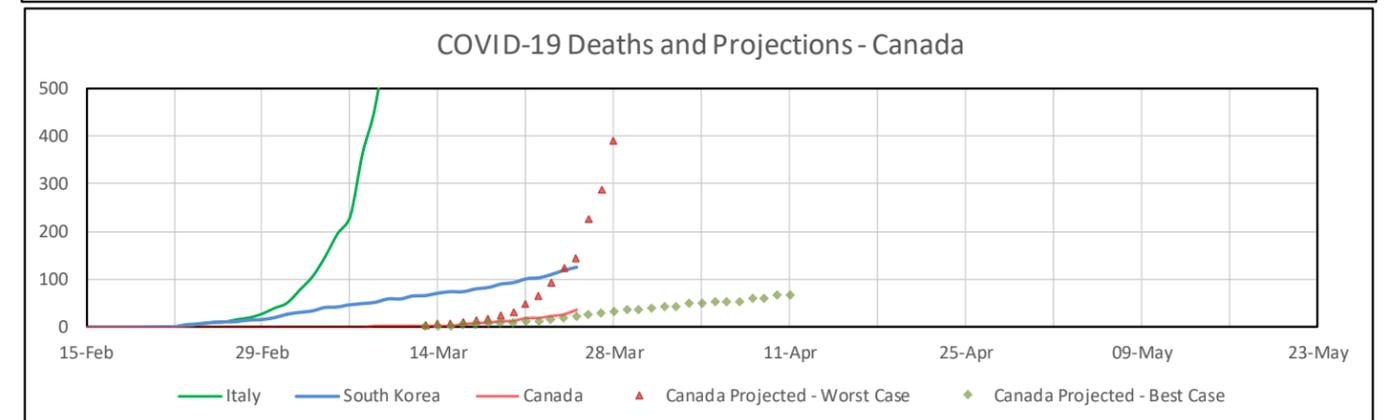
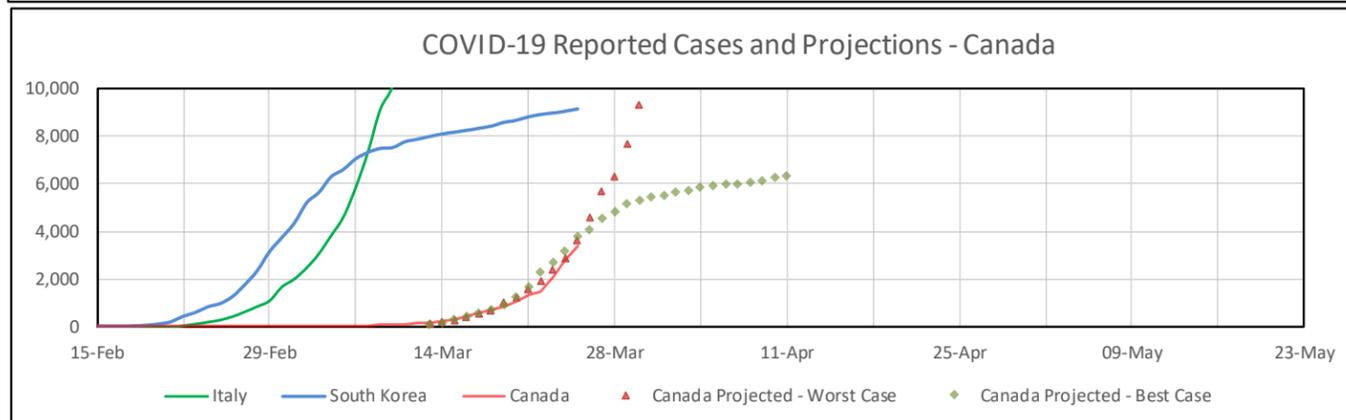
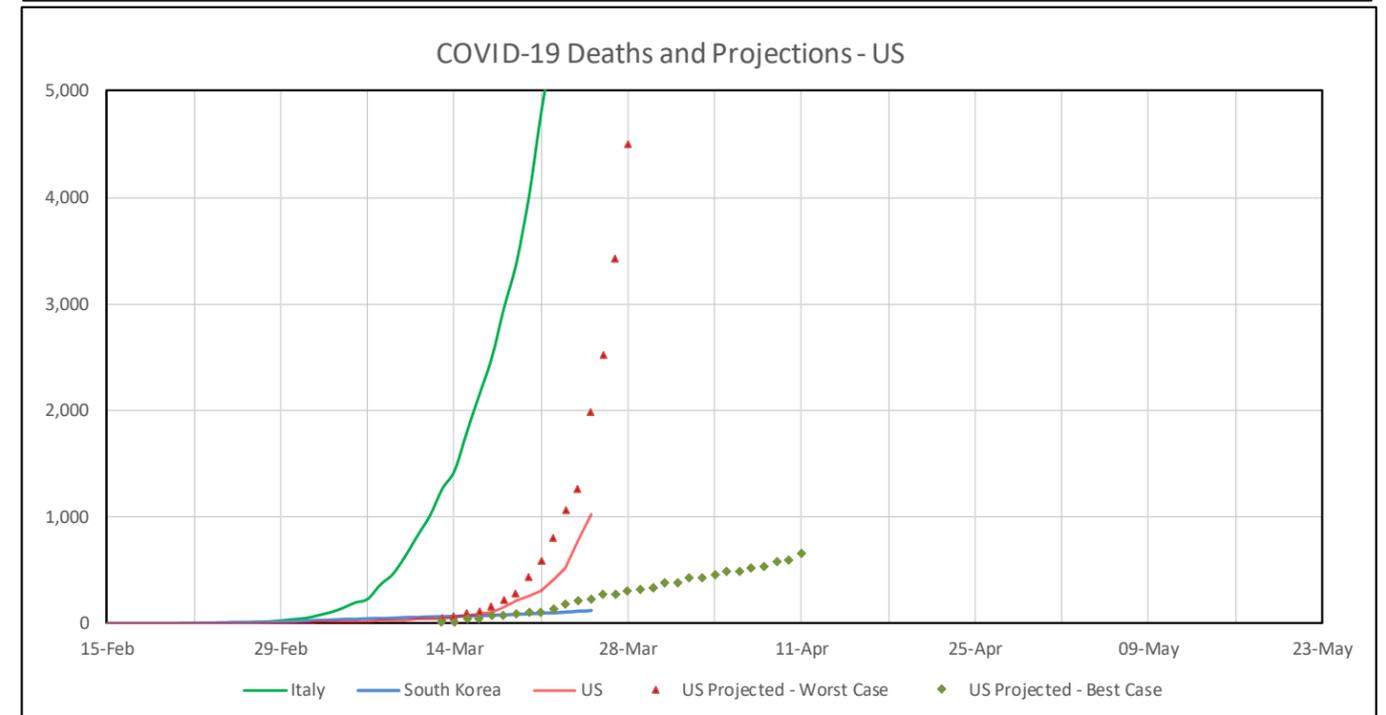
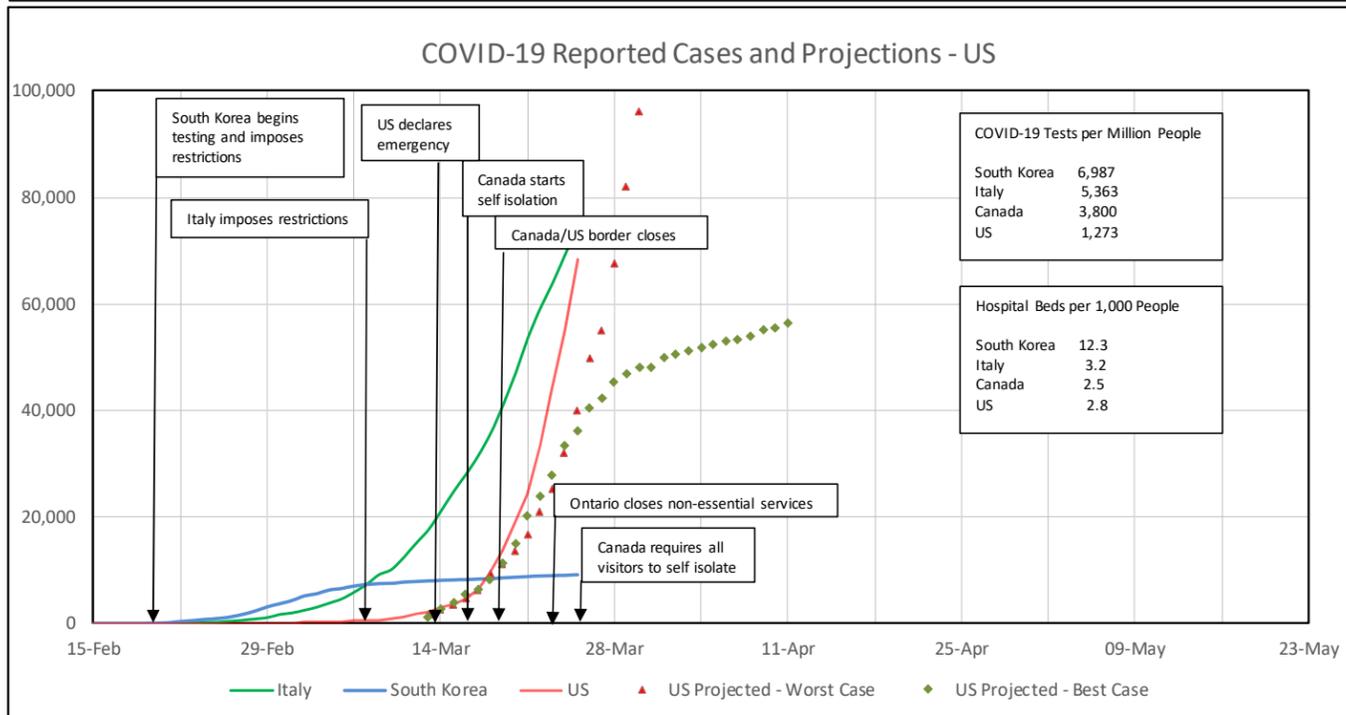
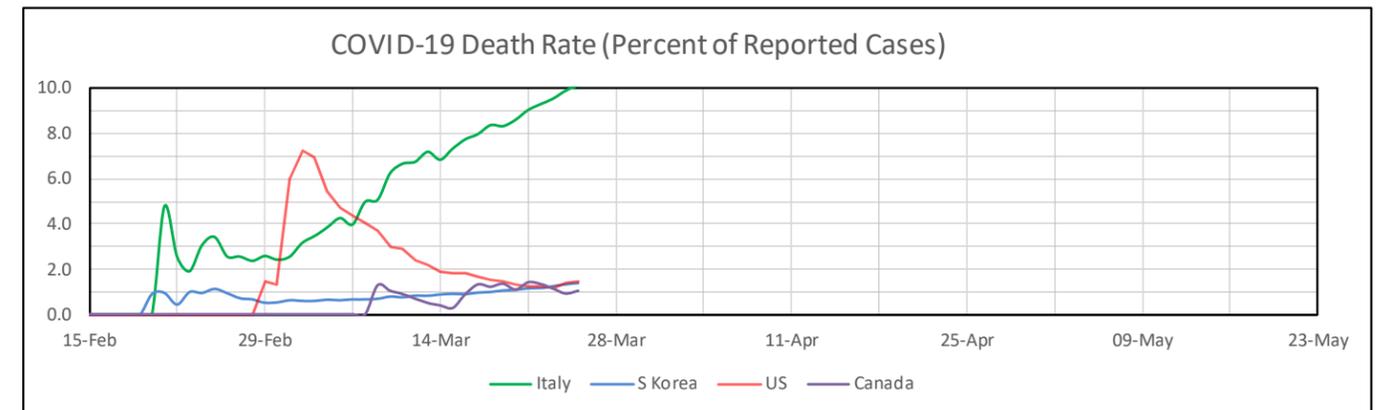
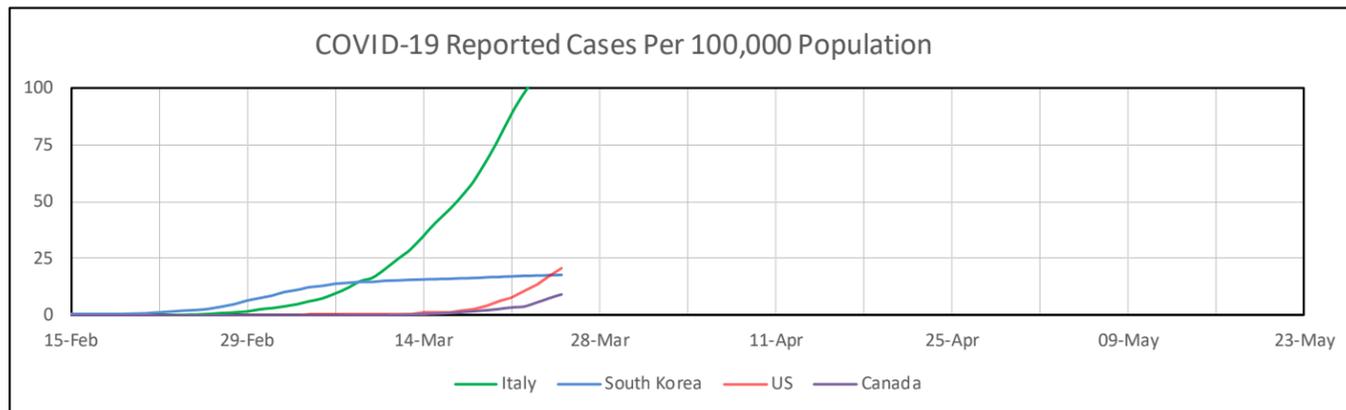


COVID-19 Observations – 26 March 2020 – by Alex Harrington



Last time I explained how I took data from South Korea and Italy to get a feel for what we might see in the US and Canada. Well it's turned into a Tale of Two Countries in terms of COVID-19 response. The charts on the left (above) show reported cases – the top shows cases per million population and the bottom two show reported cases for the US and Canada respectively. We have data from a few more days now and what a difference a day(s) makes.

The US case count is exploding. It's increasing even faster than it did in Italy early in their outbreak. At this rate the US is in for some serious trouble, even if malaria medicine is a cure as some like to think.

In Canada it's a different story – well it's the same story just not as spectacular. The shutdowns and self isolation are keeping the increase in reported cases in line with what we've seen elsewhere at this stage of the infection. We can't really tell yet what track will get followed but it seems that the measures currently being taken are having an effect.

Another part of the story is testing and the numbers are on the middle chart. These numbers reflect the total number of tests for COVID-19 that have been conducted per million population. The numbers should keep growing as time passes and more tests are conducted, and if you look at the table from last time, you'll see the increases per million population – about 840 for South Korea, 1,860 for Italy, about 1,400 for Canada and 960 for the US.

In South Korea they used testing to track down patients and their contacts using surveillance data – cell phone records, credit card histories and street cameras. They wanted to find the source of the infection and stop it that way. There was no massive shut down or imposed isolation.

In Canada and the US we are focussed on testing if you show symptoms. Because we aren't tracking people down, we have to self isolate to minimize contact and spread of the virus.

The point is to be careful when you compare testing numbers – the question is are we testing enough. The answer is sort of. We could use more testing. We self isolate and hope we don't have it. We should be able to do better than that, but for now we can't. We have no idea how many mild cases there might be or how many carriers of the virus there might be or where they are. We just hope that by staying isolated we minimize the risk of spreading the virus. This isn't necessarily bad, but it does mean that we have to be really careful in lifting restrictions because once we all go out and party again you can be pretty sure there will be a flare up if we ease up too soon.

When we look at the US we can only shake our heads. Their insistence on developing their own test kits (that didn't work) gave them little hope of getting things under control. The lack of belief in the seriousness of the outbreak and inconsistent strategies across the country have delayed any effective response. Their testing has only this week ramped up – they were woefully behind as little as four days ago. So they are a long way behind given the number of cases they have.

Reported cases are only one part of the issue – how many will die is the ultimate question. The charts on the right (above) show the deaths from COVID-19. The death rate as a percent of reported cases is on the top, and below are actual deaths from the US and Canada, respectively, along with projections of best and worst case scenarios.

The death rate is levelling at about 1% of reported cases for South Korea, Canada and the US. Italy's death rate is soaring, partly because of demographics (a high percentage of older people being infected) and partly because things got terribly and tragically out of control.

When we look at Canada's data (bottom chart) we see the death rate is tracking that of South Korea. This tells us that self isolation is working so far. It will take time before we know things are under control. It will take at least another week to be sure we are on track for the best case scenario or something like it, and if we manage that it will take a few weeks more to see consistent results. So for now we have to wait and see.

The results for the US on the centre chart are sobering. The deaths are tracking not quite as fast as Italy's, but the rise is clear, unrelenting and frightening. If the trend continues, in two to three weeks – less in some areas – care facilities will be overwhelmed and the US could be facing a situation similar to that of Italy.

So this is what the numbers are telling me. If we stay the course we could be OK – but it will take time. You can agree with this or not – it's all compiled from easily available data. I know there are all kinds of shortcomings, differences in data reporting methods and all that kind of stuff. Given what's available this is what I see.

And I hope the US can get its act together – time is running out for them. And they are too big and too close for us to not be hurt if things go in the dumpster. But I don't think they'll pull this one out.