Four Stars on One Mind

General Peter W. Chiarelli with actor Tom Hanks at a One Mind event

An Interview with Peter W. Chiarelli, Chief Executive Officer, One Mind for Research

EDITORS' NOTE *General Peter Chiarelli, U.S. Army (Retired), assumed his current position as CEO of One Mind in March of 2012. Chiarelli served as the 32nd Vice Chief of Staff of the U.S. Army from 2008 until 2012. He hails from Seattle, Washington and is a Distinguished Military Graduate of Seattle University. He was commissioned a second lieutenant of Armor in September 1972 and has served tours of duty in the United States, Iraq, Germany, and Belgium, commanding at every level from platoon to corps. Chiarelli holds a Bachelor of Science Degree in Political Science from Seattle University, a Masters of Public Administration from the University of Washington, and a Masters of Arts in National Security and Strategy from Salve Regina University.*

ORGANIZATION BRIEF *One Mind for Research (1mind4research.org) is an independent, nonprofit organization committed to curing brain diseases and eliminating the stigma and discrimination they cause. In collaboration with partners in science, advocacy, and corporations, One Mind has developed an ambitious 10-year plan to radically accelerate the development of cures for brain diseases by changing the way scientists, health care professionals, NGOs, and government partners conduct research on brain disease and injury in order to accelerate delivery of improved diagnostics, treatments, and cures to patients.*

What is the vision behind One Mind for Research? How do you focus your efforts today?

One Mind was started on the 50th anniversary of John F. Kennedy's announcement that we put a man on the moon by the end of the decade.

Co-founders Patrick Kennedy and Garen Staglin were inspired by this statement to create an organization that went not to outer space but to inner space, and to look to that moonshot as an example of what we can do if we focus our efforts.

The idea behind One Mind is to propel brain disease research forward dramatically so we can catch up with other major disease areas. Neuroscience research is, by all accounts, 30 to 50 years behind that of cancer and cardiovascular disease.

There is no umbrella organization for brain disease and we aim to fill that space and become the American Cancer Society for brain disease. We will do it by bringing in all the existing stakeholders in the neuropsychiatric community to work together for the greater good.

When government funds research projects at individual institutions, their researchers collect data and the data becomes their intellectual property, which they use to gain scholarly recognition; then they apply for additional grants and the cycle repeats. No data gets shared, there is no collaboration with other scientists outside their institution or research team, and nothing gets to the patient. One of the biggest obstacles is that there is no existing platform for sharing data. We're going to solve that problem.

One Mind's central mission in 2013 is creating the Apollo Data Exchange Portal, which is designed to be the largest repository of shared brain data in the world, open source for researchers around the globe. We have the ability today to collect and analyze massive amounts of data on these diseases and share the results, which will lead to a revolutionary acceleration in improved diagnostics, treatments, and cures.

How are you building the organization and obtaining the support you need?

We're building the portal, but the first major research we are supporting is on traumatic brain injury and post-traumatic stress. I got involved because of the huge numbers – 67 percent of our most seriously wounded soldiers have traumatic brain injury (TBI) and post-traumatic stress (PTS) as opposed to 10 percent that have lost an arm, leg, or multiple limbs.

The number of affected soldiers is only 1 percent of the 3.4 million Americans every year who suffer from TBI – the CDC lists it as one of the leading causes of injury and death in this country.

People believe government is doing the necessary research, but there are about 55 major diseases and injuries of the brain and they are all claimants on this limited NIH funding, and it ends up being a bunch of little science getting funded, not the big science we need to get breakthroughs.

We have to change the paradigm from many small studies to fewer large studies, and private philanthropy is the only way to get it started. When we do, results will come fast and we'll be able to leverage government and corporate funding. We found a cure for polio; we found effective treatments for AIDS; we can do the same for brain disease if we invest the necessary resources.

Is it tough to have patience?

Yes, it is difficult to be patient when people are suffering and dying every day from preventable afflictions. In our system, people don't share information so nobody can "connect the dots." It makes me sad because the answers are out there. We should have thousands of eyes looking at all the data and making connections – that is how you get solutions to tough problems.

What is the Gemini Program?

That's our TBI-PTS study. A researcher we're working with got NIH funding to study 652 patients who came into the emergency room after experiencing a concussive event. They were evaluated, their blood was pulled, they underwent an immediate MRI/CT scan, then full phenotyping was done and they were followed for two years.

He discovered that, using current diagnostic tools, we cannot accurately determine what mild, moderate or severe traumatic brain injury is.

We're not going to wait for him to get scholarly articles published, wait for another grant approval, and add another 400 patients – we know we need 3,000 to 5,000 patients to get real breakthroughs. So we're going to bet on something that the NIH thinks is excellent research but they can't scale up – that's what Gemini will do.

Where are you with your multiple sclerosis research program?

One Mind is entering into an innovative new cooperative alliance, to be launched in March, which is seeking to build powerful, predictive computer-based disease models that integrate an unprecedented breadth of real-world patient and clinical data to accelerate the discovery of better treatments and, ultimately, cures for multiple sclerosis.

How do you measure success in these efforts?

When we can tell the severity of a concussion or traumatic brain injury with a simple, quick, finger-prick blood test, that will be success; when we can double or triple the number of people who live free of the burdens of brain disease and can live normal lives, that will be real success. ●