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# Intensix Data Analytics Demo High Accuracy In ICU Sepsis Detection

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An analytics platform developed by Israeli big data company Intensix has shown high accuracy for detecting and predicting sepsis in critical care. The positive results were presented at the Healthcare Information and Management Systems Society (HIMSS) healthcare IT conference in Orlando, Florida.

A new study has shown that an analytics platform developed by Israeli company Intensix has a high accuracy for detecting and predicting sepsis in the ICU.

The study, conducted at the Mayo Clinic in the US sought to test the Intensix platform for sepsis detection in ICU, compared to the gold standard observation of a sepsis sniffer and additional manual review. The positive results were presented at the Healthcare Information and Management Systems Society (HIMSS) healthcare IT conference in Orlando, Florida.

"Most patients admitted to ICU are in a bad condition and deteriorating very quickly so it's vital for clinicians to be able to monitor and detect this early," Intensix CEO Gal Salomon told *Medtech Insight*. "The results from this study showed our platform's performance is comparable to manual review for detecting sepsis. It demonstrated high reliability and the ability to process flow of data needed for algorithm execution."

Intensix's platform correlates anonymized ICU data collected from different patients with mathematical algorithms to create models for predicting clinical outcomes. It can be used as a standalone app or used with existing systems.

"The platform can be integrated as part of the clinician's workflow using three different data points," said Salomon. "The first one is data from the vital signs, including heart rate and pressure. The second type of data is the medication that the patient is using, and finally results from the patient's tests, including CT and MRI scans. All this information can give us an

estimation of a patient's status in critical care."

Sepsis is the most common cause of mortality in intensive care units and can rapidly lead to vital organ dysfunction, and death. It accounts for 40% of total ICU expenditure, with 18 million individuals dying each year from the condition.

The study included 782 patients and showed a sensitivity of 90.5% and specificity of 88.5%. The positive predictive value of the Intensix system was 71.5% and negative predictive value of the system was 96.7%.

The company will now be conducting additional studies to improve and validate the system. "We need to be able to judge the system in several different categories," explained Salomon. "Firstly, it has to be able to discharge a patient faster from the ICU compared to manual review. It then has to improve costs dramatically and lower the usage of expensive medication. We need to see all those priorities evidenced in clinical trials."



Source: Source: Intensix

Most recently, Intensix completed an \$8.3m Series A financing round led by Pitango Venture Capital. Salomon said the funds would be used to expand and accelerate the development of the platform. "We are planning to increase our development team as we need to double the team in less than a year. We also need to support different clinical studies going on, we started in the US market but we're progressing towards Europe. These funds will also help us to start building our commercial team including sales and marketing. So we're going from being a small startup which is focusing only on R&D to a company that is ready to do business from next year."

The Israeli start-up is also conducting an interventional study in Tel-Aviv Medical Center. Results from the prospective study showed that the platform could recognize deterioration before medical staff.

Salomon said: "We're taking the time in 2017 to conduct clinical trials in as many hospitals as we can and the idea is to install the system and let the team work at collecting more information so we are ready for commercialization which we plan to aim for 2018."