby, they're transferring droplets directly where they cough, their hands/clothes, as well as whatever surface they're coughing near. So they'll inevitably touch a door handle, guard rail, other surface and leave droplets, which then can transfer onto your hands. This is why hand-washing is stressed so much, so in the instance that you naturally touch your face, your hands will be clean of viruses. This is especially important for the kids as they have less awareness of what all their limbs are doing.

- Social distancing: significantly reduce (ideally stop) going to places where you'll be in close proximity to people outside of your household if you don't have to, e.g. restaurants, gyms, shopping, sporting events (even the kids' games), coffee shops, bakeries, boba.
- This includes visiting other families, parents, friends, relatives, etc. This is less about avoiding contracting the disease yourself, but to prevent spreading it to older/at-risk individuals e.g. parents. You've all read the news that younger people are less likely to fall ill/show signs. You can still transmit the virus though. And older/at-risk individuals will fall gravely ill.
- If you do go out out of necessity e.g. Costco, pharmacy, drug store, groceries, don't all go as a group. It's unnecessary.
- Food prep (restaurants, fast food, coffee shops) is a large vector of transmission, so if you can, cook and eat at home.
- Going outside, to the park, on a hike is fine. Just don't let the kids play in the jungle gym (see bullet above on droplets).

And to prep prior to our cities/government doing their job:

- **Explain all of this to parents, aunts, uncles repeatedly.** They're the ones most at-risk and they need to be reminded about what to do and not do. And if there are any signals that they might be ill, watch their symptoms closely.
- It's gonna suck for parents far more than it'll suck for the rest of us, especially if they have to reduce/stop time interacting in real life with the grandkids. So call/FaceTime them far more frequently than you normally would (we should all do this more in general).
- If someone is coughing, has a fever, or trouble breathing, these are common symptoms of COVID-19. There's a great chart here comparing COVID-19 symptoms vs. the cold or flu:
<https://elemental.medium.com/how-to-tell-if-you-have-the-flu-coronavirus-or-something-else-30c1c82cc50f>
- Healthcare workers are one of the highest risk groups so give them your love and support, but also recognize that they may require extra distancing due to their higher risk.
- Schools will close down at some point. Many US universities are going online-only and this will trickle to K-12. Prepare for that.
- Work may ask you to work from home. I'm already doing so.
- Wash your hands and teach your kids to be vigorous when washing theirs. They touch/wipe their faces far more than we do and likely won't be able to restrain that natural tendency, so keep their hands clean as frequently as possible. Get them into the habit of washing their hands whenever they get home and throughout the day.
- Keep a thermometer on hand. Fevers are a common signs of COVID-19.
- If you're making DIY hand sanitizer, it has to be at least 60% alcohol to be effective, so you need 91% or 99% isopropyl alcohol to make the mixture properly balanced. not 70%.

- Stock up on masks. It will prevent you from contracting the disease as it's you'll get infected from an aerosol vector (someone coughing in your face). The *New York Times* has recently published an article on how to properly wear a mask (<https://www.nytimes.com/2020/04/10/well/live/coronavirus-face-masks-guides-protection-personal-protective-equipment.html>) and another one on how to choose the right mask (<https://www.nytimes.com/2020/04/09/well/live/face-mask-coronavirus.html>).
- If you want to nerd out, a few great consolidated and constantly updated resources:
 - <https://arstechnica.com/science/2020/03/dont-panic-the-comprehensive-ars-technica-guide-to-the-coronavirus/>
 - <https://www.fast.ai/2020/03/09/coronavirus/>

I know this can all feel annoying and unnecessary but going out less and being more mindful about what you touch is far easier than dealing with someone you love dealing with this disease.

Let me know if you have questions or concerns (and there are no dumb questions). And please forward this to others.

Sincerely,