

## **Vivace's AI solution offers effective early warning system for COVID-19 patients; hospitals offered free trial amid outbreak**

SAN DIEGO (May 5, 2020) – The Vivace Health Solutions' AI VFusion™ platform has proven to be highly reliable in identifying early-stage signs of the primary causes of coronavirus mortality: Acute Respiratory Distress Syndrome (ARDS) and sepsis. Vivace is now ready to deploy this solution widely to help health systems intervene with appropriate therapies in time to save the lives of COVID-19 patients.

ARDS has been present in more than 90% of COVID-19 victims, usually leading to sepsis as a primary cause of death. The most important factor in ARDS and sepsis case outcomes is early identification of the emerging syndrome, leading to timely interventions to arrest disease progression. There are also several critical distinctions in the presentation of these diseases that require different therapeutic approaches.

Unlike previous clinical decision support and screening tools, VFusion combines the expert knowledge of front-line clinicians with machine learning and natural language processing. VFusion integrates with any hospital electronic medical records system and also gathers data directly from bedside monitors to rapidly recognize early stages of ARDS and/or sepsis. Using VFusion's web-based knowledge management services, collaborating expert clinicians can rapidly modify screening criteria to reflect the continuously evolving COVID-19 best practices.

Vivace and Children's National Hospital in Washington, D.C., have collaborated in a research effort to investigate the clinical value of an early warning system in pediatric sepsis. "It is really important, especially now with COVID-19, to develop tools that will give us the necessary information to treat high-risk patients as early as possible to avoid complications. This research partnership will allow us to be at the forefront of AI and natural language processing technologies and their applications in pediatric medicine," said Ioannis Koutroulis, MD, PhD, pediatric emergency physician at Children's National.

In recent hospital implementations and studies, VFusion was shown to detect sepsis in both adult and pediatric populations and alert clinicians on average more than 6 hours faster than prevalent clinical practice; it also found many instances of missed sepsis diagnoses. Among 30,000 ER patients at a major health system, the platform displayed extraordinary sensitivity and specificity in detecting the onset of ARDS. Similar findings emerged from a study of 160,000 ER encounters at a top-ranked children's hospital.

Now, with the addition of a COVID-19 expert knowledge system to inform its machine learning engines, Vivace is offering to implement VFusion at no cost for overburdened hospitals in select locations that can benefit from automated surveillance for COVID-19 patients.

“Developed in partnership with leading critical-care experts and healthcare institutions, our AI application is ready for wide adoption in U.S. hospitals,” said Tom Velez, PhD, founder and CEO of Vivace and a former NASA engineer. “Due to the chaos and overburdened hospitals and clinicians during the COVID-19 pandemic, this is an ideal time to implement a continuous surveillance platform that can reliably discriminate those in non-ICU settings who are in need of critical care from the many with mild/moderate COVID-19 illness. Even in the best of circumstances, differentiating ARDS and sepsis pathologies can be difficult. With discoveries being made daily, a platform that can rapidly incorporate and disseminate the consensus of COVID-19 experts is urgently needed. Clinicians need the support of an agile and reliable clinical decision support tool to serve as a second pair of eyes to support the monitoring of all hospital patients.”

For more, go to [www.vivacehealthsolutionsinc.com](http://www.vivacehealthsolutionsinc.com).

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