

Rapid Cycle Quality Improvement of Telemedicine Protocols in a Skilled Nursing Facility During the COVID-19 Pandemic

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Abstract

Prior to the COVID-19 pandemic, telemedicine was not well adopted in US nursing facilities. Many nursing facilities have since acknowledged its value due to the need for stricter infection control and reduction of exposure risk from face-to-face visits. A quality improvement project was conducted to improve telemedicine protocols in a high-volume post-acute care nursing facility, enhance provider and facility capability for visits, improve attitudes and skills toward telemedicine, and expand patient access to medical care during the pandemic. Process improvement was facilitated through identifying core areas of need and implementing interventions to address them. Project impact was measured by a retrospective pre-post survey of 7 questions to evaluate process improvement, attitudes, skills, and perceptions using a 5-point Likert scale (5=strongly agree, 1=strongly disagree) completed by 22 respondents (8 medical providers and 14 staff). Scores from before and after implementation were compared using paired t-tests. Respondents expressed improvement in perceived value (3.2 vs 4.8), personal skill/efficiency (2.3 vs 4.2), comfort level (2.3 vs 4.5), and scheduling process (2.3 vs 3.9) for telemedicine visits (all $P \leq .001$). Respondents expressed increased awareness of barriers/benefits of telemedicine (2.8 vs 4.7, $P < .001$) and improved leadership commitment (2.6 vs 4.4, $P < .001$). The weekly average number of telemedicine visits per respondent increased significantly after protocol implementation (6.5 vs 25.6, $P = .002$). With support of facility leadership, interdisciplinary team members and engagement of key stakeholders, a telemedicine protocol was implemented in a single, high-volume, post-acute care skilled nursing facility during the COVID-19 pandemic, allowing patients to receive needed care.

Keywords

Telemedicine, Innovation, Nursing Home, COVID-19 Pandemic

Abbreviations

AMDA = American Medical Directors Association
APRN = advanced practice registered nurse
CMS = Centers for Medicare and Medicaid Services
COVID-19 = novel CORonaVirus Disease-2019, caused by the SARS-CoV-2 virus
IHI = Institute for Healthcare Improvement
PDSA = Plan-Do-Study-Act
RN = registered nurse
SARS = severe acute respiratory syndrome
SQUIRE = Standards for Quality Improvement Reporting Excellence

Introduction

Problem

Nursing homes generally house frail, multi-morbid older adults in a congregate living setting, placing them at risk for

novel CORonaVirus Disease-2019 outbreaks, caused by the SARS-CoV-2 virus (COVID-19). In Hawai'i and across the US, nursing homes have experienced repeated outbreaks with a disproportionate number of COVID-19 related deaths. One study reported that 30-day all-cause mortality of symptomatic COVID-19 nursing home residents was 21%.¹ As the need for tight infection control heightened, the Centers for Medicare & Medicaid Services (CMS) released measures in March 2020 restricting routine visitation and communal activities/dining, and requiring implementation of entry screening procedures.² Nursing homes in the US were tasked with the challenging responsibility of instituting complex infection control measures in a very short time period to protect residents from surging community levels of COVID-19. The US Department of Health and Human Services also universally approved the use of telehealth services as part of the Coronavirus Preparedness and Response Supplemental Appropriations act, opening the door for telehealth to be used freely in health care facilities including nursing homes.³

As a result, health care facilities started implementing telehealth visits as an alternative for physician face-to-face visits to decrease risk of viral exposure and cross-facility contamination.⁴ They began to view telemedicine as a means to address workforce sustainability, reduction of provider burnout, infection control, and personal protective equipment conservation due to shortages ongoing at that time.⁵

Available Knowledge

Prior to the pandemic, telemedicine was not well adopted in US nursing facilities. Only 13% of survey respondents at the 2016 annual American Medical Directors Association (AMDA) conference reported that telemedicine was available for use at their facilities.⁶ The Society for Post-Acute and Long-Term Care Medicine/AMDA is dedicated to the advancement of nursing home care and research. Before emergency waivers for telemedicine were instituted by CMS, Medicare restricted telemedicine reimbursement to previously established patients⁷ in rural areas⁸ and limited the frequency of these encounters to once every 30 days; of note, Medicare would not reimburse for new admissions or discharges.⁷

Rationale and Specific Aims

Although such restrictions were lifted on March 30, 2020, nursing homes without pre-existing telemedicine protocols were left to create their own protocols in a hurry. A COVID-19 outbreak, surging community transmission, and provider and staff frustrations with the lack of an efficient protocol highlighted the need for urgent development and implementation of a quality improvement telemedicine project. This project aimed at improving telemedicine protocols in a high-volume post-acute care nursing facility with 288 beds and approximately 100 admissions/discharges monthly, located in Honolulu, Hawai'i. The project goal was to enhance provider and facility capability of executing high volume telemedicine visits, improve provider and facility staff attitudes and skills toward telemedicine, and expand patient access to medical care during outbreaks and quarantines. This rapid cycle, quality improvement project was conducted using Standards for Quality Improvement Reporting Excellence (SQUIRE 2.0) guidelines.⁹ This project was necessary to ensure that telemedicine was successfully implemented during the COVID-19 pandemic.

Methods

Context

At the start of the COVID-19 Pandemic in March 2020, medical providers (external physicians and nurse practitioners not employed by the nursing home) began utilizing telemedicine for the first time to complete medical visits. From March 2020 to June 2020, telemedicine occurred in a sporadic, as-needed fashion. On June 10, 2020, the nursing facility experienced its first COVID-19 outbreak and was placed on strict quarantine. As a result, providers were asked to limit in-person visits for fear of spreading the virus within the nursing home as well as to other community facilities. Consequently, seemingly overnight, telemedicine demand increased drastically.

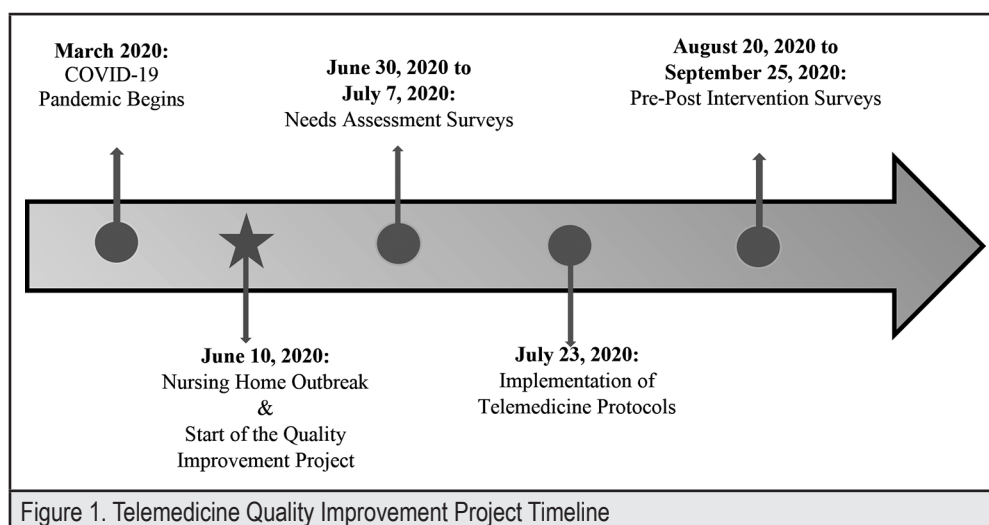
Within little over a week, providers along with facility staff and leadership began contacting the medical directors to express frustration with telemedicine operations, citing numerous barriers to successful completion of telemedicine visits. They requested rapid improvement of the facility's telemedicine protocols. As a result, a telemedicine quality improvement project was started. The ongoing outbreak and facility quarantine rules called for immediate improvement to provide patients with much needed care.

Interventions

Needs Assessment

From June 25, 2020 to June 30, 2020, preliminary data gathering included a provider telemedicine needs assessment survey, which was emailed to external medical providers from 5 major health care organizations who regularly rounded in the facility. The survey asked 5 questions: (1) How telemedicine visits were currently being scheduled; (2) Who was called or emailed for appointments; (3) Which technology platforms were being used (eg, Zoom, Skype, FaceTime, etc.); (4) Barriers/challenges experienced (eg, staff availability, internet problems, technology skills/equipment, nursing physical exam skills, etc.); and (5) Number of telemedicine visits occurring per week. Concurrently a series of interprofessional focus groups were held with facility leaders from the departments of nursing, medical records, information technology, and administration to identify specific facility needs and challenges.

From June 30, 2020 to July 7, 2020, needs assessment survey results from external medical providers and facility staff focus group results were collected, reviewed, and used to identify core areas that needed improvement. **Figure 1** provides a detailed timeline of this project.



Shortly thereafter, a telemedicine quality improvement committee was created with leaders from nursing, administration, medicine, corporate leadership, and medical records. Weekly meetings were held for the next 3 weeks to draft telemedicine protocols. Task specific protocols for medical providers, unit managers, and medical records staff were developed to guide telemedicine scheduling and completion (**Appendices A, B, and C**). The providers' guide detailed instructions on timeframes required for scheduling, methods for requesting appointments, hours of operation, platforms allowed, among other tasks, while the unit managers' guide detailed protocols for communication with medical records and front-line staff conducting visits. The medical records guide detailed the protocol for scheduling and communicating with outside providers requesting appointments, use of a scheduling calendar, and use of email distribution lists.

Protocol Implementation & Quality Improvement

On July 22, 2020, telemedicine protocols were disseminated to providers, facility unit managers, and medical records staff via email. Forty-eight hours after implementation, real-time feedback was gathered via telephone and email from providers and facility staff conducting telemedicine using the new protocols, and several improvements were quickly instituted based on this feedback. A direct phone line was dedicated for providers to request stat/urgent telemedicine visits, and minimum appointment request lead time was decreased from 48 hours to 24 hours of advanced notice. Another technology platform was also added.

From August 24, 2020 to September 4, 2020, meetings were held with external providers to obtain further real-time feedback. Additional problems were identified including appointments being double-booked and going over time. Some providers were not following the protocols and requesting add-on appointments. Medical directors contacted specific providers to re-educate them on the protocols, and facility staff were instructed to reinforce provider adherence to protocols. Feedback from nursing staff and providers identified a need for a nursing preparation sheet to streamline nursing workload, increase ease of nursing documentation, prepare nurses running telemedicine, and facilitate nursing shift hand-offs.

A nursing preparation sheet was created with input from direct staff and nursing leadership and disseminated on September 18, 2020 (**Appendix D**). The preparation sheet assisted nurses in gathering important information to convey to providers, such as vital signs, changes in condition, and physical exam findings. Nurses utilized the information from the preparation sheet to write required shift documentation.

Study of the Interventions

Continuous process improvements were made using the Institute for Healthcare Improvement (IHI) Plan-Do-Study-Act (PDSA) model over the course of the project.¹⁰ The IHI PDSA cycle has become a scientific standard for quality improvement projects to test changes, by planning it, trying it, observing results, and acting on what is learned.

In the first phase, needs assessment survey results and facility focus group results identified core areas needing improvement, and informed development of the telemedicine protocol.

About 1 month after telemedicine protocols were implemented, a pre-post provider attitudes/skills survey was conducted to evaluate the impact of the project. Telephone interviews with providers who had been working in the facility prior to the start of the project (June 2020) were completed from August 20, 2020 to September 25, 2020.

Measures and Analysis

Qualitative analyses to identify core areas needing improvement were performed using the needs assessment surveys and facility focus groups at the start of this project. Answers were categorized into 5 different themes.

Quantitative analyses were also performed. In August and September 2020, telephone interviews were conducted with facility staff and external medical providers using a retrospective pre-post format comparing attitudes and skills before (June 2020, start of the project) and approximately 1 month after implementation of telemedicine protocols (August-September 2020) (**Figure 1**). Questions were scored using a 1-5 Likert scale (1=Strongly Disagree; 2=Disagree; 3=Neutral; 4=Agree; 5=Strongly Agree). Staff and providers were also asked about the average number of telemedicine visits done in nursing home per week before and after the intervention. Paired t-tests were used to compare pre and post answers.

Telephone interviews were chosen to limit face-to-face interactions and improve the likelihood that providers would reply while working remotely under time constraints. Three additional qualitative questions assessed respondents' views on post-pandemic sustainability of telemedicine: (1) Would you like telemedicine to continue to be an option after the COVID-19 pandemic is over? (2) What factors would support this? (3) What factors would discourage this? All analyses were performed using SAS, version 9.4 (SAS Institute, Inc., Cary, NC).

Ethical Considerations

This study was reviewed by the Institutional Review Board of the University of Hawai'i. It was categorized as a quality improvement project and a waiver of consent was issued.

Results

Qualitative Analysis Results

The needs assessment survey revealed 5 core areas for potential improvement: (1) scheduling; (2) efficiency and timing of visits; (3) staffing and workload challenges; (4) wireless connectivity issues; and (5) need for technology education. A total of 8 providers were surveyed, and the number of providers reporting problems in each core area are shown in **Figure 2**.

Scheduling

Both medical providers and nursing home staff reported no consistent method for scheduling telemedicine visits, leading to chaos and frustration. Appointments were being double-booked, missed, and were often late, highlighting a need for a facility-wide method of communication for dissemination of appointment dates/times to managers and floor nurses. Medical providers requested return confirmation of appointment requests.

Efficiency

Providers wanted increased telemedicine volume, appointment availability, and on-demand visits. The facility saw increased utilization of telemedicine from primary providers and outside specialists such as infectious disease, surgery, and psychiatry, and staff expressed challenges with accommodating the volume. Providers desired complete reports on vital signs, medication lists, bowel movements, oral intakes, and therapy updates

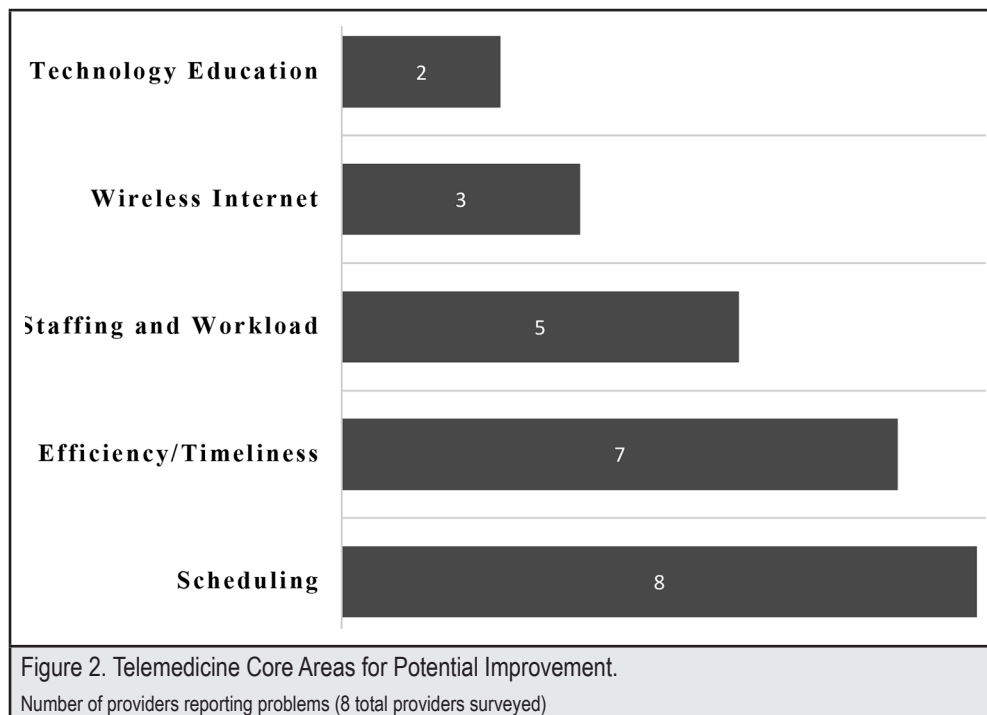
during visits. However, facility leadership and staff reported extreme challenges for staff in meeting the providers' needs and balancing direct patient care workloads. Improvements were needed in time utilization, and time limits on telemedicine visits were implemented. The need for a nurse preparation sheet was identified in order to streamline shift documentation requirements (**Appendix D**).

Staffing and Workload

Responses to qualitative questions found that increased workload and time constraints were clear barriers to continuing telemedicine for nursing facility staff. Although staff indicated that hiring dedicated telemedicine staff would likely increase desire to continue the program post-pandemic, facility administration conveyed that this would not be feasible due to ongoing staffing limitations and that telemedicine would need to be added to existing staff job responsibilities.

Wireless Internet

Respondents indicated that technology infrastructure needed to improve. Telemedicine encounters frequently stalled or dropped off in certain areas of the facility, and improvement was needed in Wi-Fi strength and range.



Education

The need for staff training was identified, as there were steep learning curves for new tasks including using Wi-Fi tablets and different technology platforms. The need for a nurse telemedicine preparation sheet was identified to standardize data gathering expectations. A dedicated in-house telemedicine staff member to oversee appointment scheduling, communication, and provide on-demand troubleshooting was requested by both providers and staff.

Quantitative Analysis Results

Retrospective pre-post attitudes and skills surveys were analyzed quantitatively. A total of 22 surveys were completed, including responses from 8 providers (6 physicians and 2 advance practice registered nurses [APRNs]) and 14 nursing home staff (8 RNs, 1 director/associate director of nursing, 1 administrator/associate administrator, and 2 health information managers).

Table 1 shows scores from before and after implementation of the telemedicine protocol, which were compared using paired t-tests. Respondents expressed improvement in the perceived value of telemedicine (3.2 vs 4.8, $P < .001$); personal skill/efficiency with telemedicine visits (2.3 vs 4.2, $P < .001$); comfort level with telemedicine (2.3 vs 4.5, $P < .001$); and scheduling process for telemedicine visits (2.3 vs 3.9, $P = .001$). They expressed increased awareness of barriers and benefits of telemedicine (2.8 vs 4.7, $P < .001$) and improved leadership commitment (2.6 vs 4.4, $P < .001$).

Telemedicine volume increased significantly after the protocol was implemented, with weekly average number of visits per respondent increasing from 6.5 to 25.6, $P = .002$ (data not shown). The range of weekly telemedicine visits per respondent was 0-50 before protocol implementation, and 0-100 after.

Respondents had mixed opinions about the desire to continue telemedicine after the pandemic. Overall, 75% of external medical providers and 43% of facility staff wanted to continue telemedicine; however, this difference was not statistically significant ($P = .204$) (data not shown). External providers reported the need for continued efficiency and visit reimbursement to be factors that would support the continuation of a telemedicine program post-pandemic.

Discussion

Summary

Prior to the pandemic, telemedicine in nursing homes had not been adopted due to barriers with reimbursement and a lack of protocols, equipment, and dedicated workforce.¹¹ Even with passage of the Coronavirus Preparedness and Response Supplemental Appropriations Act of 2020, waiving geographic and site restrictions for Medicare reimbursement for telehealth services, and the Office of Civil Rights and Department of Health and Human Services approval to relax privacy requirements of videochat platforms such as Apple FaceTime, Facebook Messenger, and Skype, there was a slow embrace of telemedicine in Hawai'i and the greater US.^{3,12} Only after project implementation was there an increase in telemedicine visits in this facility.

Interpretation

Telemedicine should continue to be a resource for nursing facilities post-pandemic. Many long-term care facilities face challenges with routine access to providers, particularly specialty consultants. Patients often have limited mobility, and transportation to private office consultations remains challenging. There was improved access to specialty care in the facility with availability of consultants in infectious disease, behavioral health, nephrology, neurology, and cardiology. These consultations were not previously available to nursing home patients via telehealth platforms. Telehealth can improve access to specialists who

Table 1. Retrospective Pre-Post Survey of Telemedicine Attitudes and Skills			
Questions - Please rate your agreement with each of the following statements BEFORE JUNE 2020 & CURRENTLY (AUGUST-SEPTEMBER 2020): [Likert Scale: 1=Strongly Disagree; 2=Disagree; 3=Neutral; 4=Agree; 5=Strongly Agree]	Pre Mean + SD	Post Mean + SD	P-value ^a
1. Telemedicine in the post-acute setting is a valuable resource for providers, nursing home residents and staff.	3.2 + 1.3	4.8 + 0.4	<.001
2. I have skill and efficiency completing or assisting with telemedicine visits.	2.3 + 0.9	4.2 + 0.6	<.001
3. There is a streamlined process to requesting and scheduling telemedicine visits.	2.3 + 1.1	3.9 + 1.0	.001
4. I am comfortable utilizing telemedicine.	2.3 + 0.9	4.5 + 0.6	<.001
5. I am aware of the barriers and benefits of telemedicine in the post-acute/nursing home setting.	2.8 + 1.3	4.7 + 0.5	<.001
6. I feel that the nursing home leadership (including medical directors) have acknowledged the value of telemedicine and demonstrated a commitment to improving the delivery of telemedicine.	2.6 + 1.0	4.4 + 0.7	<.001

^a Comparisons made using paired t-tests. June 2020 reflected time before implementation of telemedicine protocol, compared with August-September 2020 (N=22).

are unable to visit nursing homes face-to-face and for patients who are bedbound and unable to be transported to outpatient appointments. It is suggested that regular access to telehealth services can reduce recurrent trips to emergency departments and readmissions.¹³

CMS has continued to reimburse certain nursing home telehealth services, and providers continue to use telemedicine nearly 3 years after the first telehealth waivers were approved. Patients continue to benefit from telemedicine primary care visits during outbreaks, and telemedicine specialty consultations have become part of the normal operations at the facility. Although staff were initially less enthusiastic about continuing telemedicine due to its initial perception as challenging and time-consuming, it is possible that they realized the value telemedicine brings regarding patients' access to care and saving time and energy from arranging patient transportation, accompanying patients to in-person office visits, and re-evaluating patients upon return to the facility.

Limitations and Strengths

One limitation is that this project reflects a small number of providers and facility staff. Despite this, attitudes and satisfaction scores improved significantly after the intervention. Another possible limitation is the retrospective pre-post survey design, which may lead to recall bias. This design was selected to provide participants with the opportunity to frame their pre-project responses from the perspective of what they learned during the process. Since data were collected at the same point in time (at the end of the project), the ratings of before ("retrospective pre") and after (post) the project use the same metric. From a pragmatic perspective, completing the survey at the end of the project also reduced the number of surveys for busy clinicians and staff. Also, the short time interval between the pre and post periods makes it unlikely that there was recall bias. Since this project was implemented in a single nursing facility in Hawai'i, generalizability to other nursing homes in the US remains uncertain. The fact that it was conducted in a large, high-volume subacute facility demonstrates that it may be feasible to implement in other nursing homes. A strength of the project was involvement of participants from multiple health organizations ranging from health maintenance organizations to private practitioners, and inclusion of physicians/APRNs and facility frontline staff and leadership members.

Conclusions

This telemedicine quality improvement project highlighted the multifaceted needs of a complex telemedicine program in a high volume post-acute nursing facility, and demonstrated the importance of engaging medical providers, facility leadership and frontline staff in planning, execution, and evaluation. Targeted interventions focused on areas identified in needs assessment surveys, real-time feedback, leadership engagement,

and an interprofessional approach were necessary components. External provider and internal staff input played a pivotal role in balancing the needs of each group along with facilitating leadership buy-in. Factors that fostered successful implementation included ease of scheduling, efficiency, skill of telemedicine staff, technology support, perceived value, leadership commitment, and workforce capacity.

Future studies should focus on sustainability of telemedicine in nursing homes post-pandemic. In certain local facilities, telemedicine continues to flourish while in others telehealth encounters are non-existent once more, returning to pre-pandemic states. Examining factors that drive or extinguish sustainability of telemedicine in nursing homes will be important for health care leaders and facilities that wish to sustain telehealth. Further follow-up on current staff, provider and patient satisfaction, health outcomes such as emergency room use and readmission rates, along with total cost of care may be beneficial to study. Examining whether the presence of telehealth options affect provider and staff burnout should also be studied. In conclusion, with support of facility leadership, interprofessional team members and key stakeholders, successful implementation of a complex telemedicine protocol in a high-volume nursing home during the COVID-19 pandemic was achieved.

Conflict of Interest

None of the authors identify a conflict of interests.

Disclosures

Two authors (PB, SVPF) receive medical directorship contracts from the Avalon Health Care Group. One author (LO) received an associate medical directorship contract from the Avalon Health Care Group at the time this quality improvement project was conducted. One author (MU) previously received an associate medical director contract from the Avalon Health Care Group.

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Appendix A

Example Providers' Guide for Telemedicine

To schedule:

- Email the distribution list at: **(Insert email address)**
 - *Set up a distribution email address that is able to send out information to entire facility and integrate into a calendar*
 - **We require at least 48-hours advance notice (2 business days)** to schedule a routine follow-up telehealth appointment. This is to ensure that the resident, health information staff, and unit managers are available and properly prepared.
 - **New admissions can be scheduled 24 hours in advance.** Please email the email above to schedule
 - **Calling the floor and UMs directly to schedule will not be allowed on a routine basis.**
 - Urgent/STAT visits for acute issues can be scheduled on case-by-case basis but should not be a usual practice.
 - ◊ For emergencies and after hours ONLY please call the Unit Manager's cell at **(Insert unit manager's cell phone#)**
 - Please include the following in the email:
 - ◊ Name of resident
 - ◊ Floor/room # of resident
 - ◊ Date and start time for each visit (*please see below for maximum visit times allowed*)
 - ◊ Platform preferred (*see below for acceptable platforms*)
 - ◊ Special Instructions: Please indicate if additional nurse preparation is necessary (e.g. vitals, SBAR, wound care, meds, labs, PO intake, BM record) prior to the appointment.
 - Health Information Management (HIM) scheduler will respond via email if the date requested is available or if a different date/time is needed.
 - ◊ A calendar invite will be sent to your email address (this calendar invite will also be integrated into the facility schedule)

Telemedicine Hours:

- We request that telemedicine visits are conducted during the following hours : **Mon – Fri from 10am to 3pm**
 - Allocation of time: (SBAR is required for any new condition)
 - ◊ Admissions/new consults – 45 minutes
 - ◊ Recertifications – 30 minutes
 - ◊ Follow-ups – 20 min

Platforms allowed:

- **(Insert list of allowed platforms)**

Questions:

- Please contact: (Insert contact information with email and phone#)

Recommended pre-visit preparation for providers:

- We ask that all providers review the electronic medical record and "pre-round" prior to the visit so as to offload the nurses from spending a lot of time going through the chart during the visit
- If you do not have electronic med record access, please request access through the HIM Department: **(Insert HIM contact information here)**
- *Suggested items for review prior to your visit, as applicable:*
 - Vital signs and trends
 - Diets
 - Dietary supplements
 - Medication Lists and Administration Records
 - Lab results
 - Nursing progress notes
 - PO Intake and BM Records
 - Wounds pictures
- The nurses may provide updates and will provide you with an SBAR for a new issue/condition change. They will not provide routine SBARs for all visits.

Appendix B

Example Unit Managers' Guide to Telemedicine

For scheduled appointments:

- Scheduler from Health Information Management (HIM) will notify the Unit Manager (UM) via email regarding future telehealth appointments within 24 hours.
 - Telehealth schedule (for the next business day) will be distributed to UM during stand-up meetings.
 - Verify that the UM/Nurse has the proper resources such as fully charged iPads
 - Unit Manager's cell phone is also available as a back-up for trouble shooting

Prior to appointments:

- Prior to telehealth appointments, please ensure:
 - The resident has agreed/consented to the telehealth appointment
 - The resident is prepared and presentable for the appointment.
 - All required documentation (nurse prep sheet), including the SBAR, are completed.
 - Newly acquired vitals should be recorded.

After the appointment:

- Sanitize the iPad with approved sanitizing wipes
- Return iPad to medical records

Telemedicine hours:

- Mon – Fri from 10am to 3pm
 - Allocation of time:
 - ◊ Admissions/new consults – 45 minutes
 - ◊ Recertifications – 30 minutes (SBAR not required)
 - ◊ Follow-ups – 20 minutes (SBAR not required)
- You may be contacted to schedule emergency and after hours visits on your cell phone.

Platforms:

(Insert list of acceptable platforms)

QUESTIONS:

- (Insert HIM contact information, email, and phone number)

Appendix C

Example Health Information Management (HIM) Guide for Telemedicine

To Schedule:

- An email account (**Insert email address here**) was established to streamline the scheduling process for all telemedicine appointments.
- All providers are required to request telehealth appointments via the email address above.
- Health Information Management (HIM) Director will ensure that all requests are addressed accordingly and in a timely manner.
- HIM will create/update the online telehealth calendar for all scheduled appointments and send a calendar invite to UM/nurses and medical provider requesting the appointment
- HIM **MUST invite the Unit Manager (UM)** on all scheduled telehealth appointments within 24 hours by including them via the calendar invite.
 - Ensure the UM/Nurse has the proper resources such as an iPad (must be fully charged).
 - Unit Manager's cell phone is also available as a back-up for trouble shooting
- HIM Director will bring the next business day's scheduled appointments to the stand-up meeting in the morning for the Unit Managers to provide and discuss with their nurses.
- Ensure that calendar has the following information:
 - Name of resident
 - Location and room number
 - Date and time
 - Include the following in the notes section:
 - ◊ Platform preferred & call-in information
 - ◊ Provider special instructions: Check if additional nurse preparation is necessary (e.g. vitals, SBAR, wound exposure, meds, labs, PO, BM) prior to the appointment.

Telemedicine Hours:

- Mon – Fri from 10am to 3pm
 - Allocation of time:
 - ◊ Admissions/new consults – 45 minutes
 - ◊ Recertifications – 30 minutes (SBAR not required)
 - ◊ Follow-ups – 20 minutes (SBAR not required)
- For emergencies and after hours ONLY please call the Unit Manager's cell at (**Insert cell phone#**)

Technology platforms allowed:

- (**Insert list of allowed platforms**)

Questions

- (**Insert HIM contact information, email, and phone number**)

Appendix D

Example Nurse Prep Sheet for Telemedicine Visits:

Assessment: Review of Systems (ROS)

Check mark /write observation

Admission Consult Discharge Recertification

Name: _____ DOB: _____ Room #: _____

Name of RN: _____ Date: _____

NEURO			
	<input type="checkbox"/> Alert	<input type="checkbox"/> Confused	<input type="checkbox"/> Lethargic <input type="checkbox"/> Sedated <input type="checkbox"/> Agitated <input type="checkbox"/> Non responsive
Speech	<input type="checkbox"/> Clear	<input type="checkbox"/> Slurred	<input type="checkbox"/> Apathic
Oriented	<input type="checkbox"/> Person	<input type="checkbox"/> Place	<input type="checkbox"/> Time <input type="checkbox"/> Date
RESPIRATORY			
Rhythm	<input type="checkbox"/> Regular <input type="checkbox"/> Irregular	<input type="checkbox"/> SOB	<input type="checkbox"/> SOB on exertion
Cough	<input type="checkbox"/> No cough	<input type="checkbox"/> Productive/describe sputum	<input type="checkbox"/> Non productive
Lung Sounds	<input type="checkbox"/> Clear	<input type="checkbox"/> Rhonci	<input type="checkbox"/> Wheezes <input type="checkbox"/> Crackles
Area	<input type="checkbox"/> RUL <input type="checkbox"/> RML	<input type="checkbox"/> RLL	<input type="checkbox"/> LUL <input type="checkbox"/> LLL
O2	<input type="checkbox"/> _____/L	<input type="checkbox"/> Nasal Cannula	<input type="checkbox"/> FM <input type="checkbox"/> NRB Mask
CARDIAC			
Rhythm	<input type="checkbox"/> Regular <input type="checkbox"/> Irregular		
Radial pulse	<input type="checkbox"/> RT present/absent	<input type="checkbox"/> LT present/absent	
Pedal pulse	<input type="checkbox"/> RT present/absent	<input type="checkbox"/> LT present/absent	
PT	<input type="checkbox"/> RT present/absent	<input type="checkbox"/> LT present/absent	
Edema	<input type="checkbox"/> None <input type="checkbox"/> Present	<input type="checkbox"/> Location:	(<input type="checkbox"/> 1+ <input type="checkbox"/> 2+ <input type="checkbox"/> 3+ <input type="checkbox"/> 4+)
GI			
Abdomen	<input type="checkbox"/> Soft <input type="checkbox"/> Firm	<input type="checkbox"/> Distended <input type="checkbox"/> Tender	<input type="checkbox"/> Location Last BM: _____
Bowel Sounds	<input type="checkbox"/> Present <input type="checkbox"/> Absent	<input type="checkbox"/> _____ quadrants	<input type="checkbox"/> Continent <input type="checkbox"/> Inc
	<input type="checkbox"/> Nausea <input type="checkbox"/> Vomiting	<input type="checkbox"/> Diarrhea <input type="checkbox"/> Constipation	
GU			
Urine Color	<input type="checkbox"/> Yellow <input type="checkbox"/> Amber	<input type="checkbox"/> Bloody	<input type="checkbox"/> Other
Appearance	<input type="checkbox"/> Clear <input type="checkbox"/> Cloudy	<input type="checkbox"/> with sediments	<input type="checkbox"/> Odor
Moist Complaints	<input type="checkbox"/> Frequency <input type="checkbox"/> Dysuria	<input type="checkbox"/> Cont/Inc	
Catheter	<input type="checkbox"/> Foley <input type="checkbox"/> SP	<input type="checkbox"/> Straight cath	Time: _____ Amount _____cc
		Describe:	
MUSCULOSKELETAL			
Mobility	<input type="checkbox"/> Full <input type="checkbox"/> Limitations	<input type="checkbox"/> Describe	
Gait	<input type="checkbox"/> Steady <input type="checkbox"/> Unsteady	<input type="checkbox"/> Activity/Assist	<input type="checkbox"/> Independent <input type="checkbox"/> One/Two persons <input type="checkbox"/> Total
SAFETY			
Side rails	<input type="checkbox"/> Up <input type="checkbox"/> Down	<input type="checkbox"/> Recent Fall? If yes, date: _____	<input type="checkbox"/> Injury- Yes or No
Fall risk protocol	<input type="checkbox"/> Yes/No	<input type="checkbox"/> Call light within reach: Yes/No	<input type="checkbox"/> Bed Low
SKIN			
Color	<input type="checkbox"/> Normal <input type="checkbox"/> Pale	<input type="checkbox"/> Cyanotic	Condition: <input type="checkbox"/> Clammy <input type="checkbox"/> Dry <input type="checkbox"/> Moist <input type="checkbox"/> Flakey
	<input type="checkbox"/> Cool <input type="checkbox"/> Warm	<input type="checkbox"/> Integrity: <input type="checkbox"/> Intact <input type="checkbox"/> Not intact	<input type="checkbox"/> Describe
PAIN			
	<input type="checkbox"/> Location	Rating (0-10)	
Pain medication given	<input type="checkbox"/> Time <input type="checkbox"/> Recheck time	Rating (0-10)	
PSYCHO/SOCIAL			
Affect	<input type="checkbox"/> Calm <input type="checkbox"/> Agitated <input type="checkbox"/> Anxious	<input type="checkbox"/> Flat <input type="checkbox"/> Confused	<input type="checkbox"/> Depressed <input type="checkbox"/> Combative
Involvement in care	<input type="checkbox"/> Active <input type="checkbox"/> Passive	<input type="checkbox"/> Refuses	<input type="checkbox"/> Independent
Demeanor	<input type="checkbox"/> Pleasant <input type="checkbox"/> Unpleasant	<input type="checkbox"/> Cooperative	<input type="checkbox"/> Uncooperative
Visitors	<input type="checkbox"/> Yes <input type="checkbox"/> No	Who: _____	
VITAL SIGNS		LABS	MEDICATIONS
T: _____ P: _____ R: _____ BP: _____			
O2 Sat _____%	Room Air _____L <input type="checkbox"/> R <input type="checkbox"/> L		