Critical Care Solution by CLEW

Using artificial intelligence to improve the outcome of critically ill patients

CLEW's ICU solution – CLEWICU, delivers customizable real-time clinical optimization, actionable predictive clinical analytics and patient risk stratification. The platform utilizes the full range of available patient data to provide continuous predictions based on sophisticated machine learning algorithms and models. The solution enables early identification and intervention and patient context prioritization. The CLEWICU system interfaces with existing EMR systems and medical devices and can be deployed either on-premises or in the cloud.

Maximizing scarce ICU resources

Healthcare reforms are affecting the finances of hospitals, the workloads of healthcare providers, and the treatment of patients. These reforms are driving an increased focus on improving clinical value by identifying high risk patients within the ICU, prioritizing treatment based on patient acuity, and reducing total length of stay and iatrogenesis.

Existing EMRs do not provide information to help ICU teams work proactively. CLEW's unique technology helps focus attention to where it is needed most, staying ahead of impending problems. In large facilities, CLEW's technology enables staff in large and/or multiple ICUs to understand expected acuity and enables better distribution of medical and nursing resources.

CLEWICU dashboards provide overviews of the patient, individual units and entire facilities to provide maximal insight to each team member and management enabling the effective distribution of manpower in real-time.

Actionable predictive clinical analytics notifications

CLEW's ICU solution takes a holistic approach to delivering early predictive of occurrence of clinically significant events. The solution analyzes multiple parameters before it generates a single notification to predict a potential clinical deterioration, significantly lowering the false alarm rate (FAR). This ability to provide a highly accurate and actionable notifications several hours in advance assists in the delivery of the most effective, proactive, properly timed and resource-efficient response, while avoiding costly and disruptive emergency situations.

Leverage existing patient data

CLEW's solution harnesses the vast amount of available ICU patient and medical device data, with no need for additional data entry on the part of ICU staff. Utilizing a combination of Big Data, machine learning and high-frequency real-time patient-based data, the system delivers accurate predictions for high, moderate and low risk patients, enabling an optimized workflow. CLEW's ICU solution includes an AI-based classification model that predicts which patients will not require intervention within the coming 8 hours. The low risk patient classification allows providers to allocate additional resources to critical and unstable patients.

## Customizable real-time clinical optimization

CLEWICU can be used to monitor quality and high cost procedures; reminders and their cadence can be defined per unit and per rule. The system includes pre-defined best practices rules for VTE, lung protective ventilation, stress ulcer prophylaxis, blood transfusions and accelerated mechanical ventilation weaning & liberation. Best practices rules can be defined by the customer to monitor specific medication utilization, ventilator parameters screening, or other desired practice based on the ICU center experience and leadership guidance.

Key Benefits

- Continuous patient risk stratification

- Actionable predictive clinical analytics

- Acuity-based resource allocation

- Customizable and automated real-time clinical optimization and best practices

- Improved case volumes and workload reduction

- Patient context prioritization

Key Features

- Utilizes the full range of available patient data

- Seamless interface with existing EMRs and medical devices

- Actionable predictive clinical analytics notifications

- High PPV (positive predictive value) reducing alert fatigue

- Low-risk patient classification by a dedicated AI model

- On-premises and/or cloud deployment

- Highest levels of data security and patient privacy
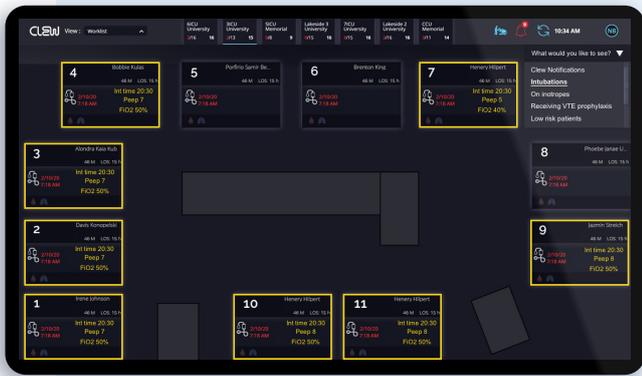
Unit View by Layout – Full ICU situational awareness, displaying patient data and predicted risk level, for one unit or multiple units. The display highlights all notifications, low risk patients and other key clinical information, to provide multi-dimensional situational awareness.

- Patient risk stratification (high, moderate and low risk patients)
- Intubated patients
- Vasopressors/inotrope support
- Empty beds
- Key patient and unit information
- Occupancy, ventilator status and vasoactive medication
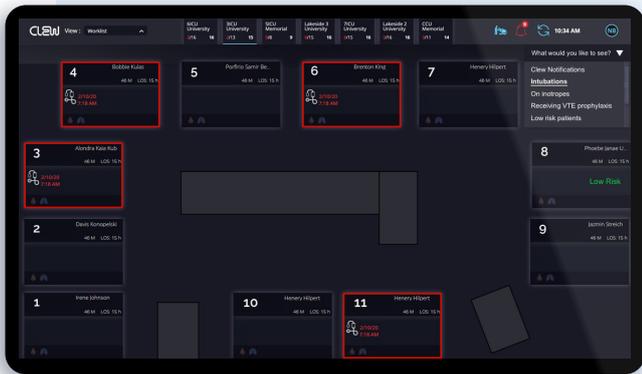
Patient View – Rapid, clear, consistent patient data summary and visualization

- User selectable vital sign display
- Summary of all relevant lab results
- Dynamic and collaborative caregiver task list
- Aggregate patient demographics and PMH (past medical history) and predicted risk level

About CLEW

CLEW is a real-time AI analytics platform designed to help providers make better informed clinical decisions by predicting life-threatening complications across various medical care settings. With CLEW, healthcare organizations can improve outcomes and safety, streamline patient care, and efficiently handle regulations and penalties, ultimately lowering the cost of care. The platform uses machine learning and data science technology to develop patient-specific physiological, predictive models to deliver predictive warnings during all phases of a patient's stay. Originally developed and proven in the ICU, these models optimize scarce clinical resources and guide health care providers in predicting patient deterioration, across all care settings.

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