

# The pandemic has permanently changed us, and its biopsychosocial sequelae linger...

**Good riddance COVID-19 pandemic? Alas, that's wishful thinking.**

Many assume the pandemic is in our rearview mirror, but its biological, psychological, and social impacts continue to unfold. Its repercussions are etched into our brain, mind, emotions, behaviors, cognition, and outlook on life. Welcome to Pandemic 2.0.

Think of people who survive a heart attack. They experience multiple changes. Their initial ephemeral thrill of beating death is rapidly tempered with anxiety and worry about a future myocardial infarction and health issues in general. They become more risk-averse and more prone to dysphoria, irritability, and impatience. These individuals adopt a healthy lifestyle (diet and exercise), which they had neglected before. They develop more disciplined personality traits, feel a greater appreciation for being alive, and develop a closer affinity to family and friends. Simple things they had overlooked become more meaningful. They reevaluate their life goals, including career vs personal fulfillment. Some may overindulge in pleasurable activities in case their heart fails again. Some of those changes may be abrupt or transient,

while others may become permanent features of their lives. And some may seek psychotherapy, which they may never have considered before.

The pandemic is the equivalent of a "societal cardiac arrest." Its immediate impact was devastating. Bustling cities suddenly became ghost towns. Schools were closed, and children were locked at home with their parents, who were laid off. Businesses shut down; the economy tanked. Anxiety about being infected and dying skyrocketed, triggering a universal acute stress reaction that worsened the mental health of the population, but especially of the millions with preexisting psychiatric disorders. Routine medical and dental care stopped. Television and social media disseminated alarming updates about massive intensive care unit admissions and morgues overflowing with corpses of COVID-19 victims. Posttraumatic stress disorder (PTSD) was brewing across the nation as everyone faced this life-threatening pandemic.

The warp-speed development of vaccines for COVID-19 was equivalent to a defibrillator for the societal asystole, but the turmoil continued among the frazzled population. Some refused the vaccine due to conspiracy theories



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**The lasting effects of COVID-19 continue to impact virtually every facet of our lives**

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about their dangerous adverse effects. Employees in the private sector, state and federal government, and even the military who refused the mandatory vaccination lost their jobs. Controversy about shuttering schools and depriving children of face-to-face learning and socializing prompted some states to keep schools open, in contrast to most other states. Anger escalated about wearing masks, social distancing, and avoiding gatherings such as at restaurants or houses of worship. Cynicism and mistrust sprouted about the competence and reliability of health “experts” due to some conflicting signals, precluding wide adherence to medical advice.

## The lingering effects of the COVID-19 pandemic

Those were the immediate repercussions of the pandemic. But what are its lingering effects? The sequelae extend across 1) the health care system; 2) the mental and emotional wellness of the population; 3) education; 4) work culture; 5) the economy; 6) societal operations; 7) technological and digital transformations; 8) mistrust in various societal institutions; 9) lack of confidence in medical information; and 10) preparedness for another pandemic due to a new strain.

As all psychiatrists know, the demand for mental health services continues to surge well after the pandemic has subsided, straining access to outpatient and inpatient care. Multiple lines of evidence confirm a deterioration in the long-term psychological well-being of children and adolescents because of lockdowns, social isolation, and anxiety about their own health and the health of their loved ones, leading to a serious rise in depression and suicidal behavior.<sup>1-3</sup>

Adults who survived the pandemic experienced grief during 2 very

stressful years, with no peace of mind or “normal living.” Many began to contemplate the meaning of life and reevaluate the future, waxing more philosophical and embarking on “personal archeology.” The fragility of life suddenly became a ubiquitous epiphany that changed people’s habits. Working from home, which was necessary during the pandemic, became a preferred option for many, and home became an emotional refuge, not just a physical, brick-and-mortar refuge. Millions decided to quit working altogether (the “great resignation”).

Sexual activity declined precipitously during the pandemic for singles (French kissing became “the kiss of death”) but intercourse increased among couples, eventuating in a significant rise in births after the pandemic (a baby boomlet). Sexual interest among college students declined after the pandemic, which may be either due to fear of getting infected or a sublimation of libido to invest the energy in other, less risky activities.

At the societal level, the pandemic’s sequelae included a major shift to virtual communications, not just in health care (telepsychiatry and telemedicine) but also in business. Technology saved the day during the nadir of the pandemic by enabling psychiatrists and psychotherapists to treat their patients remotely. This was not technologically feasible during the past century’s influenza pandemics (1918, 1957, and 1968).

The intellectual and social development of an entire generation of children was stunted due to the COVID-19 pandemic. Consequences will continue to emerge in the years to come and may have ripple effects on this generation’s functioning. This may have particularly affected children of lower socioeconomic status, whose families cannot afford private

schools and who are in dire need of good education to put them on the path of upward mobility.

As for adults who did not get infected by COVID-19, they suffered in 2 ways. First, they experienced a certain degree of brain atrophy, which is known to occur in chronic stress. This is attributed to persistent hypercortisolemia, which is toxic to the hippocampus. PTSD is well known to be associated with hippocampal atrophy.<sup>4</sup> Additionally, a significant proportion of adults who contracted the COVID-19 virus and “recovered” were subsequently diagnosed with “long COVID,” with multiple neuropsychiatric symptoms, including psychosis, mania, depression, and panic attacks, as well as memory impairment and loss of the senses of smell and taste. For these individuals, the pandemic has not subsided; they will carry its neuropsychiatric scars for a long time.

Economically, the pandemic caused a horrific economic setback in its acute phase, which prompted the government to spend trillions to support the unemployed as well as blighted businesses. The economic sequelae of deficit spending of unprecedented proportions due to the pandemic triggered painful inflation that is ongoing. Interestingly, the numerical terms “billion” and “trillion” lost their loftiness as very huge numbers. Few people realize that counting to a billion (at one number per second) would take 31.7 years, while counting to a trillion would take 31,700 years! The inflationary impact of spending \$6 trillion (which would take almost 200,000 years to count) becomes mathematically jarring. And despite the heroic measures to support the economy, some business perished, although others were created, changing the human architecture of the economy.

The pandemic drastically suppressed the “hunting and gathering” instinct of humans and demolished

the fabled concept of work ethic. The “great resignation,” coupled with a desire to work from home on a mass scale, led to a glut of vacant office space in many large cities, lowering the value of commercial real estate. Following the pandemic, there was an uptick in moving away from urban areas, reflecting a creative destruction and reversal of a decades-long trend to gravitate to cities to work or live.

There was also political fallout from the pandemic. Staying at home is conducive to overdosing on television and social media, leading to an intensification and ossification of political hyperpartisanship and the further displacement of religious beliefs by passionately entrenched political beliefs. This continues to have seismic effects on political stability and harmony in our country. The pandemic may have instigated new models of national voting, which triggered further political friction.

Other examples of the pandemic’s aftereffects include a shortage of life-guards and truck drivers, replacing the traditional handshake with a first bump, and increased spending on pleasurable activities (reminiscent of the Roaring 20s following the 1918 influenza pandemic), which may reflect an instinct to “live it up” before another deadly pandemic occurs.

Ironically, as I was finishing writing this article in early September 2023, the government announced that COVID-19 cases were again rising and a new vaccine was available for the new viral “strain.”

Here we go again: as the French saying goes: plus ça change, plus c’est la même chose...



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**The consequences for an entire generation of children will continue to emerge in the years to come, and may have ripple effects**

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