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# **COGNITION TODAY**

Updates from the Chief Medical Officer, Cognivue, Inc.



#### A message from Dr. Fred Ma, MD, PhD

Senior Vice President & Chief Medical Officer of Cognivue Inc.

The US COVID-19 pandemic is a rapidly evolving concern as states, once seemingly free of the virus' stranglehold, are battling skyrocketing infection rates, crippling hospital admissions, and record deaths. As images of exhausted and heroic healthcare workers bookend the news, impending lockdowns – whether voluntary or mandated, loom large over the approaching holiday season. During the month of November we have seen the number of COVID-19 infections top 11 million with deaths approaching a quarter million since the pandemic erupted last spring.<sup>1</sup>

Globally, 54.5 million reported cases and almost 1.5 million deaths illustrate that the virus continues to ravage worldwide. However, as news of promising vaccine trials by Pfizer and Moderna create some much needed optimism as we head into 2021, the healthcare community must begin now to plan for what a post-COVID-19 world will look like, and how we can begin to make the transition from caring for those currently infected, to addressing the needs of those living with the after-effects.

COVID-19 Alert

Post Covid-19 Syndrome

About Dr. Fred Ma



#### **Post-COVID Syndrome**

Dr. Fred Ma, MD, PhD Senior Vice President & Chief Medical Officer

As recently as November 7, 2020, in a discussion held between Dr. Anthony Fauci, Director of the NIAID, and by Dr. James Madara, CEO and EVP of the American Medical Association (AMA), during an AMA section meeting, the concept of a Post-COVID Syndrome, first identified in April of 2020, was reiterated, and discussed in detail. "We do know for absolutely certain that there is a post-COVID syndrome," Dr. Fauci said. "Anywhere from 25% to 35%-or morehave lingering symptoms well beyond what you would expect from any post-viral syndrome like influenza and others. It's fatigue, shortness of breath, muscle aches, dysautonomia, sleep disturbances and what people refer to as brain fog, or an inability to focus or concentrate. That can last anywhere from weeks to months," he explained. As the CMO of Cognivue, I can see the Post-COVID syndrome having a major impact on a persons' integration back into life now, and even once COVID-19 cases start to wane in the future. The implications of this syndrome on a person diagnosed with COVID-19 is starting to be more predictable, however, the question must be asked, "What is going to be the impact on cognitive function in people not diagnosed with COVID, but living in COVID times with the struggles that come from trying to trying survive everyday life in a COVID restricted world?" It is a human. economic and social crisis. The coronavirus disease (COVID-19), which has been characterized as a pandemic by the World Health Organization (WHO), is attacking societies at their core.

As the COVID-19 pandemic has continued to grow, so too has the impact on those whom it has infected and those whom it has not. We know that one in five COVID-19 patients is diagnosed with a mental illness within three months of testing positive. Further, regardless of a COVID-positive or COVID-negative diagnosis, we have seen an escalation in overall "brain fog" due to issues such as parental anxiety and depression. domestic violence, child abuse, front-line healthcare worker exhaustion and disillusionment, elderly disengagement, pediatric isolation, and severe economic impact representing 11.1 million jobs lost (6.9%). With unemployment now nearly twice the February levels (3.5 percent and 5.8 million, respectively), this, and the aforementioned concerns, influence the cognitive status of each and every one of us. We are going to have to solve for the reentry of those on whom COVID-19 had direct physical impact and those who were mentally scathed by the continual cognitive assaults and aftershocks of the pandemic.

We must look for ways to ensure that we are sending a population of cognitively sound people back to work, to school, to worship centers, to recreational centers, to medical institutions, and back into life. Although it is going to be a collective effort by many individuals, groups and organizations, the road back to cognitive health begins with knowing what someone's cognitive function looks like.

#### **Post-COVID Syndrome**

Dr. Fred Ma, MD, PhD Senior Vice President & Chief Medical Officer

We need to strongly consider that leveraging a self-administered and personalized Cognivue® test that provides immediate feedback on the function of the key domains of the brain, is certainly one of the most obvious starting places for mitigation of any outward assault on a persons being. We have an opportunity to better understand a person in total when we insist that cognitive function testing is included as part of the recovery plan for all individuals who experienced the whiplash of COVID-19, either directly or indirectly. As of November 17, 2020, there have been 54,771,888 confirmed cases of COVID-19, including 1,324,249 deaths, reported to WHO.

The impact of this pandemic is not just on the patient, but on all those directly involved and those within a community, region and nation who continue to face the increasing rates, constant fear, and the physical and mental fatigue of continuing to fight. We have an opportunity to help mitigate the onslaught of what we know is coming related to cognition and cognitive function and the time is now. My team and I are working to ensure that we provide the proper support to both HCP's and their patients in order to help them navigate this relentless and exhausting COVID-19 storm. I look forward to partnering with you to be a part of the cognitive recovery plan for patients, loved ones and families, employees, the community, and the world at large.

1. CDC COVID Data Tracker. (n.d.). Retrieved November 18, 2020, from https://covid.cdc.gov/covid-data-tracker/ 2. WHO Coronavirus Disease (COVID-19) Dashboard. (n.d.). Retrieved November 18, 2020, from https://covid19.who.int/ 3. American Medical Association. (2020, November 7). Dr. Anthony Fauci on the Year Ahead | Exclusive Interview [Video file]. Retrieved November 16, 2020, from https://www.youtube.com/watch?v=djt/mzicN6Q&feature=youtu.be)

### About Dr. Fred Ma, MD, PhD



Senior Vice President & Chief Medical Officer at Cognivue

Dr. Fred Ma, MD, PhD, is the Senior Vice President and Chief Medical Officer at Cognivue. His nearly four-decade career spans global medical device and pharmaceutical development and commercialization, as well as advancing neurological disorder treatments, therapies and prevention as a neurosurgeon.

Dr. Ma was most recently president and chief operating officer of Innovative Health Sciences, the immunology drug and subcutaneous drug infusion device company. He has served as chief medical officer for KORU Medical Systems, Innovacyn, and GE Healthcare, as well as leadership roles within Johnson & Johnson, Merck and elsewhere.

Dr. Ma managed more than 100 new product developments with over 600 successful clinical trials and regulatory filings in the Americas, Europe, Africa and Asia-Pacific. Before accepting his first industry position in 1990, Dr. Ma was a practicing neurosurgeon at the China-Japan Friendship Hospital in Beijing and the University of Tokyo Hospital, including tenures as attending physician and resident general chief. He received a BS/MD degree from Capital University of Medical Sciences, Beijing; a DMS (Doctor of Medical Sciences, MD/PhD) from the University of Tokyo, and a PhD in Neuroscience from Rutgers University. He is Board certified in Japan and China in neurosurgery, functional neurosurgery and oncology.

Among his many accomplishments, he has been involved in drug research and clinical investigation for cognitive modulation on ADHD, Alzheimer's, and dementia, plus near infrared light therapy device development for TBI and PTSD.