Best Practices for Tele-Sitting and Virtual Patient Observation

Hybrid Care Planning,
Implementation and Staff Engagement
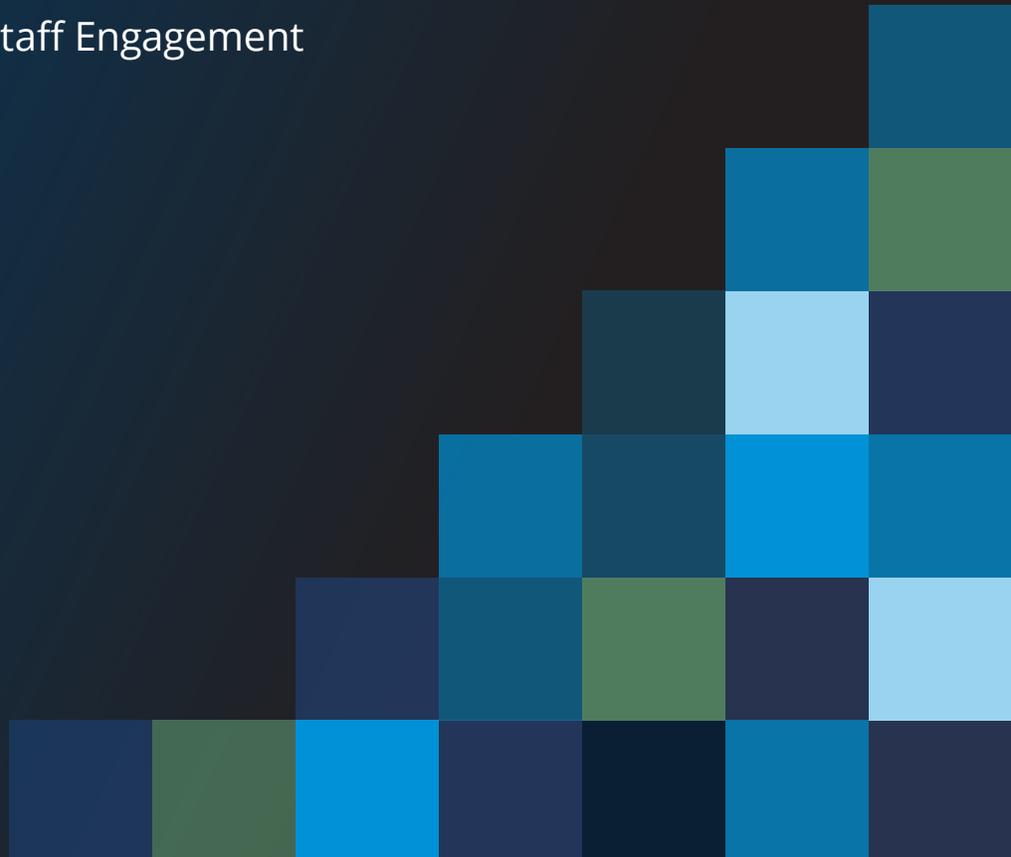
As the pandemic, staffing shortfalls, and narrow margins affect healthcare facilities across the U.S., virtual patient observation programs, also known as tele-sitting, are gaining prominence. Reflective of the emerging growth of hybrid care models, these programs combine remote and in-person resources to reduce blind spots for care teams and improve the timeliness of clinical intervention.

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Thoughtful planning underpins the success of tele-sitting programs. Key factors include:

+ Selecting devices and a service model that serve current and future patient needs and enable the institution to provide hub-and-spoke services across the enterprise

+ Strategic consideration of all applicable patient groups, even if scale-up is gradual

+ Up-front and ongoing staff education with a phased rollout to avoid missteps

+ Futureproofing to ensure long-term return on investment

This white paper discusses each of the above issues, with additional best practices for a durable, impactful program. These include recommendations related to audio and video fidelity, EHR and medical device interoperability, workflow integrations with platforms such as eCareManager, and "self-healing" wall units and mobile carts to minimize staff burden.

Feasibility & Scalability: Assessing Inpatient Risk

As managers plan virtual sitter implementations, considering the current use of in-person bedside sitters and the long-term goals of telehealth across a facility or system are both important. As a rule of thumb, tele-sitting is unlikely to make an impact in an organization requiring only one bedside sitter daily. However, in instances where multiple patients need to be observed, establishing a tele-sitter program can be very cost-effective.

The first step in scoping a program is to quantify eligible patients. Candidates typically include unstable tele-ICU, tele-stroke, NICU, and ED patients. Additional groups may include at-risk patients in recovery, transitions of care, SNFs, and any contracts where monitoring services are extended to partner facilities.

Common inpatient use cases include virtual monitoring of:

+ Patients at risk of falls or other accidents. Studies have found significant and consistent reductions in falls and fall-related injuries as well as financial savings due to reduced labor costs through continuous video-based observation[1,2]

+ Patient deterioration in pre-sepsis or septic conditions, when cognitive status, pallor, sleep patterns, and vitals can be critical indicators

+ Isolated patients in rooms where doors are kept closed, as with infectious diseases such as COVID

+ Patients with cognitive impairment, dementia, or sleep disorders who might pull out tubes, remove respiratory support device masks, or try to leave their bed or room

+ Suicide risk patients or those experiencing emotional and psychosocial issues who may be prone to elopement, self-harm, harm to others, dumping food, or ingesting unapproved substances

+ Patients at potential risk of harm from visitors, such as possible victims or perpetrators of abuse

+ Patients in transition who can be monitored closely until their condition stabilizes, or an ICU bed becomes available and the patient can seamlessly be passed on to an ICU observer

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Case in Point: Centralized Tele-Stroke Coordination

Tele-sitters can observe stroke patients across their health system remotely for bundle compliance – including stroke unit admission, imaging on day one, and swallow screen and aspirin regimens – which are all correlated with more favorable prognoses.[3]

Patient evaluation for surgery, discharge, transfer, palliative care, and hospice are also increasingly common inpatient use cases for tele-sitters. ED patients can be observed with fewer room or curtain visits, which is especially critical if staffing is tight or an infectious disease requiring PPE is suspected. NICU infant feedings and other key events can also be monitored and documented.[4]

It is worth noting that tele-sitting is not appropriate for every patient that falls into these categories. As Tracey Kopenhaver, Operations Manager of Geisinger's CICU and eICU program, explained, "If we have to use the panic alarm more than three times in 30 minutes, or if we're trying to redirect the patient and they consistently are not redirectable, then that's a conversation with the bedside staff and they typically will get an in-person staff member for that patient."

Connecting Points of Care Across the Continuum

As hybrid care models continue to take root, virtually enhanced workflows that move beyond bedside care are emerging. Examples of these innovative new use cases include:

+ **Long-term care patients discharged from acute care settings.** Discharge is often delayed because the SNF or transitional care facility is unable to provide the virtual monitoring that the patient received in acute care. Extending that modality to the patient's long-term setting can expedite discharge when medically appropriate, which is especially important for integrated systems and facilities at full risk.

+ **Ad hoc points of care.** In transport, curbside, and drive-through care scenarios, or wherever a rural patient might present, Caregility's iObserver virtual observation application can be installed on a laptop, tablet, or phone to connect a patient in need with expert assessment and monitoring. The advanced video resolution even enables a patient's pupils to be accurately assessed to help confirm or rule out stroke.

Navigation Menu
This expandable menu gives access to settings such as - add rooms, edit patient info, adjust room notifications, change the layout, end/transfer or import sessions, launch reports dashboard and adjust device/media

Priority Indicator
Small colored icons indicate the priority level of the patient.
Green Square – Normal
Yellow Triangle – Medium
Red Circle - High

Patient Info
Lists the Room, Name and Risk Type for each patient for quick reference

Night Mode
Toggle the low light camera mode on/off to increase visibility in dark rooms

Home
This button returns the active feed's camera to the default or pinned "home" position

Pin
Allows for the saving of a camera location in the active feed

Camera Controls
Use the arrows to control the active feed's camera. Use the +/- to zoom in and out

Listen
Click to listen to the active feed

Talk
Click to talk to the patient in the active feed

Active Feed
Clicking on a window highlights it, making it the active feed and presents you with additional controls for that room

Active Feed Controls
These icons let you refresh the feed's camera, view notes for a patient, or escalate to a live two-way call

Notify
Alert staff to the patient's bedside when conditions escalate by activating an audible alarm and sending a call or text to the care team

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Selecting Models & Programs: Key Considerations

In planning a virtual observation program, certain criteria are intuitively important, such as ISO certification, certified HIPAA compliance, and a program's ability to support any point of care, even if it is initially used in conjunction with legacy systems. Some platforms lack the federal-grade security required to ensure regulatory compliance and protect data and networks.

Moreover, health systems that want to reserve the option to operate as a virtual monitoring hub for noncompetitive facilities will need a fully compliant cloud-based platform. Cloud architecture is also more easily scaled, integrated, and extended.

Other key considerations include assessment of the extent to which assigning, monitoring, and transferring patients among tele-sitters, either at shift changes or to balance workloads as patient status evolves, can be automated.

For example:

+ It should be simple to append patient data and notes to each patient's video image, switch to privacy mode when desired, and automatically delete data post-session to comply with HIPAA.

+ The reporting process for alarms, incidents, and initiation and termination of video observation should be automated as well. This allows account managers to run reports on patients, users, and access points automatically, without expending design time.

+ Consider the extent to which the tele-sitting solution can integrate with the facility's EHR, even if integration is not initially feasible or desired.

+ If siloed from the EHR or other hospital systems, some platforms may entail whiteboards for patient assignments, handwritten flow sheets entered into the EHR, clipboard audits of patient eligibility, and manual reports on events observed while monitoring. Each of these adds to the administrative burden and makes data needed in emergent situations more difficult to access.

As part of a complete telehealth solution, Caregility's bedside devices and software can be leveraged with tele-ICU platforms and other EHR add-ons, even in advance of a formal virtual sitting program.

Painting the Big Picture: Operational Flexibility & IT Buy-In

In these resource-challenged times, it is especially important that technologies support care, rather than interrupt it. Customers increasingly require a reputable vendor with a stable platform that can integrate into existing systems or stand alone, but still meet IT group requirements. COVID and other unpredictable phenomena may require repurposing facility square footage temporarily or permanently.

Kopenhaver reported that since Caregility's cameras and cart systems support both the eICU and patients in other settings, this dual functionality was leveraged "to help support patients outside of the ICUs who were sicker than they had ever been during our initial COVID surge."

Brad Cicolani, Clinical Informatics Architect at OhioHealth, noted that garnering strong IT support for the new service line requires advance consensus-building on what the expectations are, both from a specification standpoint and in terms of implementation and go-live processes. In addition, it is important to allocate an appropriate budget for operational support and training.

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Reclaiming Tech Support Staff Time

Tele-sitting advantages depend on technology that "just works." If devices require a manual reboot, software updates and patches must be installed often, or audio and video support are sporadic or of poor quality, staff will spend their time on tech support rather than patient care.

Another key criterion is the ease of use for clinicians, virtual observers, and patients alike. As with any software and device platform, ease of use can be determined by evaluating the time it takes to complete unfamiliar tasks, the time needed to become proficient, and the sequence of events when unforeseen glitches occur.

Facilities should expect their vendor's audio and video technology to be regularly maintained and updated without the need for a new contract. Decision-makers should also see evidence of a commitment to increased functionality over time, and a roadmap in sync with broader access to gigabit fiber, Bluetooth-aware devices, advanced EHR add-ons, and AI-enabled camera software.

In years past, tech support for bedside devices was a limiting factor in tele-sitting. Wall-mounted and mobile cart devices often required frequent reboots, manual updates, and staff time for repairs. Today, if a Caregility mobile cart or wall unit component requires replacement, that can be done in 10 minutes or less. Each uses hot-swappable modular components stored on site. In addition, Caregility monitors all devices remotely 24/7/365, with reboots automated when a problem is detected so that the unit is ready when needed.

In determining the number and type of devices to purchase, real-time flexibility is key. Thus, many institutions stock 60-80% of their devices as mobile carts. The option to install applications on a tablet or phone in certain situations, while remaining fully HIPAA and ISO 27001-compliant, is also important.

By contrast, wall units help keep the floor clear for other equipment and support a designated area and nurse pod(s) for patients at risk.

Policy & Regulatory Implications

Some organizations allow physicians to write video monitoring orders, whereas in other facilities, those orders are nursing-driven. There may also be policies at the program, floor, or unit level that specify criteria for monitoring.

Tele-sitting order sets or policies can be informed by consulting JCAHO, CMS, and the applicable State Department of Health. These authorities can speak to required telehealth documentation and any limits on usage. For example, in some states, facilities cannot legally use virtual sitters for patients considered to be a suicide risk. However, as risk stratification becomes more commonly used, including differentiation of low versus high risk, as is common in behavioral health facilities and floors, in-person sitters may be reserved for high-risk patients.

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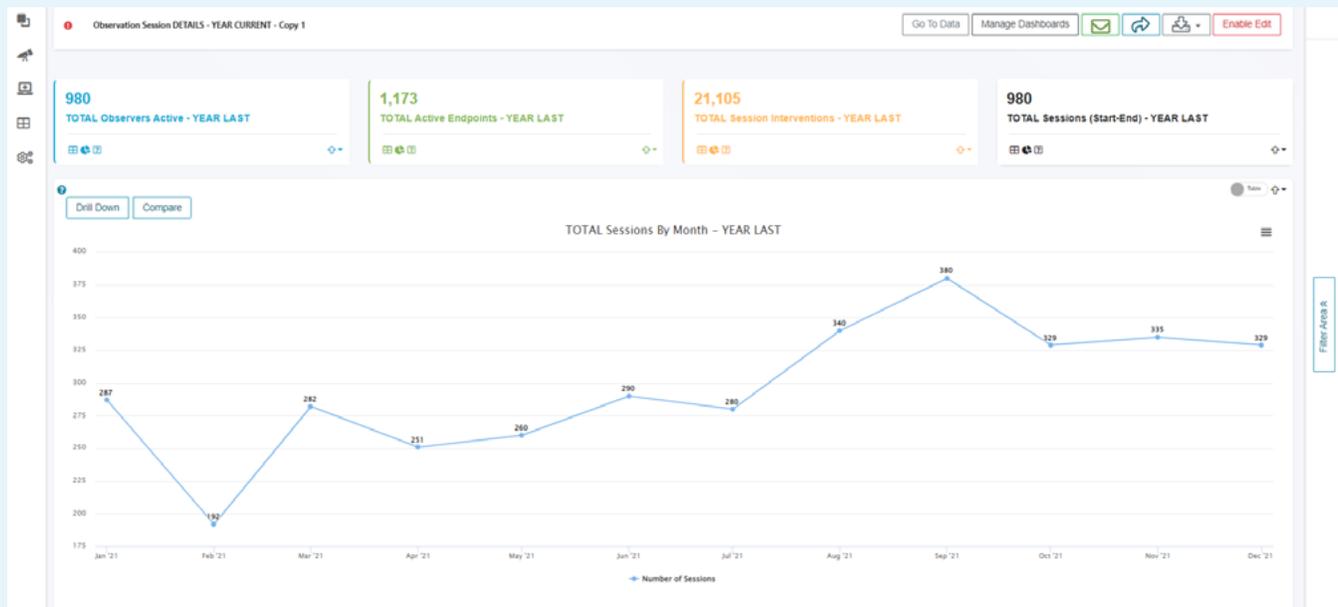
Performance & Utilization Metrics

Key success metrics include abatement of behavioral health and suicide risk, as well as fall or other accident rates. From an operational perspective, labor costs, opportunity costs (e.g., helping to stabilize a patient versus moving between avoidable room visits), staffing needs, and staff satisfaction and retention are important metrics to monitor. Caregility's Administrative Portal also facilitates monitoring the usage of mobile carts and wall units (so that carts can be relocated when needed), user activity at the individual level, the quality of audio and video components, and of course overall utilization.

Staffing Impact

If several patients are being virtually observed, and an additional admit comes in, there is no staff shortfall as there would be otherwise.

Beyond more flexible staffing ratios, tele-sitting should also improve employee engagement and satisfaction in several respects:

+ Nursing assistants and patient care technicians can be out on the floor helping nurses and patients, rather than tied to one room. Staff who chose acute care facility settings (or long-term care over home health) typically appreciate more variety, cross-training, and potential career growth. Thus, virtual observation can improve retention at all staff levels, potentially including physicians who are better informed of patients' status.

+ Nurses who are no longer physically or emotionally comfortable in bedside roles can supervise virtual sitters, or work in telenursing in conjunction with virtual observers and bedside staff. They may be used for training, mentoring, signing off on meds and other documentation, redirecting patients, helping bedside nurses prioritize activities, and more.

Efficient Intervention at the Speed of Sound

Care efficiency directly impacts patient outcomes and opportunity savings. With a tele-sitting program, staff should make fewer yet more productive visits to patient rooms. Not only can staff better differentiate true from false alarms (such as when a patient is simply shifting weight in bed), but they can also more efficiently address the need that the virtual patient observer has reported. This in turn preserves staff time for patients truly in need. In addition, patients who can see and be seen by a human being with the press of a button may be reassured that they are not alone and rest more easily.

Instead of one visit to respond to a call button and another after materials are gathered, room visits can more often be "one and done." For example, a patient can tell the monitor that her water pitcher fell, and the nurse or an aide can enter the room prepared to clean up and replace it. Or, if a trip to the bathroom or emesis basin is needed urgently, the monitor can alert on-site staff accordingly, while assuring the patient who may be trying to get out of bed that help is on the way.

Particularly relevant in a pandemic, having a video monitor to alert staff of the patients' needs and status can reduce the occasions on which a nurse enters a patient room in PPE, then realizes a trip to a supply closet is needed, requiring extra time to re-don PPE.

Audio quality and reliable connections are critical to care team efficiency. Patients who may be sedated, disoriented, or in pain may find it difficult to verbalize accurately. For the tech to pass on accurate information to the bedside nurse or assistant, staff need access to audio that is as clear as possible. Likewise, if a patient observer tries to zoom in on an IV or to report on vent data, being unable to see numbers clearly could mean both avoidable room visits and suboptimal outcomes for patients.

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Rollout: Slow & Steady Sets the Pace

Bedside nurses, assistants, and technicians should be involved in planning a program. "Get their ideas on what would work and what won't work," notes Kopenhaver. "And then really spend a lot of time on education. If I had it to do over again, I would've probably slowed down our initial implementation a little bit and really spent a lot of time with education process review with the bedside folks."

Typical staff education regimens include a few days of classroom training followed by onsite support during go-live week. Bedside nurses should be apprised of protocol when alarms sound and are typically also provided tip sheets.

A soft go-live is another option to ensure the care team is aligned. This could include a bedside sitter in conjunction with the tele-sitter so that everyone feels comfortable and can ease into new workflows.
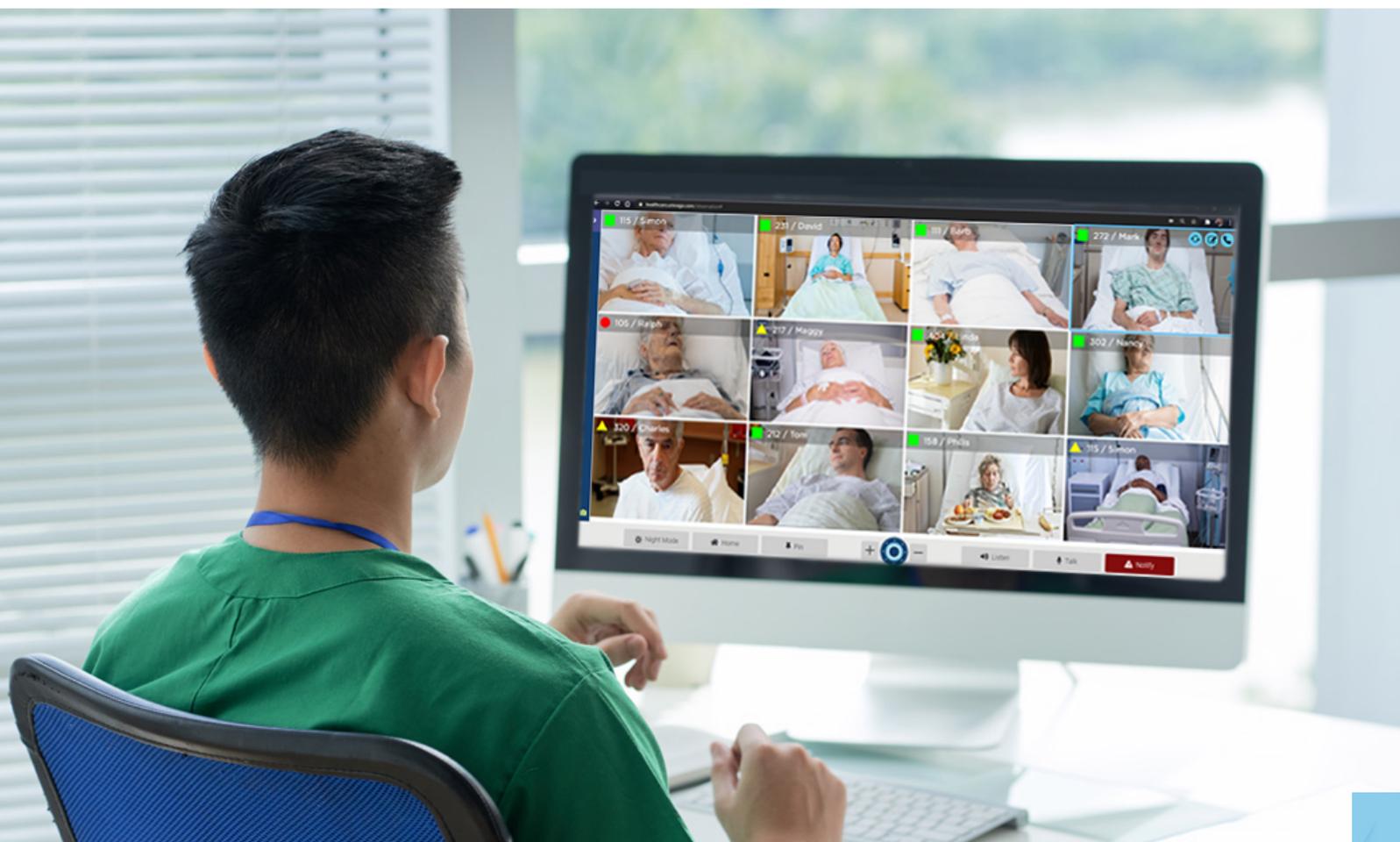
The Future: Enriched Virtual Engagement

In addition to basic considerations such as compliance, functionality, integration, and value determination, the decision to adopt a virtual patient observation platform should be mindful of future strategic initiatives. This includes "the hospital room of the future" as well as "hospital at home" settings where future patient populations may reside. Selecting a tele-sitting platform should entail identifying telehealth infrastructure and architecture that is open enough for that platform to be leveraged in any inpatient virtual engagement scenario down the road. Though many organizations are entering the virtual care paradigm through more established use cases such as tele-sitting, tele-ICU, and tele-stroke, providers' future needs mandate a centralized approach that can extend hybrid care enablement across the health system enterprise, regardless of patient acuity level, for optimal cost and outcome benefits in not only year one, but all the years to come.

> To gain the most value from tele-sitting, select a platform that will increase staff productivity by minimizing administrative workload, no matter what direction your telehealth program and other enterprise systems take.

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ABOUT CAREGILITY

Caregility is dedicated to connecting patients and clinicians everywhere with its Caregility Cloud™ virtual care platform. Designated as the Best in KLAS Virtual Care Platform (non-EMR) in 2021 and 2022, Caregility Cloud™ powers a purpose-built ecosystem of enterprise telehealth solutions across the care continuum. Caregility provides secure, reliable, and HIPAA compliant audio and video communication designed for any device and clinical workflow, in both acute and ambulatory settings. Caregility supports more than 1,300 hospitals across dozens of health systems with millions of virtual care sessions hosted annually. From critical and acute, to urgent and emergent, to post-acute and ambulatory, as well as hospital-to-home, Caregility is connecting care everywhere.

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