

3 Must-Have Modernization Strategies for Hospitals

The healthcare industry has experienced unprecedented challenges in the past few years. The pandemic, weather-driven, and conflict-related disasters have continued to challenge clinical resources and systems and have impacted the delivery of care at every turn and in every country around the world. This has caused hospitals to reach beyond traditional approaches and embrace innovation like never before to uncover transformational strategies that create efficiencies for staff, decrease costs, and improve outcomes.

Mobile modernization is at the top of the list. While healthcare has historically been slow to adopt mobile technology, the pandemic forced hospitals and healthcare technology companies to think creatively. The more advanced and innovative technology companies accelerated development and solved the interoperability, privacy, and security challenges that have been the major concern for hospitals and health systems. As a result, health systems are prioritizing mobile modernization, and clinicians are embracing mobile-first technology.

The right technology combined with a robust infrastructure can accelerate modernization efforts, improve patient throughput, increase capacity without increasing staff, reduce staff burnout, and increase patient and provider satisfaction. The trick is to streamline processes and implement technology that combines third-party integration, interoperability, and communications in ways that improve workflows and optimize staff efficiency.

AirStrip® Clinical Surveillance solutions enable hospitals to expand their reach beyond the limitations of a physical location with natively mobile technology that turns data into actionable information so clinicians can diagnose earlier than ever before, accelerate life-saving interventions, and reduce the cost of care.



1. Cardiac Mobile Monitoring Modernization

Traditionally, hospitals have relied upon bedside monitoring as the data exchange method among cardiac and critical care providers. The major obstacles to this approach have been access to data when not co-located with the patient, difficulty achieving timely collaboration, and scalability to effectively manage a growing volume of cases. However, modern technology solutions are emerging to help cardiac and critical care providers negotiate their way through a healthcare environment that's increasingly competitive, cost- and sustainability-conscious, and challenging for clinicians who must now specify the nature of the clinical requirements of patient care for optimal reimbursement."¹

Vendor-agnostic, mobile-first interoperable technology ensures cardiac and critical care providers can access disparate data from the various technology systems in place. Analyzing existing workflows to uncover inefficiencies can shine a light on opportunities to save precious time for cardiac and critical care providers and optimizing mobile-first technology can solve the challenges related to time and space by enabling providers to access data anytime, anywhere.

A good example of how mobile modernization can support cardiac care providers is mobile access to 12-Lead EKGs. According to AHA guidelines, 12-lead EKGs should be performed and shown to a physician within 10 minutes of arrival for patients with symptoms suggestive of an ST-elevation myocardial infarction (STEMI). Obtaining a rapid EKG is crucial to making the STEMI diagnosis and decreasing the door-to-balloon time results in better patient outcomes. A door-to-balloon time under 60 minutes is associated with a lower 30-day recurrent myocardial infarction and 30-day mortality rates.

Many hospitals are implementing mobile 12-lead EKG surveillance, which enables cardiologists to receive near real-time STEMI notifications on mobile devices. With this near real-time data, cardiologists can quickly diagnose myocardial infarction, decrease time to treatment, and reduce false catheter lab activations. However, there are benefits far beyond the acceleration of clinical intervention. Cardiac and critical care providers benefit from streamlined workflows, and administrators can track the entire digital footprint, from STEMI notification to treatment.

AirStrip's 12-Lead EKG Surveillance enables cardiologists to view, edit, and confirm near real-time 12-Lead EKGs and get STEMI notifications on mobile devices almost immediately, saving hospitals 0.85 ICU days and \$1,445 in variable cost savings per STEMI case.

AIRSTRIP CARDIOLOGY IMPACT SUMMARY



2. Telemetry Cessation Strategies

The issue of inconsistent telemetry utilization in hospitals is a significant concern that can lead to various negative impacts, including increased costs, decreased revenue, reduced patient throughput, and prolonged hospital stays. This inconsistency arises from a failure to adopt the American College of Cardiology standardized criteria involving processes and oversight for initiating, continuing, and discontinuing patient monitoring.

Research has shown that more than 35% of patients being monitored lack a recommended indication and there is no evidence showing improved outcomes in these patient subsets.² Additionally, even when patient monitoring is initiated for appropriate indications, over 50% of patients are monitored beyond the recommended duration per the ACC/AHA Practice Standards. This overuse is costing hospitals dearly. Given that the cost for incremental labor for telemetry is \$53–\$84 per day,³ hospitals waste at least \$19,345 annually for each patient day where monitoring is not indicated.

Inconsistent telemetry utilization and oversight impact monitored bed availability^{4, 5, 6} and patient throughput and increases the overall length of stay.⁷ Ultimately, overuse translates into increased cost of care,⁸ and decreases in hospital revenue. Overall, hospitals face reduced throughput of net new admission revenue potential when telemetry beds are otherwise occupied.

AirStrip Telemetry Cessation Reporting is a daily report of patients who have had a normal sinus rhythm for 48 hours. The list of patients who meet the normal sinus rhythm criteria can be shared with physicians, supervisors, and other stakeholders who can then make informed decisions on which patients are ready to be removed from telemetry.



Freeing up the telemetry beds allows additional patients to be appropriately observed, increases patient capacity, and results in increased revenue. One way to tackle the telemetry discontinuation challenge is to improve processes and systems of evaluating which patients can and should be removed from telemetry.

Telemetry cessation reporting provides hospitals with timely, clear data that enables physicians, supervisors, and other stakeholders to make informed decisions about which patients are ready to be removed from telemetry. With the right data, hospitals can streamline the decision-making process to ensure patients are in telemetry units only while it is medically necessary. Easy identification of patients eligible for telemetry discontinuation can decrease unnecessary or excessive telemetry days, decrease the cost of care, and make DRG reimbursement more profitable.

3. Centralized Monitoring

On-unit telemetry is associated with high levels of alarm fatigue and desensitization from false-positive alarms, missed real events with increased patient fatality,⁹ and the potential for patient harm from interventions in clinically inconsequential arrhythmias.¹⁰ Almost half of the unplanned ICU transfers from the general ward had healthcare worker-related root causes, mostly due to monitoring failures in clinically deteriorating patients.¹¹

To alleviate the burden of on-unit monitoring on the nursing staff, hospitals are centralizing the patient monitoring function and consolidating telemetry staff and equipment. The benefits of central monitoring include standardized processes for managing monitored patients, maximizing bed utilization and throughput, and supporting frontline staff.

Access to disparate data sources is key to a successful central monitoring unit model. Hospitals are investing in interoperable technologies that enable seamless integration of data sources, access to near real-time telemetry waveforms, access to historical data including waveforms, alarms, and trends, and the ability to monitor multiple patients simultaneously.

The goal is to provide telemetry technicians and staff with systems that allow for remote patient observation so that trained personnel can monitor patients, review alarms, and when necessary, collaborate with bedside care teams to assess patients that require clinical attention and immediate intervention.

AirStrip's Multi-Patient Viewer enables central monitoring telemetry technicians to get a birds-eye view of up to 40 patients on a single screen, group and sort patients by various criteria, monitor up to 16 patients per screen, and easily access data about specific patients.



Summary

Hospitals are embracing modernization strategies like never before to cope with staffing shortages, mobility hurdles, and workflow inefficiencies — all of which can impact outcomes. It is through thoughtful design of infrastructure and the effective use of technology tools that healthcare organizations can and should reasonably expect to improve results. If value improves, patients, payers, providers, and suppliers can all benefit while the economic sustainability of the health care system increases.¹²

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AIRSTRIP®

AirStrip Technologies, Inc. is bringing actionable vitals data to clinicians and care teams wherever they are. The AirStrip ONE platform is a vendor-agnostic solution that transforms monitored data into contextually rich information to surface life-saving decisions that must be made quickly.

With one-touch access from the web or native mobile apps, clinicians can measure, review acknowledge, and approve cardiac rhythm strips; view, edit, and confirm near real-time 12-lead EKG; get STEMI notifications almost immediately to reduce door-to-balloon time; and monitor mom and baby remotely with instance access to maternal and fetal waveforms.

Learn how AirStrip can help your clinicians diagnose earlier than ever before, accelerate life-saving interventions, reduce the cost of care, and save lives. Visit www.airstrip.com to learn more.