ED Solution Helps Emergency Departments Respond to Rising Patient Volumes and Throughput Concerns

WALTER REED NATIONAL MILITARY MEDICAL CENTER, WASHINGTON DC

Annual inpatient admission.............................9,784

Clinical Users...........................2,640

Staffed beds.............................215

CliniComp's ED and Inpatient solution installed. Customer since 1997.

DWIGHT D. EISENHOWER ARMY MEDICAL CENTER, FORT GORDON, GA

Annual inpatient admission.............................4,063

Clinical Users...........................1,046

Staffed beds.............................300

CliniComp's ED and Inpatient solution installed. Customer since 2008.

Dwight D. Eisenhower Army Medical Center

Year over year, hospital emergency departments (EDs) have experienced an upward trend in patient volume. According to the CDC, an estimated 130 million emergency department (ED) visits took place in 2018.

The impact of COVID-19 and a rise in substance use and mental health populations presenting in the ED have further necessitated EDs to invest in integrated data-driven processes and real-time tracking approaches to meet the trend of increasing patient volumes and care management. ED information systems enable healthcare professionals to triage patients for disposition and manage care while also identifying high-risk patients.

In this case study, two healthcare organizations share how they are using the **CliniComp ED Solution** to meet evolving emergency medicine challenges— streamlining workflow processes and providing lifesaving data in a setting where ED medical professionals are trained to deliver real-time responsive treatment, ultimately stabilizing and discharging patients home or transferring to another level of care.

The two organizations — one, a new adopter, and the other, a 10-year legacy user receiving a functionality upgrade — are testament to CliniComp's readiness to partner with providers to tailor implementation and training strategies individualized to their ED needs and facility preferences.

Virtual ED Solution Implementation and Go-Live in Record Time is Resounding Success

Dwight D. Eisenhower Army Medical Center is a 300-bed medical treatment facility in Fort Gordon, Georgia.

In December 2020, the Army medical center decided to expand its inpatient use of the CliniComp solution to the emergency department, *going live in a record two weeks virtually.*

CliniComp's virtual implementation and activation of the **CliniComp ED Solution** was deemed extremely smooth and fast compared to the normal deployment time of three months or 90 days.

Troy W. Akers, M.D., Chief, Department of Emergency and Hyperbaric Medicine, Dwight D. Eisenhower Army Medical Center, is credited with spearheading the seamless inpatient-to-ED expansion and two-week virtual implementation, working closely with the CliniComp team.

"Markedly successful" is how Dr. Akers described the speed of CliniComp's two-week virtual implementation of the CliniComp ED Solution.

"My team embraced the virtual planning and the training classes, which set us up for success," he said. "CliniComp's numerous training venues helped get our busy ER staff rotated through the process changes. By the time we were ready for go-live, the staff felt very comfortable. All of this was done with the virtual platform, which proved to be more conducive than in an in-person implementation."

Dr. Akers recalled past experiences where working with trainers on site could present time challenges for his staff when organizing the rotation of people. "I was very pleased with the ease of the virtual launch and the support that we received," he commented.

The virtual training was not only more time efficient for the clinicians, it proved also more cost efficient for the hospital. The ED staff could schedule training modules at their convenience without incurring overtime.

As the emergency department staff transitioned from virtual training, additional virtual CliniComp Go-Live support was provided to the onsite ED team to ensure every employee was prepared and ready to take the CliniComp ED Solution live.

"I really couldn't ask for anything better from CliniComp's support and preplanning," Dr. Akers added. "We had enough planning time to invite executive leadership to join our physician and nursing staff during the go-live. The switch to the new system was seamless."

"The preplanning and all the support from CliniComp was a remarkable feat," he continued. "Over 100 staff members were trained — whether through CliniComp training or by super users — successfully transitioning to a completely new system. That's remarkable during a two-week period and especially during the holiday season."

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ED Solution Data Satisfies Regulatory Requirements

The Joint Commission had scheduled a visit in March 2021 to Dwight D. Eisenhower Army Medical Center prior to the go live of the CliniComp ED Solution, increasing the immediacy to get the system up and running.

"While I had a high-level of confidence that we were meeting Joint Commission standards, I had serious concerns that our previous data and reporting tools were not able to pull the required information for the mock survey," Dr. Akers noted. "It was really important for us to be prepared to meet Joint Commission regulatory/compliance needs and knew the CliniComp solution would meet the needs in the approximate **two-week go-live implementation** timeframe we had."

With the new ED System, Dr. Akers now can generate reports showing hospital military leadership where the hiccups and bottlenecks are hindering patient flow and management.

"This tool gives us the knowledge, proof and validation that we're meeting care standards and regulatory requirements," he said.

Cost Savings Benefit

Dwight D. Eisenhower Army Medical Center realized significant cost reductions when comparing the virtual solution implementation to the traditional way of training staff in person and on site. "I estimate that we saved substantial over-time hours and resources to train ED staff," Dr. Akers said.

Impact on ED Operations

Since the go-live implementation, Dwight D. Eisenhower Army Medical Center's ED team has observed first-hand the CliniComp ED module's enhancements contributing to rising staff adoption and usability, which by design, improves ED operations.

Dr. Akers listed four major improvements:

1. "We had significant patient safety concerns before we implemented the new ED solution. In our previous system, our vital signs were buried in the note and there was no tracking system. It was easy to miss critical vital signs that could lead to significant patient harm," Dr. Akers said.

   "CliniComp's tracking board displays vital signs and changes, enabling the ED staff to see data in real-time. This significant patient safety improvement has also enhanced physician and nurse satisfaction. We now have real-time tracking to see what's going on. This information is not buried in some note."

2. **"We can track patients quickly when they enter the ED,** including identifying frequent flyers or people who are regular emergency department visitors," he continued. "We can better manage through put timestamping entry and exiting times of all ED patients."

   In fact, the data collected over a 10-week period successfully proved that non-emergency cases were overwhelming ED throughput. This

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RESULTS

Solution Implementation, Virtual Training, and Go-Live:

- Accelerated solution activation smoothly and virtually in a record two weeks, compared to 90 days deployment

- Satisfied care standards and The Joint Communication requirements

- Provided virtual planning, training and support to onsite ED team to ensure every employee was prepared

- Realized substantial cost reductions in overtime hours and resources to virtually train ED staff

- Achieved transformed, integrated and seamless workflow that increased patient safety and timelier care

resulted in a management decision to offload these patients to a primary care clinic.

"Our ED physicians and nurses are happier that patients are safer," commented Dr. Akers. "EHRs are built to improve workflow processes. Our old system slowed us down. Once physicians and nurses have a clinical system that supports them, everything, including morale and patient safety, is better."

3. **"We're able now to quickly identify where we have challenges,"** he said. "For example, we can view timestamped data if there's a delay in triage, from a doctor seeing a patient at admit time to a resident coming to collect and take the patient upstairs. We have actionable data for reports, including trends of diagnosed illnesses such as COVID-19. This helps hospital leadership make decisions on bed count and other matters to improve ED patient safety and throughput."

4. "We're also using the ED dashboard concurrent with reports to view metrics in real time. We're in the process of revalidating a lot of our clinical policies, some of which are related to timestamped standards. Having **real-time dashboard length-of-stay data trends,** for example, allows our physicians to document more accurately."

Advice for Others

In reflecting back over his first virtual implementation experience of ED solutions software, Dr. Akers said, "I wouldn't change anything at all. I'm satisfied with the amount of preplanning and support that CliniComp provided during the training period, as well as the go-live period where we had lots of people on speed dial. I recommend that emergency departments listen to their vendor's preplanning guidance and actually follow through on it. Training virtually provided more flexibility for my organization and ED staff. Why not continue in that mode moving forward?"

Legacy User Upgrades to CliniComp | EHR ED Solution for Seamless Workflow

Walter Reed National Military Medical Center is one of the nation's most prominent military medical centers in the Washington, D.C. metropolitan area. Located in the community of Bethesda, Maryland, Walter Reed is the world's largest integrated military medical center, serving more than 1 million patients annually.

Walter Reed National Military Medical Center

As an early adopter of the CliniComp application in the 1997, Walter Reed implemented the **CliniComp ED Solution** in 2009 and upgraded to the enhanced ED module in September 2020.

Over the decade's use of the ED system, Walter Reed has partnered with CliniComp to evolve its capabilities to achieve an integrated seamless workflow in emergency medicine. The new ED module currently reflects CliniComp's ability to respond to the customer's needs in delivering upon transformed workflows.

CAPT Matthew Lawrence, M.D., Chief, Department of Emergency Medicine at Walter Reed National Military Medical Center, shared positive outcomes experienced using the CliniComp ED Solution upgrade designed to augment operations.

ED DASHBOARD

"The full screen view of the ED Dashboard, obviously the nerve center of the emergency department, provides a situational awareness in real time of all ED patients including present locations of those in the ED waiting room, ED patients who are being discharged and more," said CAPT Lawrence.

"The new ED Dashboard conveys a lot more information a lot more quickly," he explained. "What's more, the dashboard's new features actually add another layer of situational awareness." Among the top viewing features are the ability to read clinician comments, see vital signs and ESI level, and receive early warning scores for newborns, pediatrics and adults that detect a patient's deteriorating condition and prompt critical care intervention.

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ED Dashboard

> "The ESI triage level assigned to every patient entering the ED is displayed onscreen to help the medial team get a really quick digestible snapshot of patients upon arrival. The triaging prioritizes the most critically ill requiring immediate medical attention over those with fewer severe conditions who can wait a bit longer."
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Walter Reed's ED staff strives to triage all incoming patients to be seen within 10 minutes by an ED physician. The ED dashboard supports clinicians' critical decision-making and patient care management in real time.

According to CAPT Lawrence, "The ESI triage level assigned to every patient entering the ED is displayed onscreen to help the medical team get a really quick digestible snapshot of patients upon arrival. The triaging prioritizes the most critically ill requiring immediate medical attention over those with fewer severe conditions who can wait a bit longer. Today, our new dashboard color codes critical patients in red, enabling life-threatening ED communications to be seen quickly from across the room."

Now that ED clinicians are familiar with the new ED dashboard, patient throughput has accelerated. "Our throughputs are faster due to multiple variables attributed to the CliniComp ED Solution upgrade, as well as the fact that our COVID-19 patient volumes are down, resulting in fewer ED patients to manage," said CAPT Lawrence.

He explained that concurrent with the CliniComp ED module update, Walter Reed's ED staff launched other performance improvement initiatives such as improved triaging of patients at the bedside, as well as reducing time to identify sepsis, which involved enlisting the ED dashboard's early warning scores.

TIMESTAMPING ADMISSIONS STEPS

Because the emergency department is a critical care area, the ED module's new real-time length of stay and other valuable metrics proved especially beneficial in helping to visualize different patient dispositions across Walter Reed's ED.

"One of the biggest challenges before the upgrade was the timestamping of certain steps in the admissions process," said CAPT Lawrence. "Timestamping the patient's progress through admissions was dependent on the ED physician reliably typing a note. Now, timestamping of the sequence of steps in the process is automatic and guaranteed. ED staff are aware of everyone and every patient along the ED course."

CliniComp was fully engaged onsite with Walter Reed's ED staff during the ED module's smooth implementation. "CliniComp was very responsive about addressing our concerns. We were really happy with the level of training

ED Dashboard and Timestamping Admission Process:

- Provided real-time situational awareness and present locations of patients

- Supported triage priorities, critical decision making and patient care management

- Color coded the triaging of critically ill patients requiring immediate medical attention

- Accelerated throughput by improving patient flow and operations processes

- Improved triaging across ED, patients at the bedside and reduced time to identify sepsis

- Streamlined patient tracking and triage to disposition management

- Automated key performance indicators (KPIs) in real time

- Better managed, through timestamping, entry and exiting times of ED patients

- Generated trends data metrics in real time to improve policies and workflow gaps

resources and support available and especially in the middle of a global pandemic," he said.

Conclusion

With the ever-increasing number of ED patient visits annually, hospitals and health systems realize the proportionately growing need to provide better and more timely emergency care. Analyzing core technology and information system needs best suited to the ED department and all phases through the ED encounter is an essential aspect of emergency department operations and care.

Vital to ED operations are key features such as the real-time ED dashboard, streamlined workflows, patient tracking, comprehensive ED patient record, triage to disposition management and automated key performance indicators (KPIs). Above all, the primary purpose of ED automation is supporting clinicians in delivering the best care possible to the patient.

"CliniComp was very responsive about addressing our concerns. We were really happy with the level of training resources and support available and especially in the middle of a global pandemic."

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For more information on ED and the CliniComp suite of solutions using technology to simplify clinical workflow, alleviate IT complexities, and promote fiscal vitality, please contact us at:

1.800.350.8202

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