The Sapling Solution to Healthcare
A White Paper by The Sapling Company

From recording the time of birth to timing a code blue situation, accurate time is crucial in the healthcare industry. However, some facilities still lag behind with standalone (unsynchronized) clocks that confuse staff and patients, risk grave inaccuracy of timekeeping records, and present liability and patient safety issues. A Sapling Synchronized Clock System is the ultimate solution to improve efficiency, reduce risks associated with inaccurate time, and save money in a healthcare facility. Listed below are some of the situations in which a synchronized clock system will benefit a healthcare facility.
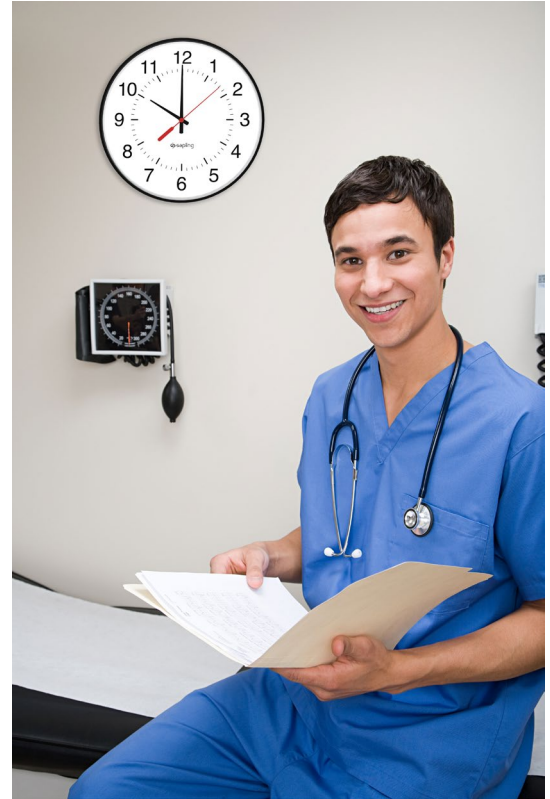
Accreditation Compliance

Accreditations help draw more people through hospital doors. For instance, a Chest Pain Center Accreditation will assist a hospital in attracting patients seeking treatment for chest pain, however, in order to meet the requirements for many accreditations, certain actions must be completed within a predetermined amount of time.

The Society of Cardiovascular Patient Care's Chest Pain Center with Primary PCI Accreditation requires an interventional cardiologist to reach the hospital within 30 minutes of a STEMI heart attack[1] , and failure to meet this and similar standards could result in a loss of accreditation. Accordingly, it is essential that everyone in the facility is working based on the same time source. Documenting the time based on a standalone clock, a wristwatch, or a cell phone may cause inaccurate time records and mean the difference between compliance and noncompliance with an accreditation's strict standards.

A Sapling Synchronized Clock System ensures everyone in the facility is working based on the same accurate time source, thereby assuring accuracy in recording certain events. Synchronized clocks show uniform time around a facility – safeguarding your accreditation status from timekeeping errors. Sapling offers four types of synchronized clock systems: Wired, Wireless, TalkBack Wireless, and IP. All four systems are of high quality and reliable, but they possess different capabilities and have different methods of synchronizing the clocks in order to meet the needs of any facility.

EMR/EHR Integration

Electronic Medical Records and Electronic Health Records have streamlined patient care – enabling healthcare providers to monitor their patients more easily. Although EMRs and EHRs have increased the efficiency of patient care, they have also created potential liability issues. In most systems, EMRs and EHRs record the time and date of all updates to a patient's record[2]. These electronic time stamps may be made available during discovery in a malpractice lawsuit, so discrepancies cannot be afforded. For example, even if the EMR/EHR's time source is only five minutes fast, it could create timeline issues and call the patient's record into question. When updates are being tracked down to the second, accurate time is essential.

[1] http://www.scpcp.org/services/cpc.aspx
[2] http://www.physicianspractice.com/risk-management/can-technology-get-you-sued

When the EMR/EHR system is hosted on a local (S)NTP-enabled server, it can be programmed to take the time from a Sapling NTP Master Clock over the network – ensuring the accuracy of the system's time stamp records. A Sapling Master Clock can take the accurate time from up to 10 internal or external NTP servers for supreme reliability and redundancy, and as an optional feature may also take the time from GPS. Taking the time from a Sapling NTP Master Clock ensures the EMR/EHR system is keeping records based on accurate time. Adding a Sapling Synchronized Clock System based on the same Sapling Master Clock will keep both the EMR/EHR system and the care providers working on the same time source – keeping timelines clear and consistent for all parties.

Code Blue

Timing the duration of a cardiac or respiratory arrest is extremely vital in determining what actions or measures need to be taken when treating the patient. Relying on a wristwatch or an old wall clock risks human error and is inadequate for a situation in which every second counts. Sapling offers a solution to simplify the timekeeping process in a Code Blue situation.

Sapling Digital Elapsed Timers show the elapsed time down to the second on an easy-to-read display and may be activated with the simple press of a button. With a Sapling Elapsed Timer, there is no need to rely on emergency personnel in a frantic situation to remember the precise time the code began since the Sapling Digital Clock will count the seconds on a highly visible 6-digit display. All of Sapling's clock systems (Wired, Wireless, TalkBack Wireless, and IP) support digital clocks as elapsed timers, allowing flexible solutions that will suit any healthcare facility's needs or requirements.

Sapling also offers a digital clock model capable of interfacing with a nurse call system via a contact closure. If a patient has a medical emergency, the nurse call system will trigger the elapsed timer while simultaneously alerting hospital staff to the Code Blue. With this option, the digital clock will begin timing the code from the moment the nurse call system is triggered, providing emergency teams with the exact elapsed time.

Medication Dispensation

Accurate timekeeping is critical when it comes to providing patients with medication. Intervals between medication dosages are key to providing proper care. Recording the time medicine is administered to the patient based on a wristwatch or standalone wall clock is insufficient, since different personnel may be providing the medicine throughout the day and patients may be moved from one location to another. The time shown on one

provider's watch may vary significantly from another, just as the time on a standalone clock in one location could differ from a clock in another location.

A study conducted by the Auburn University Center for Research on Pharmacy Operations and Designs found that about one in five medication doses administered are done in error. The most common error is dispending medicine at the wrong time[3]. To ensure accurate records, a synchronized clock system is the only solution.

With a Sapling Synchronized Clock System, healthcare providers in one corner of the building will be referencing the same time as those working in the opposite corner. As a result, even when patients are moved around a hospital, their medication will be dispensed based on the same time, reducing the risk of medical staff administering medicine at incorrect intervals.

Reduce Maintenance Costs

Wall clocks are standard in every healthcare facility, but standalone wall clocks drain resources and time. A medium-sized hospital with 300 beds may have hundreds of clocks – if they are not part of a synchronized clock system, the clocks will waste days of maintenance or IT staff's time. In an area where Daylight Saving Time is observed, maintenance staff will have to go to the physical location of each clock, climb a ladder, remove each clock from the wall, and manually adjust the hands. Depending on the size of the facility and maintenance team, this process may take days or longer. Additionally, in time, standalone clocks will drift from the time they are set to, causing significant time discrepancies throughout the facility.

Sapling Synchronized Clock Systems automatically correct each clock for Daylight Saving Time, eliminating the need for staff to spend days adjusting each clock. This allows the maintenance or IT staff to allocate their time to other matters. Sapling engineers and assembles its clocks to set it and forget it; there is no need for regular maintenance and each clock is inspected for both functionality and aesthetics prior to leaving Sapling's facility. With the Sapling TalkBack Wireless and IP System, clock diagnostics may be viewed remotely and email alerts can inform maintenance of various potential issues. By showing accurate time and automatically correcting for Daylight Saving Time, a Sapling Synchronized Clock System is a maintenance department's best friend.

The Sapling Solution

Hospitals around the world depend on Sapling Synchronized Clock Systems every day to ensure the accuracy of time records across a facility, and to provide critical time information in an emergency situation. Synchronized clocks improve organizational efficiency, help reduce liability issues caused by inaccurate time records, and greatly decrease maintenance costs associated with clocks. Sapling has been a worldwide leader in synchronized timekeeping systems since 1993 and continues to develop innovative technology. With wide-ranging lines of analog and digital clocks, Sapling has options to suit any healthcare facility, including round analog clocks with a pristine brushed aluminum case and square analog clocks with a clean white back case for more modern looks. A Sapling Synchronized Clock System provides more than stylish wall decorations, it helps healthcare organizations improve efficiency and safety.

[3] http://www.ncbi.nlm.nih.gov/pubmed/12196090