COVID-19

Visualizing the History of Par

Published 1 month ago on March 14, 2020
By **Nicholas LePan**

The History of Pandemics

Pan·dem·ic /panˈdemik/ (of a disease) prevalent over a whole country or the world.

As humans have spread across the world, so have infectious diseases. Even in this mod outbreaks are nearly constant, though not every outbreak reaches pandemic level as t Coronavirus (COVID-19) has.

Today's visualization outlines some of history's most deadly pandemics, from the Anto to the current COVID-19 event.

A Timeline of Historical Pandemics

Disease and illnesses have plagued humanity since the earliest days, our mortal flaw. I was not until the marked shift to agrarian communities that the scale and spread of th diseases increased dramatically.

Widespread trade created new opportunities for human and animal interactions that such epidemics. Malaria, tuberculosis, leprosy, influenza, smallpox, and others first ap during these early years.

HISTORY OF PAN

PAN·DEM·IC (of a disease) prevalent
a whole country or the world.

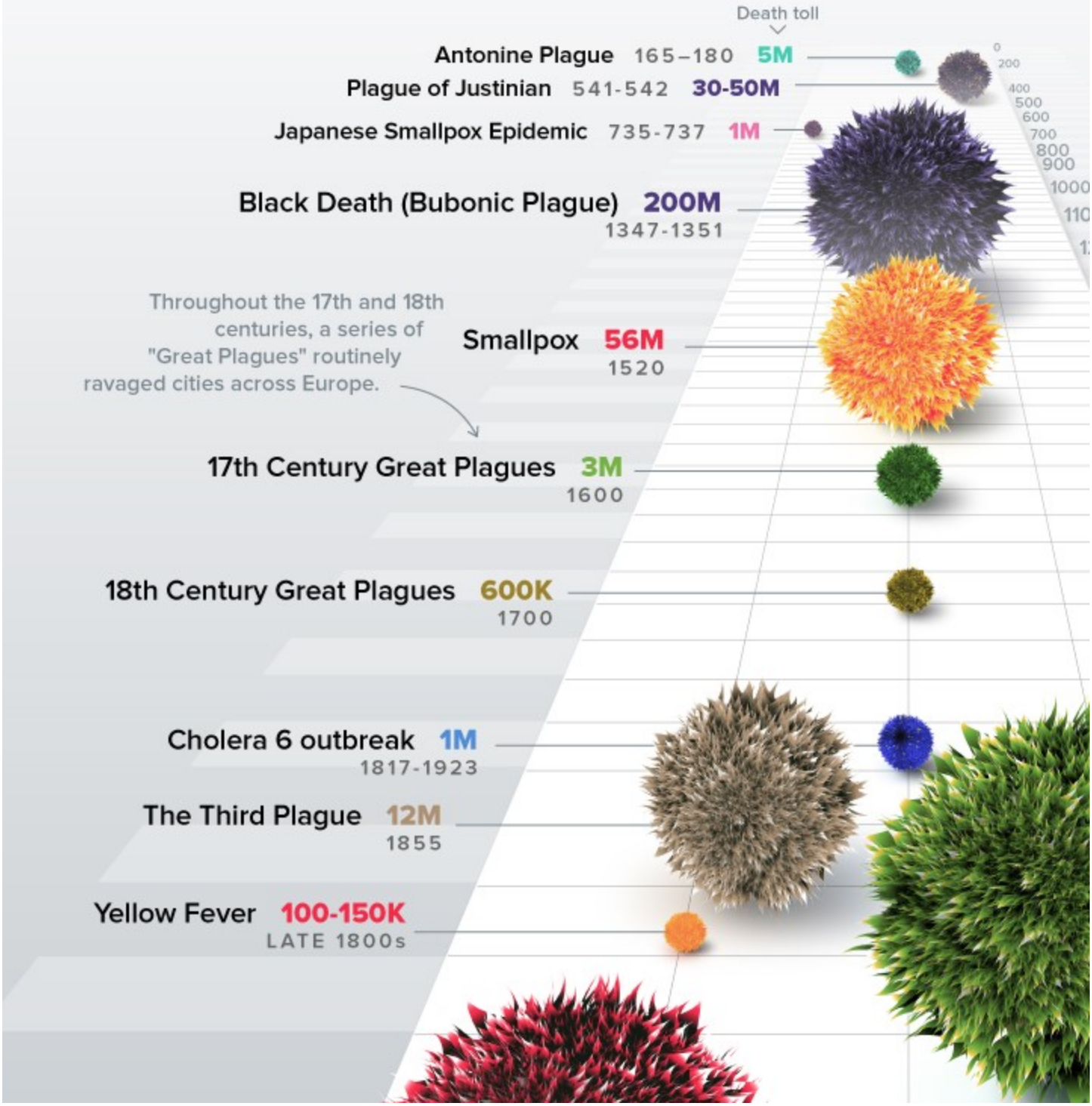
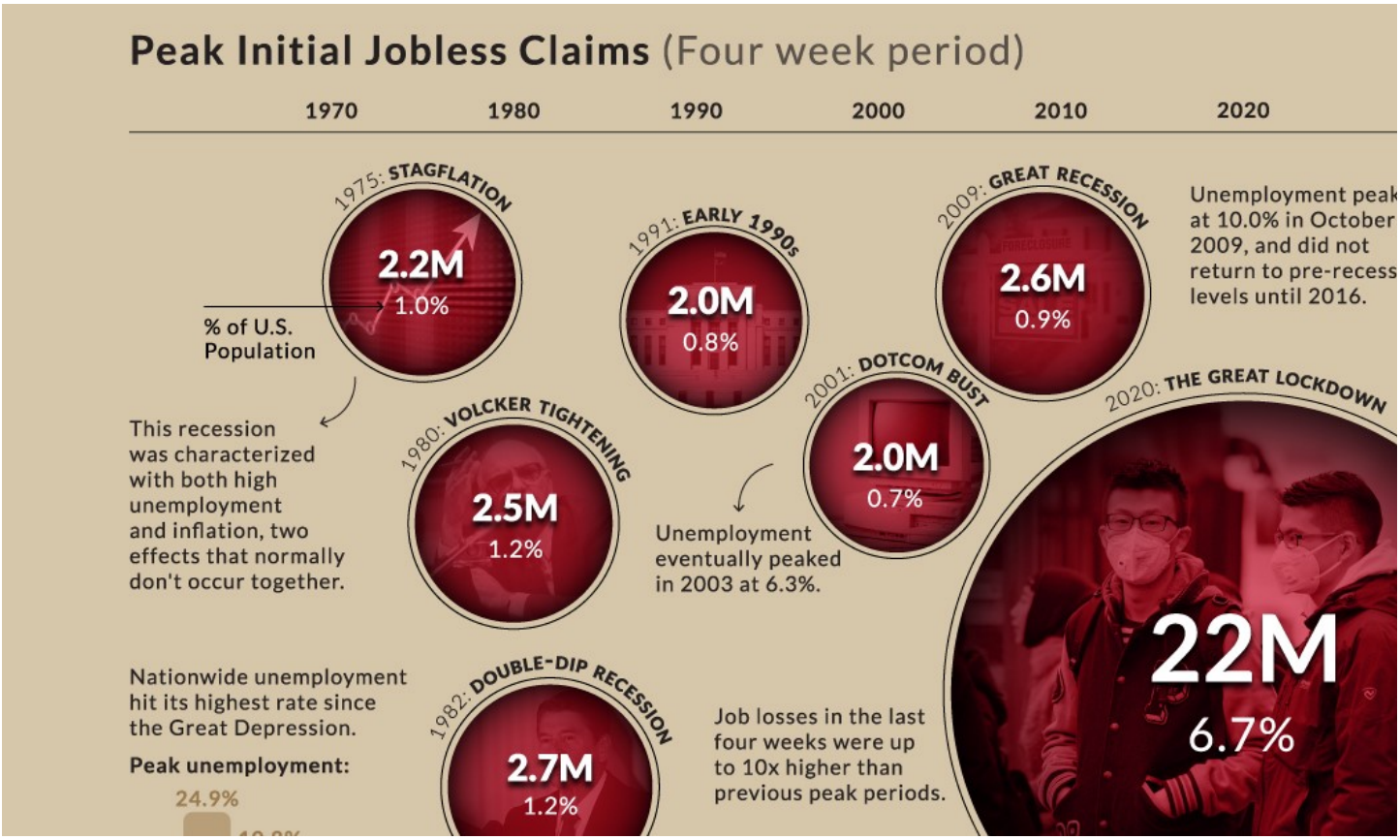


CHART OF THE WEEK

These Charts Put the Historic U.S. J Losses in Perspective

In the last four weeks, 22 million Americans filed initial jobless claims. Here's h staggering number compares to the peaks of past recessions.

Published 21 hours ago on April 17, 2020
By **Jeff Desjardins**



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When recessions hit, it's not unusual to see millions of jobs lost.

Such episodes are a regular part of the business cycle and when they occur, most businesses do their best to tough things out. Then, as time progresses, it gradually becomes clear that spending must be curtailed, budget cuts must be made, and w must unfortunately be sent home.

This economic process normally takes months, or even years, to unwind.

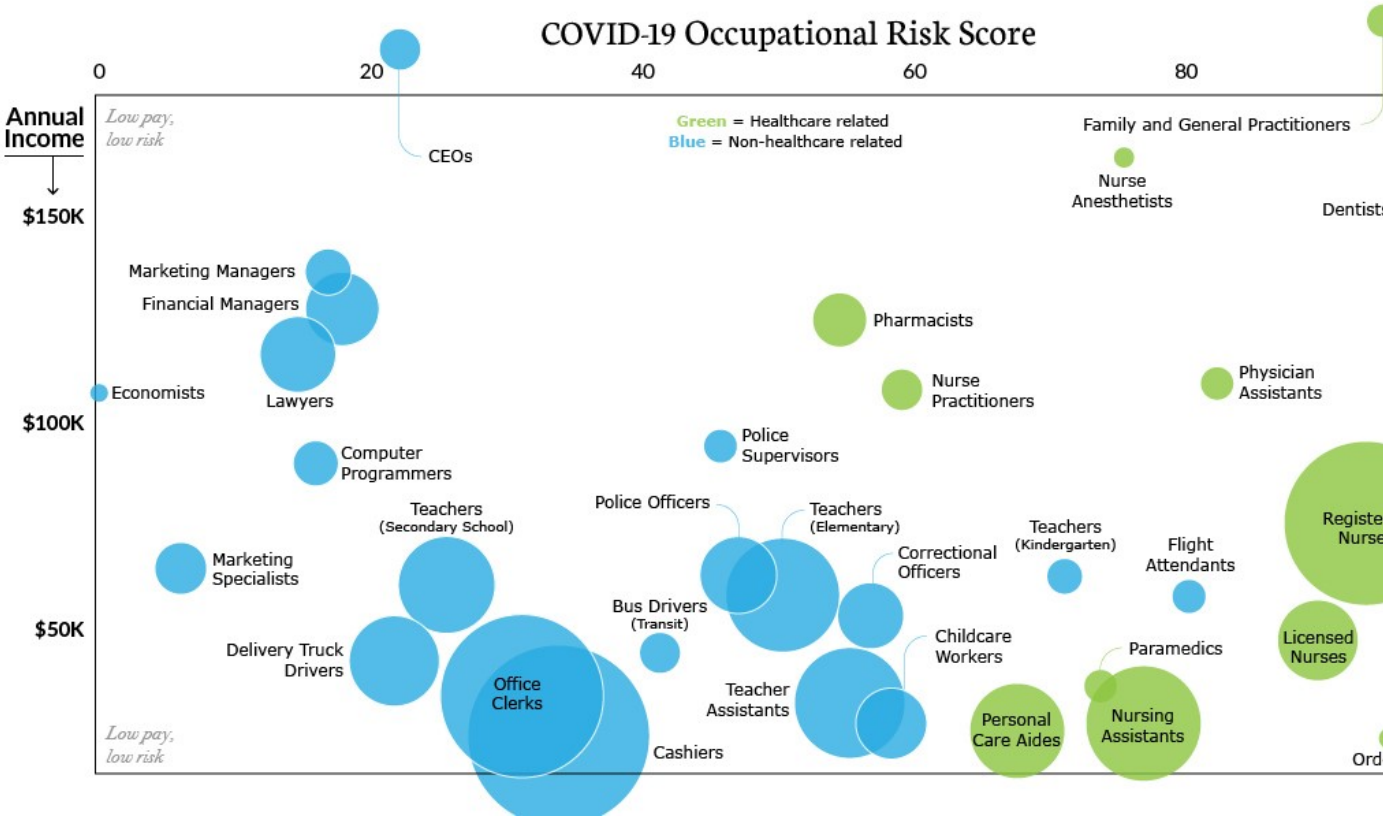
But, the COVID-19 pandemic has thrown a wrench into the economic status quo, creating a situation that is incomparable to any previous downturn. Instead of a gradual economic transition to slower growth prospects, business operations hav suddenly screeched to a halt with no clear window to resume.

COVID-19

The Front Line: Visualizing the Occupations with the Highest COVID-19 Risk

As millions of people continue to show up for work during the COVID-19 pande face a higher risk of potential exposure to the virus.

Published 3 days ago on April 15, 2020
By **Marcus Lu**



The Occupations with the Highest COVID-19 Risk

Many individuals have been practicing social distancing by working from home i recent weeks. While this arrangement can be a great way to reduce one's exposur COVID-19, it's a luxury that's available to just 29% of Americans.

The situation for the remaining 71% is uncertain, to say the least. A significant po of the population has lost their jobs due to business shutdowns and mandated lockdown orders. Others employed in "essential services" have continued workin usual, but may face a higher risk of potential exposure to the virus.

CONTINUE READING

Name	Time period	Type / Pre-human host	Death toll
Hong Kong Flu	1968-1970	H3N2 virus	1M
HIV/AIDS	1981-present	Virus / Chimpanzees	25-35M
Swine Flu	2009-2010	H1N1 virus / Pigs	200,000
SARS	2002-2003	Coronavirus / Bats, Civets	770
Ebola	2014-2016	Ebolavirus / Wild animals	11,000
MERS	2015-Present	Coronavirus / Bats, camels	850
COVID-19	2019-Present	Coronavirus – Unknown (possibly pangolins)	147,600 (Johns Hopkins Universit as of 8:38am PT, April 17)

Note: Many of the death toll numbers listed above are best estimates based on available research. Some, suc of Justinian and Swine Flu, are subject to debate based on new evidence.

Despite the persistence of disease and pandemics throughout history, there's one consi over time – a gradual reduction in the death rate. Healthcare improvements and unde the factors that incubate pandemics have been powerful tools in mitigating their impa

Wrath of the Gods

In many ancient societies, people believed that spirits and gods inflicted disease and d upon those that deserved their wrath. This unscientific perception often led to disastr responses that resulted in the deaths of thousands, if not millions.

In the case of Justinian's plague, the Byzantine historian Procopius of Caesarea traced of the plague (the Yersinia pestis bacteria) to China and northeast India, via land and s routes to Egypt where it entered the Byzantine Empire through Mediterranean ports.

Despite his apparent knowledge of the role geography and trade played in this spread, laid blame for the outbreak on the Emperor Justinian, declaring him to be either a dev invoking God's punishment for his evil ways. Some historians found that this event co dashed Emperor Justinian's efforts to reunite the Western and Eastern remnants of th

Empire, and marked the beginning of the Dark Ages.

Luckily, humanity's understanding of the causes of disease has improved, and this is r a drastic improvement in the response to modern pandemics, albeit slow and incompl

Importing Disease

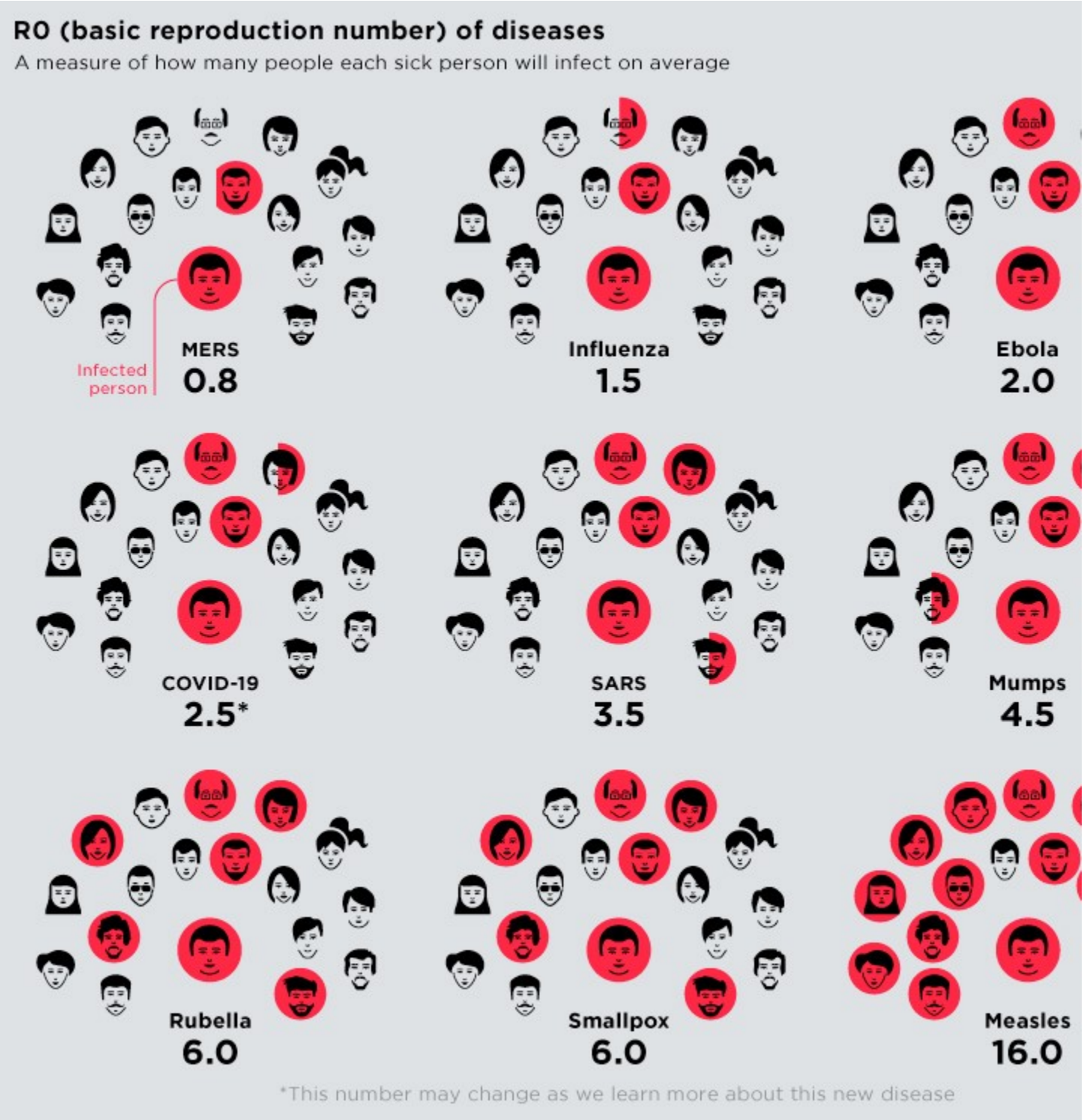
The practice of quarantine began during the 14th century, in an effort to protect coast from plague epidemics. Cautious port authorities required ships arriving in Venice fro ports to sit at anchor for 40 days before landing — the origin of the word quarantine f Italian "quaranta giorni", or 40 days.

One of the first instances of relying on geography and statistical analysis was in mid-1 London, during a cholera outbreak. In 1854, Dr. John Snow came to the conclusion tha was spreading via tainted water and decided to display neighborhood mortality data o map. This method revealed a cluster of cases around a specific pump from which peop drawing their water from.

While the interactions created through trade and urban life play a pivotal role, it is als virulent nature of particular diseases that indicate the trajectory of a pandemic.

Tracking Infectiousness

Scientists use a basic measure to track the infectiousness of a disease called the reproc number — also known as R0 or "R naught." This number tells us how many susceptibl average, each sick person will in turn infect.



Measles tops the list, being the most contagious with a R0 range of 12-18. This means a person can infect, on average, 12 to 18 people in an unvaccinated population.

While measles may be the most virulent, vaccination efforts and herd immunity can c

spread. The more people are immune to a disease, the less likely it is to proliferate, ma
vaccinations critical to prevent the resurgence of known and treatable diseases.

It's hard to calculate and forecast the true impact of COVID-19, as the outbreak is still c
researchers are still learning about this new form of coronavirus.

Urbanization and the Spread of Disease

We arrive at where we began, with rising global connections and interactions as a driv
behind pandemics. From small hunting and gathering tribes to the metropolis, human
reliance on one another has also sparked opportunities for disease to spread.

Urbanization in the developing world is bringing more and more rural residents into c
neighborhoods, while population increases are putting greater pressure on the enviro
the same time, passenger air traffic nearly doubled in the past decade. These macro tr
having a profound impact on the spread of infectious disease.

As organizations and governments around the world ask for citizens to practice social
to help reduce the rate of infection, the digital world is allowing people to maintain co
and commerce like never before.

*Editor's Note: The COVID-19 pandemic is in its early stages and it is obviously impossil
predict its future impact. This post and infographic are meant to provide historical co
we will continue to update it as time goes on to maintain its accuracy.*

*Update (March 15, 2020): We've adjusted the death toll for COVID-19, and will continu
on a regular basis.*

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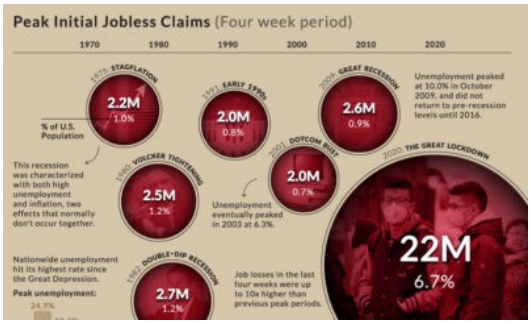

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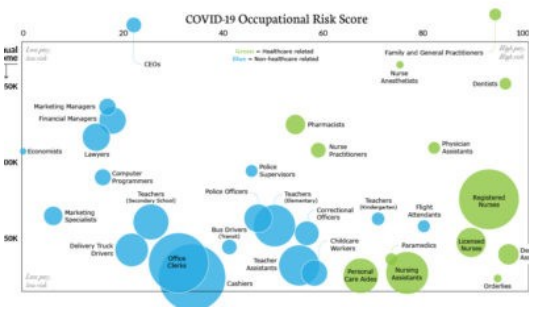

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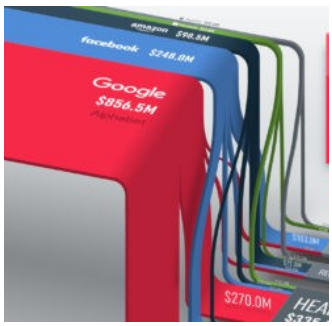

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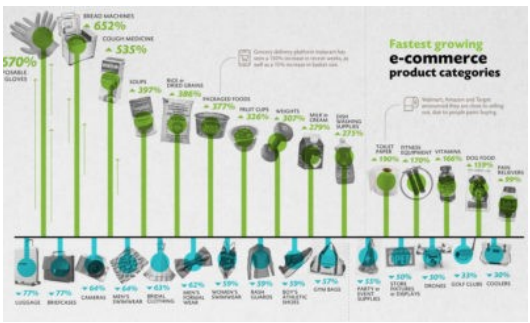

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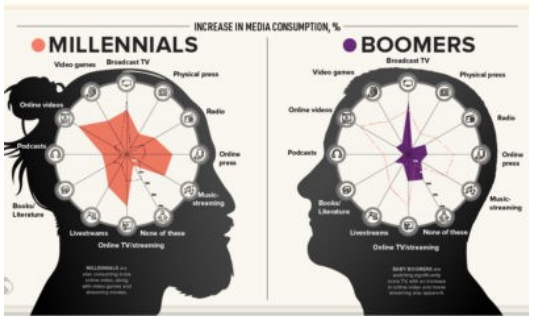

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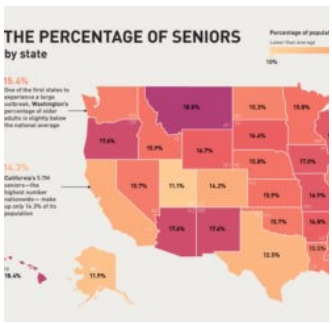

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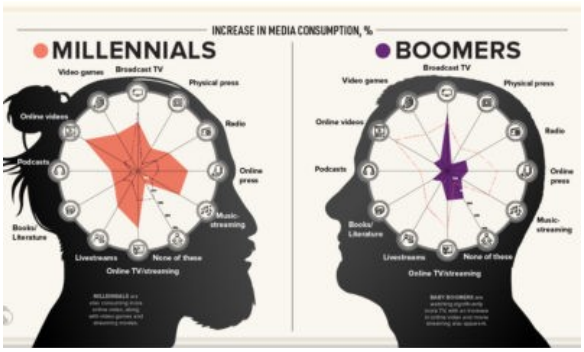

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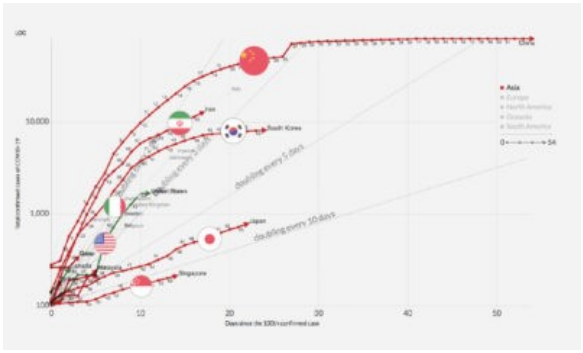

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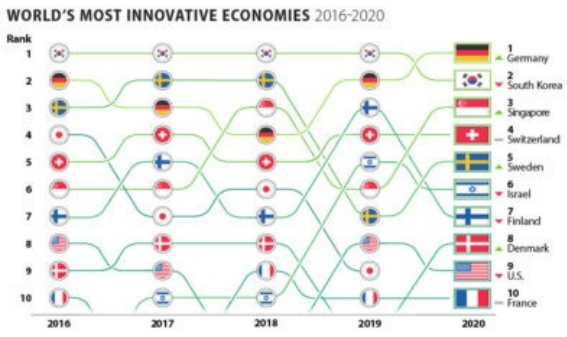

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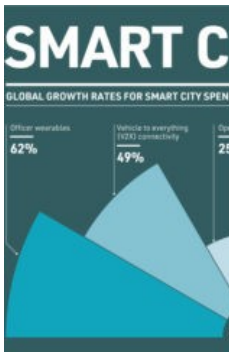

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