Super Alarm – A Learning Software for Prevention of Alarm Fatigue

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INVENTORS

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OTHER INFORMATION

KEYWORDS

Digital Health, Health Informatics, Health Analytics, EMR, Alarm Fatigue, Patient Monitoring, Patient Deterioration, Rapid Response, Predictive Model, Machine Learning

CATEGORIZED AS

- **Biotechnology**
  - Bioinformatics
  - Health
- **Computer**
  - Software

RELATED CASES

2014-081-0

INVENTION NOVELTY

A robust learning software platform capable of combining both patient physiologic monitor alarms and data in EMR (e.g., laboratory tests) to more precisely monitor patients.

VALUE PROPOSITION

Patient physiologic monitors are an essential tool for medical staff. However, the excessive number of monitor alarms leads to desensitized or failed responses to true clinically significant events and compromises the quality of patient care. The presented learning algorithm meets this unmet need for reliable patient monitoring systems by providing more accurate prediction of patent deterioration and the opportunity for early medical intervention. For example, it shows 90% sensitivity for predicting code blue two hours ahead of time and 85% reduction in false alarms.

Additional advantages of this invention include:

- Identify patient changes earlier
- Present complex data in a simple and comprehensive manner
- Share patient's configured data across different channels such as on monitors, at the nurses station, the command center, and by phone for enhanced communications

TECHNOLOGY DESCRIPTION

Researchers at University of California, San Francisco have developed an advanced analytic software platform for more precise patient monitoring and prevention of alarm fatigue in medical staff. It monitors the streaming data from monitors and EMR (e.g., alarms and lab test results) and identifies patterns among these data that signal patient deterioration.

LOOKING FOR PARTNERS

To develop & commercialize the technology as an analytic software module that can extend the functionality of patient monitors and EMR systems

STAGE OF DEVELOPMENT

Proof of Principal

RELATED MATERIALS

- Bai, Y., Do, D. H., Harris, P. R. E., Schindler, D., Boyle, N. G., Drew, B. J., & Hu, X. (2015). Integrating monitor alarms with laboratory test results to enhance patient deterioration prediction. Journal of biomedical informatics, 53, 81-92.
- Salas-Boni, R., Bai, Y., & Hu, X. (2015). Cumulative Time Series Representation for Code Blue prediction in the Intensive Care Unit. AMIA Summits on Translational Science Proceedings, 2015, 162.

PATENT STATUS

Country	Type	Number	Dated	Case
United States Of America	Issued Patent	10,811,141	10/20/2020	2014-081

INTELLECTUAL PROPERTY INFO

Additional IP:

PCT WO 2013/056180

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