Completely Automated Critical Care Data Collection

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Introduction: Ventura County Medical Center (VCMC) has developed a unique, automated method of collecting critical care clinical and financial data to support outcome reporting. Hypothesis: Working in conjunction with Medical Automation Systems and its ICUTracker®, VCMC created a data screen in the Meditech® hospital information system for use by physicians during patient morning rounds.

Methods: Physicians use computers on wheels during rounds, and log data elements that reflect their daily patient assessment. Examples include: ICU admitting diagnosis, ventilator status, and head of bed elevation. These physician designated data along with automated electronic data collection of admission/discharge/transfer data, laboratory data, charge data and co-morbidities/complications results in a rich database, with automated calculation of APACHE II, III and IV scores.

Results: Physicians have ready access to data enabling rapid assessment of successful treatments and protocols. A web enabled dashboard displays quarterly trends of key quality indicators. Reports using all available electronic data can be created and saved as needed. Reports can be filtered by patient population, unit or attending physician.

Conclusions: VCMC can now rapidly evaluate the efficacy of treatment modalities and provide physicians and hospital administrators with timely feedback on success and opportunities for improvement.