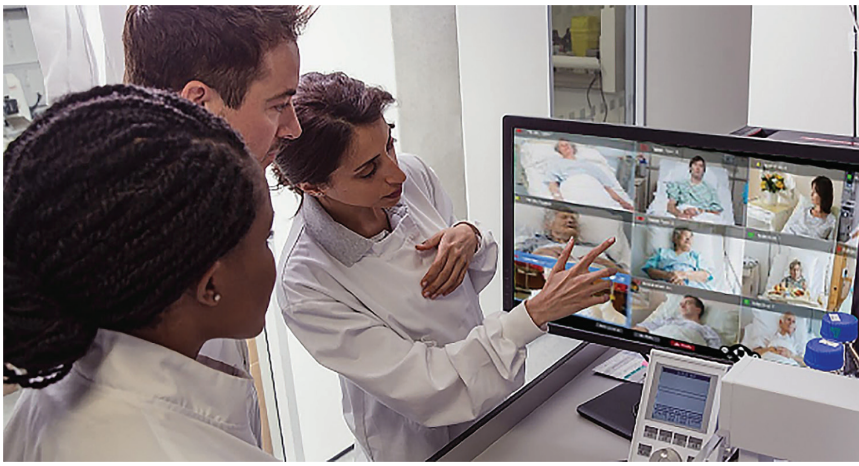
CONSIDERING VIRTUAL OBSERVATION FOR YOUR HEALTHCARE ORGANIZATION

Virtual observation systems often serve as a first line of defense for at risk-patients, alerting staff to quickly intervene when a patient is attempting to leave their bed, for example. It can be utilized in acute care hospital settings, behavioral health facilities and transfer centers, as well as in post-acute settings, such as skilled nursing facilities (SNF), long-term care facilities (LTCF), or long-term acute care hospitals (LTACH). The system is most often a portable wireless unit but can also be a wired or permanent unit installed in the wall or ceiling of the patient's room.

Fall prevention is just one of the uses for virtual observation technology, which provides significant benefits to patients and facilities alike. *American Nurse Today* estimates that more than 84 percent of adverse events in hospital patients are related to falls, which can prolong or complicate recovery[1]. And, one recent study by The Joint Commission estimates that a fall with injury can cost an average of $14,000. This means that by preventing just 20 falls with injury, a hospital could save nearly $25 million[2].



How Do Virtual Observation Systems Work?

If a patient is determined to be a fall risk, a virtual observation unit can be placed in their room. These units typically consist of a video camera and two-way audio that transmits to a central monitoring station. The camera can pan, tilt, and zoom to keep the best view of patients. Each monitoring station can be staffed by a trained observer who typically watches no more than 10-12 patients at a time.

Patients can be observed continuously, using night vision technology when lighting is dim. If a patient who is a fall risk attempts to leave their bed, the observer can address the patient over the speaker, advising them to stay in bed while the observer alerts hospital staff to assist the patient.

Virtual observation systems can benefit hospitals and other facilities by freeing up patient care technicians, certified nurse assistants, and medical assistants who might otherwise be assigned as a physical sitter in the patient's room. For example, assessing the 4Ps of Fall Prevention (Placement, Pain, Position, Potty) can be done remotely, increasing efficiency and freeing up bedside staff to perform other tasks.

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[1]*American Nurse Today*: https://www.nursingworld.org/membership/ana-periodicals/americannursetoday/

[2]The Joint Commission: https://www.jointcommission.org/-/media/deprecated-unorganized/imported-assets/tjc/system-folders/topics-library/sea_55pdf.pdf?db=web&hash=53EE3CDCBD00C29C89B781C4F4CFA1D7

Which Patients Are Candidates for Virtual Observation?

Typically, a patient's nurse and clinical staff will determine if a patient meets the criteria for virtual observation. When assessing a patient for virtual observation, you should consider the following questions:

- Is the patient redirectable?
- Does the patient have low impulsivity?
- Is the patient able to hear and comprehend verbal direction? (i.e., deafness, hearing impairment, language barriers)

If the answer to any of these questions is "no", the patient is probably not a good candidate for virtual observation and may benefit from having a physical sitter in the room.

Using Virtual Observation Technology for Behavior Management

When it comes to using continuous or virtual observation technology, patient selection is critical. In the case of behavior management, virtual observation can assist with fall prevention, agitation, confusion, or elopement prevention. The technology can also be helpful if a patient aligns under the following categories:

- **Risk *from* Others:** Virtual Observation can be used as a deterrent for bad behavior by those visiting the patient. For example, virtual observations can help deter visitors from bringing the patient anything that might put them at risk, such as outside medications or illegal substances.
- **Risk to Self:** If the patient poses a risk to themselves, virtual observation can be used as a second set of eyes to support a physical sitter in the room.
- **Risk to Others:** If a patient may potentially become aggressive or violent, virtual observation can be used as a second set of eyes to support a physical sitter or officer in the room. The system can quickly alert hospital staff in the event that additional assistance is needed.

Legal Considerations

If you plan to use continuous observation as a first-line sitter for patients at risk to or from self or others, you should first consult with your organization's behavioral health specialists, regulatory leadership, and legal departments.

Some states require that a sitter be within arm's reach of the patient. In that case, a virtual sitter could serve as a second set of eyes to support a physical sitter in the room.

There are also legal issues to consider when using video surveillance with minors. Therefore, if you plan to use continuous observation for patients under the age of 18, you should first consult with your organization's legal department.

Assessing Patient Risk

If you're considering using continual observation for your facility, you will need to adopt a strategy for patient assessment that works best for your organization. Some options to consider include:

- **Nurse-driven assessment:** This process begins when a bedside nurse submits a sitter request for a patient. That nurse, or a charge nurse, then conducts a subjective evaluation of the patient to determine their appropriateness for virtual observation.

- **Site-driven tools:** A facility can use or develop its own scoring tools to assess whether a patient is a good candidate virtual observation. The assessment could measure the number of times a patient has to be redirected during a set time period or be used to determine a patient's fall risk score.
- **Virtual-first:** You might set virtual observation as a first-line strategy before a patient can be moved to a physical sitter.

Physiological Observation

Virtual observation technology can also be used for physical observation of high-risk patients. This may include patients on telemetry, those who require frequent suctioning, or patients who frequently bounce back to the Intensive Care Unit (ICU). A facility may use a certain Modified Early Warning Score (MEWS), or other tools or parameters, to determine the need for physiological observation.

A cart system or wall unit equipped with virtual observation software can be used to provide continuous observation of high-risk patients. Virtual observation can be used to remotely read blood pressure and other equipment in the room without the need for device integration. Virtual observation technology can also be used in conjunction with a facility's remote telemetry hub, or other type of centralized monitoring unit.

Using virtual technology, a nurse tech can centrally monitor a group of patients, either within a single facility, or across multiple facilities, using escalation guidelines and decision support parameters to determine when to escalate concerns and alert staff to the patient's bedside.

Additional Applications for Virtual Observation

Virtual observation technology is extremely flexible and can be adapted to various physiological use cases, depending on an organization's needs. Some common applications include:

Rapid Response: A rapid response team with mobile carts can utilize camera capability for visual assessment if the provider is not physically available.

Overflow Monitoring: When patients are in the post-anesthesia care unit (PACU) or Emergency Department (ED) waiting for a critical care bed to become available, virtual observation technology can be used remotely by a clinician to support continuous monitoring of those patients until they can be transferred.

NICU Observation: Similarly, a remote clinician can provide continuous monitoring of newborns and infants in the NICU through one central location.

Telestroke Management: Centralized coordination can be provided using the virtual observation software. For example, a centralized stroke coordinator would be able to visually observe multiple patients in specific rooms, across one or more facilities.

Patient Transfers: If an organization has a transfer center, virtual observation technology can be used to conduct pre-transfer assessments before moving patients to a higher or lower level of care, or to an outside organization.

What to Look for in a Solution

If you're considering implementing virtual observation technology within your organization or facility, you'll want to make sure that the solutions you're considering have the capabilities you're looking for. Some features you may want to ask potential vendors about include:

1. **Does the system have one-way or two-way audio and/or video capability?** In some situations, you may want to talk to a patient without using two-way video. Or you may want only one-way video capability (if you want to observe the patient, but don't need them to be able to see the remote observer).
2. **Does the camera have pan, tilt, and zoom capability?**
3. **Is there an alerting/notification system to bring someone to the bedside quickly, if needed?**
4. **Does the camera have night vision capabilities so that you can clearly observe patients when the room is dark?**
5. **Does the system offer language translation? Which languages?** This doesn't work for two-way communication but can be helpful for simple instructions like telling the patient to stay in bed while a nurse is alerted.
6. **What types of reporting and analytics does it provide to help you demonstrate ROI back to your organization?**

7. **Can the software be delivered with a cart or a wall system?** Can the hardware be installed from the ceiling or the wall, or wherever you need it to be, based on your room configuration? If you already have certain technology, such as camera capability, in the room can the software integrate easily into your existing telehealth system? Or, will you need to use a different device for each application?
8. **Is the technology scalable?** What additional costs might there be if you want to scale the solution across multiple facilities? What are the applicable licensing fees?

Could My Organization or Facility Benefit from Virtual Observation?

Some questions to consider if you are considering a virtual observation solution for your organization or facility:

1. **What is our current daily/ monthly/ annual spend on physical sitters today?** Are there cases in which patients could be monitored by a virtual sitter instead? What would be the labor cost savings of monitoring 10-12 patients virtually, rather than one-to-one?
2. **What are our current fall rates per patient day?** How could you use virtual observation technology to help decrease those fall rates?
3. **Are there other use cases, such as telemedicine or telehealth, that we might be able to leverage with the technology?**

4. **Are there issues with inappropriate transfers from outside locations?**
5. **What is our ICU bounce-back rate?**
6. **What is our post-acute hospital readmission rate?**

Ultimately, the decision to use virtual observation technology must be made by carefully evaluating the needs of your patients, staff, and organization. How do you see the technology being implemented within your organization or facility? Do you have existing technology the software might integrate with? Are there other use cases for the software that you hadn't previously considered? Does the potential benefit of providing continuous observation for patients outweigh the costs?

About Caregility – Caregilityis a clinical collaboration and communications company moving the access point of care closer to the patient. Leveraging over eight years of experience in clinical environments, Caregility's core offering, the UHE Platform, is a purpose-built ecosystem for the entire healthcare continuum. The UHE Platform provides secure, reliable two-way audio and video communication designed for any device and clinical workflow, in both inpatient and outpatient settings. Today, Caregility supports over 6,500 access points of care systems across the U.S. From ambulatory/acute/ICU/post-acute care settings to virtual care operation centers to patients in the home, Caregility is helping transform patient care delivery. Follow Caregility on Twitter @caregility.

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